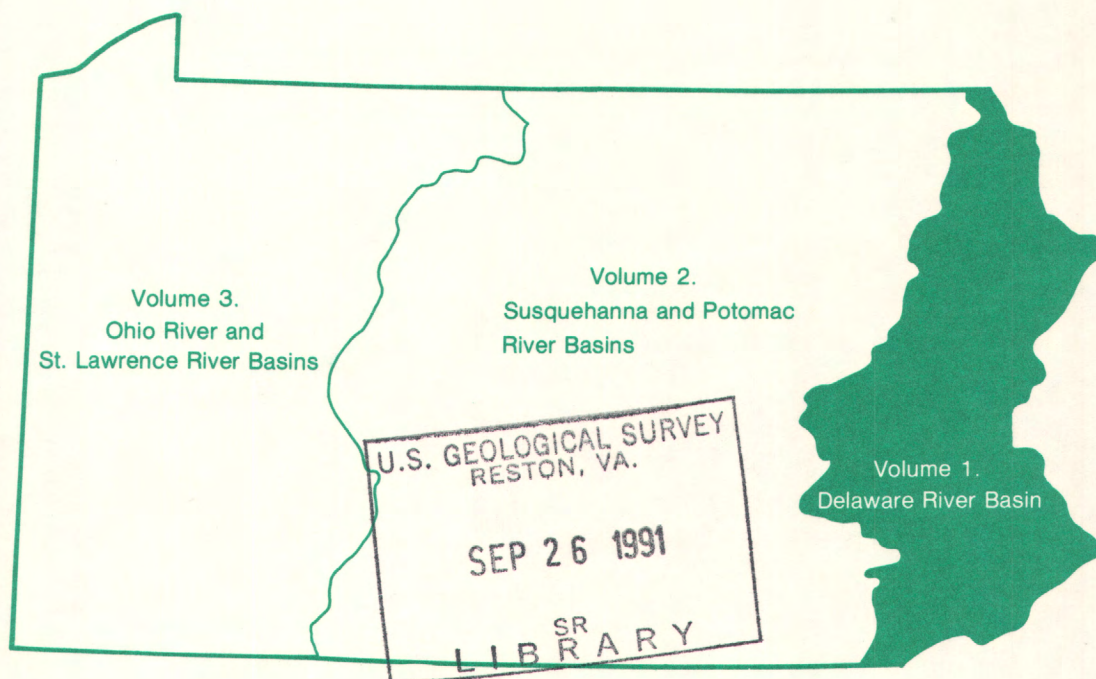


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# Water Resources Data Pennsylvania Water Year 1990

## Volume 1. Delaware River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-90-1  
Prepared in cooperation with the Pennsylvania Department of  
Environmental Resources, the Philadelphia Water Department  
and with other State, municipal, and Federal agencies





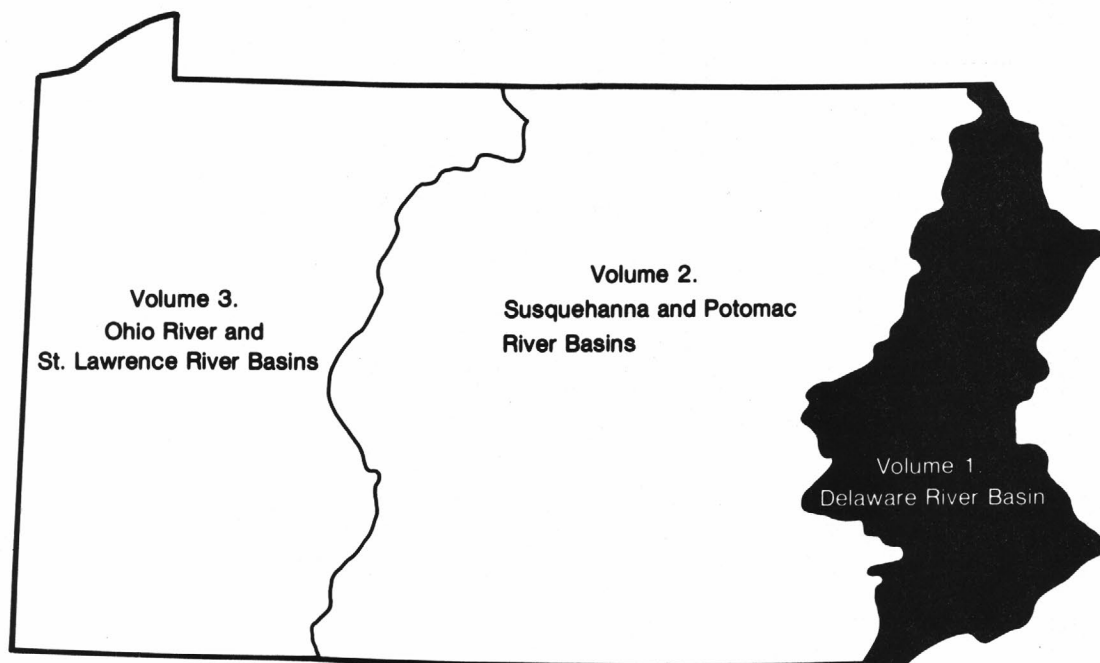




# Water Resources Data Pennsylvania Water Year 1990

## Volume 1. Delaware River Basin

by J.R. Kolva, T.E. White, R.L. Druther, and K.E. White



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-90-1  
Prepared in cooperation with the Pennsylvania Department of  
Environmental Resources, the Philadelphia Water Department  
and with other State, municipal, and Federal agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., SECRETARY

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to  
District Chief, Water Resources Division  
U.S. Geological Survey  
P.O. Box 1107  
Harrisburg, Pennsylvania 17108-1107  
1990



## 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 three volumes:

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

Volume 1 was prepared in cooperation with the Commonwealth of Pennsylvania and the other agencies under the general supervision of David E. Click, District Chief, Pennsylvania District, and Charles R. Wood, Subdistrict Chief, Malvern Subdistrict. 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:

Richard Campbell  
George Jung  
Cynthia R. Lesitsky  
Paul Moleski  
Andrew G. Reif

Victor Coricino  
Cynthia L. Gilliam  
Curtis Schreffler  
Karen Vogel



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<b>16. Abstract (Limit: 200 words)</b> Water-resources data for the 1990 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 1, includes records from the Delaware River basins. Specifically, it contains: (1) discharge records for 80 continuous record streamflow-gaging stations and 74 partial-record stations; (2) elevation and contents records for 12 lakes and reservoirs and elevations for 1 tidal station; (3) water-quality records for 32 gaging stations, for 39 ungaged streamsites; and (4) water-level records for 17 observation wells. Locations of these sites are shown on figures 6-9. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data, together with the data in Volumes 2 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.			
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## GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

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BUCKS COUNTY		
Well 402643075150501	Local number BK 929	265
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CARBON COUNTY		
Well 410123075425401	Local number CB 104	267
CHESTER COUNTY		
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Well 395949975341801	Local number DE 3	269
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MONTGOMERY COUNTY		
Well 400808075210401	Local number MG 225	274
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## WATER RESOURCES DATA - PENNSYLVANIA, 1990

### INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and Federal agencies, collects a large amount of data pertaining to the water resources of Pennsylvania each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Pennsylvania, Volumes 1, 2, and 3." Volume 1 contains data for the Delaware River basin; Volume 2, the Susquehanna and Potomac River Basins; and Volume 3, the Ohio and St. Lawrence River basins.

This report, Volume 1, specifically contains (1) discharge records for 80 continuous record streamflow-gaging stations, 74 partial-record stations, and 2 special study and miscellaneous streamflow sites; (2) elevation and contents records for 12 lakes and reservoirs; and elevations for 1 tidal station; (3) water-quality records for 32 gaging stations, for 39 ungaged streamsites; and (4) water-level records for 17 observation wells.

Publications similar to this report are published annually by the Geological Survey for all States. For the purpose of archiving, these official reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-90-1." These water-data reports, beginning with the 1971 water year, are for sale as paper copy or microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

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

Prior to the introduction of this series and for several years concurrent with it, water-resources data for Pennsylvania were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States," which was released in numbered parts as determined by natural drainage basins. For the 1961-70 water years, the data were published in two 5-year reports. Data prior to 1961 are included in two reports: "Compilation of Records of Surface Waters of the United States through 1950," and "Compilation of Records of Surface Waters of the United States, October 1950 to September 1960." Data for Pennsylvania are published in Parts 1, 3, 4. Data on chemical quality, temperature, and suspended sediment for the 1941-70 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935-74 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Bldg. 41, Box 25425, Denver, Colorado 80225.

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 District Hydrologic Information Specialist, telephone (717) 730-6916.

### COOPERATION

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

The Commonwealth of Pennsylvania Department of Environmental 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, Director;
- Bureau of Mining and Reclamation, Ernest F. Giovannitti, Director.

Delaware River Basin Commission G. M. Hansler, Executive Director;

Chester County Water Resources Authority, D. C. Yaeck, Executive Director;

City of Bethlehem, Gordon Mowrer, Mayor;

City of Philadelphia, Water Department, W. J. Marrazzo, Water Commissioner;

City of Allentown, Department of Public Works, D. S. Lichty, Chief Utility Engineer;

City of Media, Water Department, J. J. Loughran, Superintendent;

## WATER RESOURCES DATA - PENNSYLVANIA, 1990

Federal Energy Regulatory Commission Licensees:  
Philadelphia Electric Co.,  
Pennsylvania Power and Light Co.,

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 39 streamflow-gaging stations, 5 reservoir stations, and 13 crest-stage gages;

The following organizations aided in collecting records: Palmer Water Company, Philadelphia Suburban Water Company, Borough of Tamaqua, Womelsdorf-Robeson Joint Water Authority, and the City of Coatesville.

## WATER RESOURCES DATA - PENNSYLVANIA, 1990

SUMMARY OF  
HYDROLOGIC CONDITIONS

Precipitation for the 1990 water year was below the 1951-80 normal for the Delaware River basin. Figure 1 compares the 1990 monthly precipitation with the 1951-80 monthly mean precipitation recorded at Allentown, Pennsylvania. May was the wettest month with rainfall about 196 percent of normal. November, December, February, March, April, June, July and September had rainfall below normal. October, January, May, and August had more rain than normal. Rainfall for the year was 4.75 inches below normal.

Streamflow for the Delaware River basin was normal during the 1990 water year. Figure 2 compares the 1990 monthly and yearly mean discharges with the median discharges for 1951-80 at two representative gaging stations. The yearly mean discharge was 105 percent of the 1951-80 median at Schuylkill River at Pottstown, and 114 percent of the median at Bush Kill at Shoemakers.

Monthly mean discharges at Schuylkill River at Pottstown were normal during July and September. Monthly mean discharges for October, November, January, February and May through August were above normal. Flows, for December, March and April were below normal. Flows for May October were 240 percent of normal.

Storage in seven major reservoirs during the 1990 water year was average or slightly below average. Storage ranged between 72 percent of normal at Francis E. Walter Reservoir and 101 percent of normal at Beltsville Reservoir and Green Lane Reservoir.

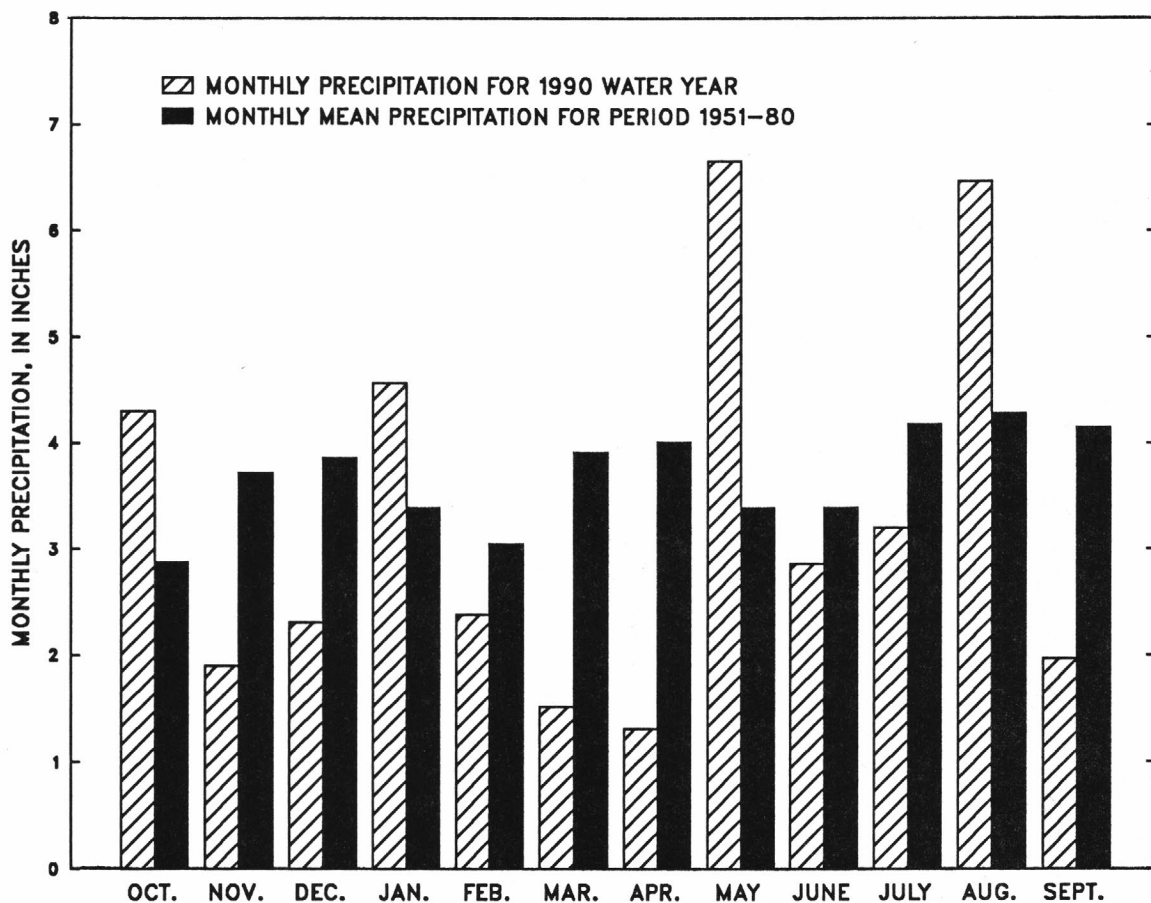


Figure 1.—Comparison of precipitation in the Delaware River basin above Allentown, Pa. during the 1990 water year with mean precipitation for 1951-80.



## WATER RESOURCES DATA - PENNSYLVANIA, 1990

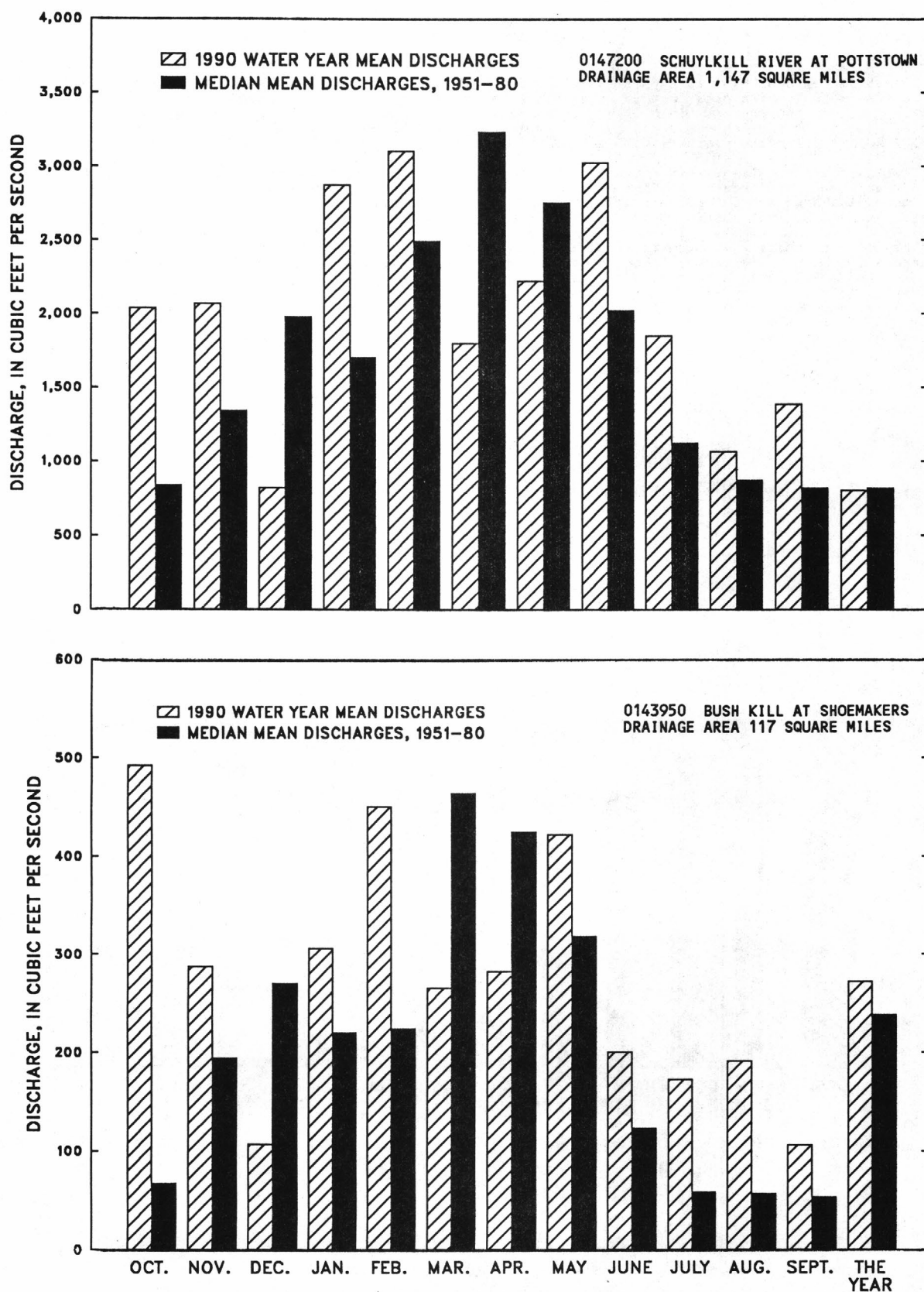


Figure 2.—Comparison of discharge at two-term representative gaging stations during the 1990 water year with median discharge for period 1951-80.

## WATER RESOURCES DATA - PENNSYLVANIA, 1990

Ground-water levels, which were above normal throughout much of the Delaware River basin during the 1989 water year, were generally normal during the 1990 water year. However, water levels varied substantially throughout the basin due to an uneven distribution of precipitation. Seasonal mean water levels in 16 observation wells relative to long-term seasonal mean levels are shown in figure 3. Long-term mean water levels were calculated from records ranging from 5 to 40 years in length.

During the fall, water levels were generally normal in the northern and western parts of the basin and above normal in the southern parts of the basin. Recharge was sufficient during late fall and early winter and levels were normal throughout the basin except for the southern parts which were above normal. Spring levels were normal to much above normal except for the limestones of the Great Valley which were below normal rainfall maintained water levels at above normal or much above normal throughout the summer months except high in August the limestones areas which generally were normal.

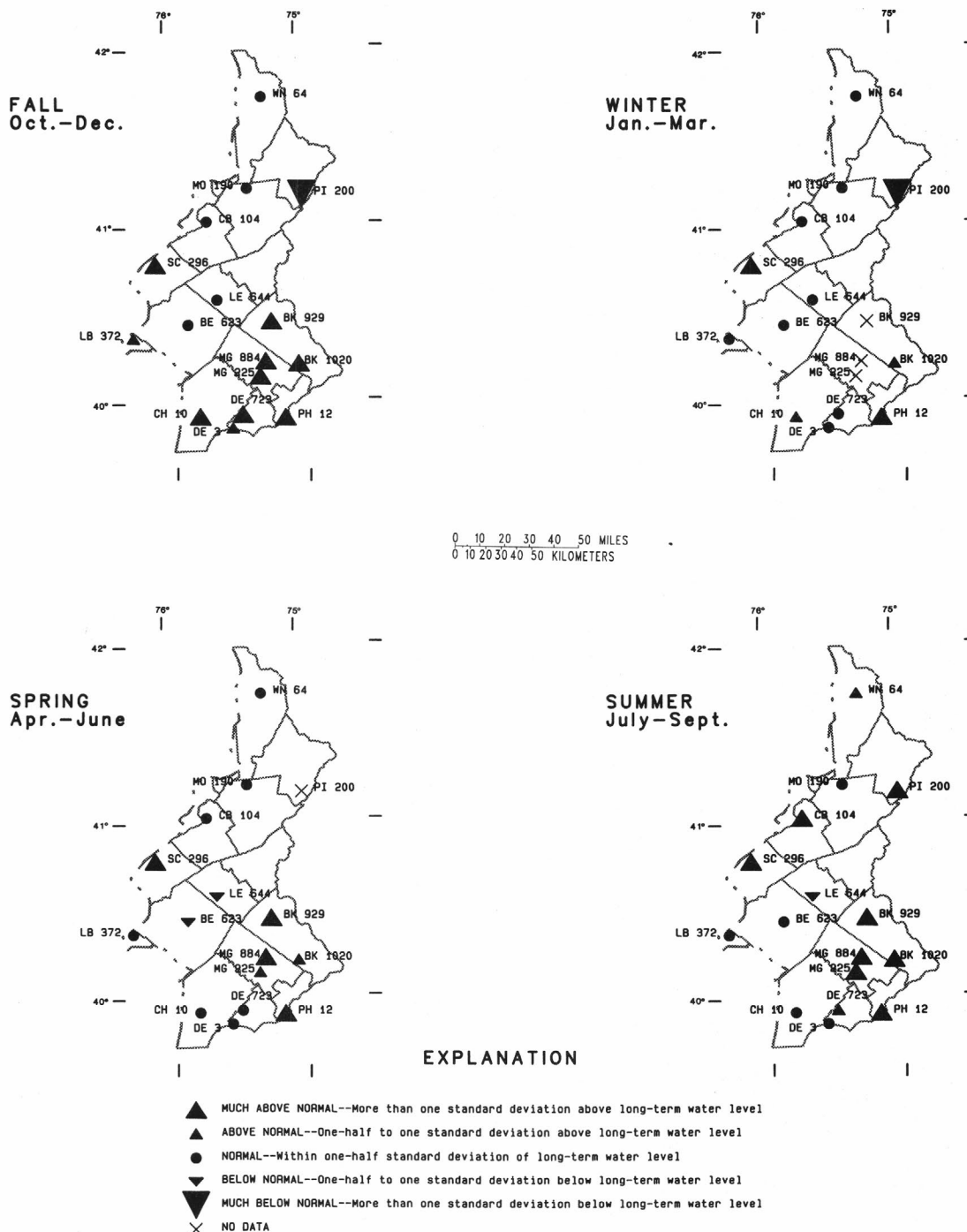


Figure 3.--Relation between mean 1990 seasonal water levels and long-term mean water levels.

## WATER RESOURCES DATA - PENNSYLVANIA, 1990

During 1990, a program of monitoring the dissolved oxygen levels of the Brandywine Creek Basin was continued. All these stations are equipped with satellite data collection platforms (DCP) to provide near-real-time data. Figure 4 shows the diurnal fluctuations of dissolved oxygen concentration at three stations on the Brandywine Creek for the period of July 14-25, 1990.

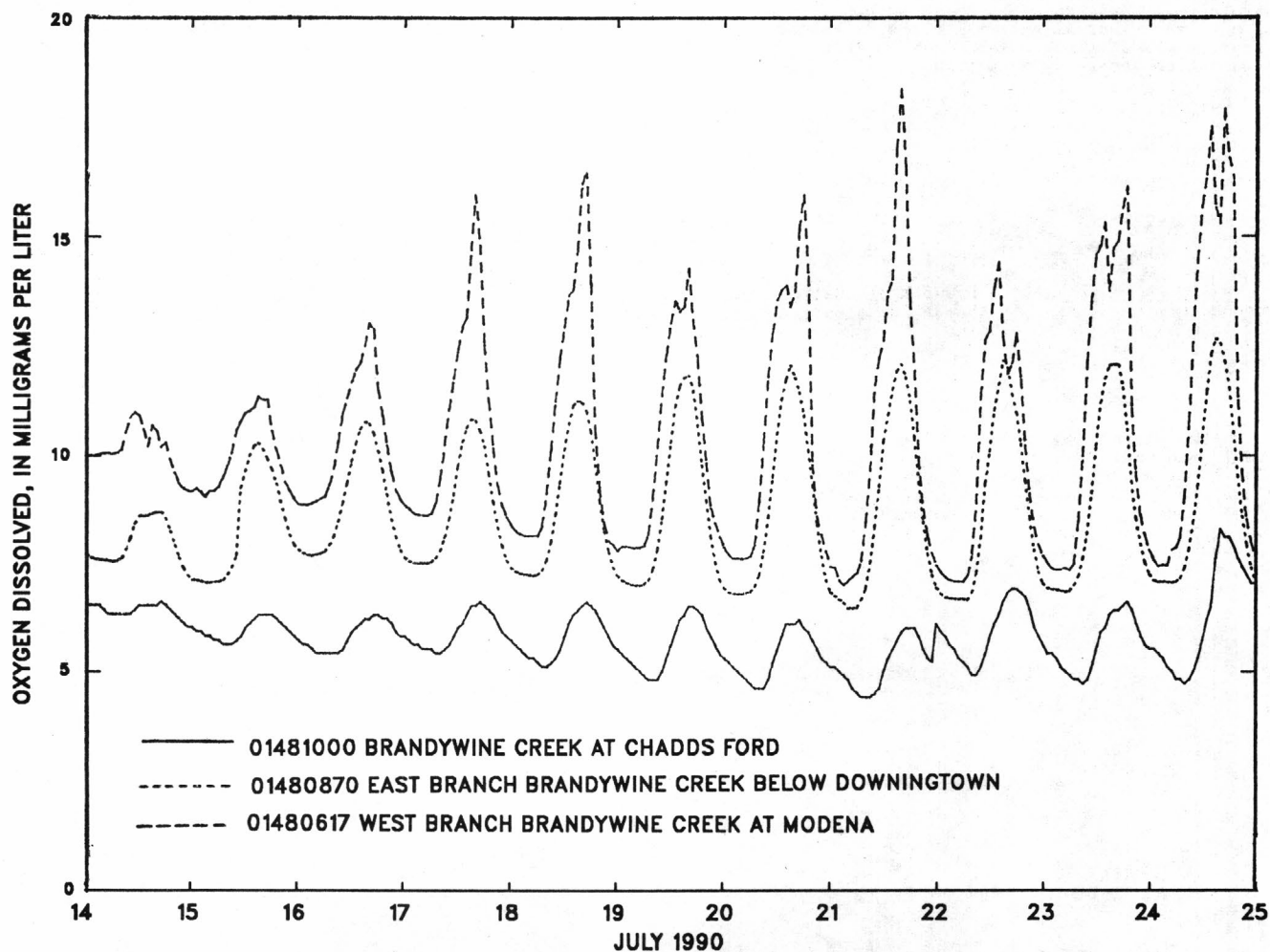


Figure 4.—Diurnal fluctuation of dissolved oxygen concentration at three stations on the Brandywine Creek.

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins throughout the country that provides consistent data on hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide. This network also provides analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

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. Most of the 500 or so sites in NASQAN are 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 Federal 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 1988 water year that began October 1, 1987, and ended September 30, 1988. 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 6-9. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.



### Station Identification Numbers

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

#### Downstream-Order System

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

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and 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 in length 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 within a 1-second grid. See figure 5 below.

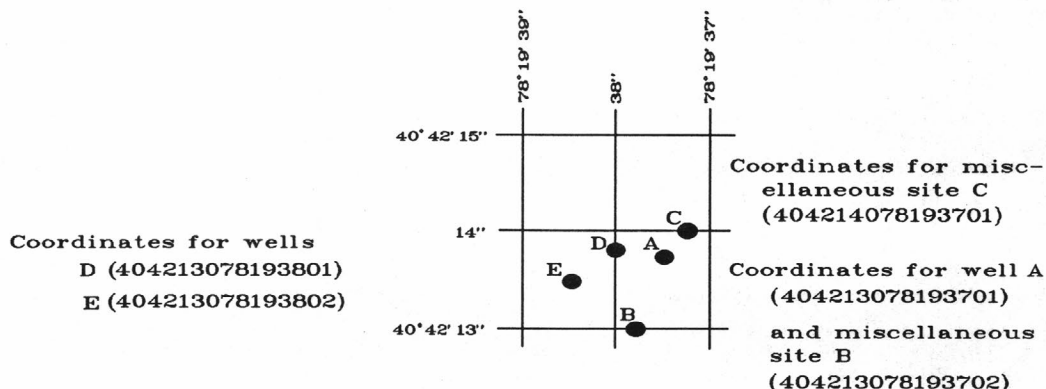


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude).

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

### Records of Stage and Water Discharge

Records of stage and water discharge may be continuous or partial. Continuous records of discharge are those obtained using a continuous stage-recording device through which either instantaneous water discharges may be computed for any time, or mean discharges may be computed for any period of time, during the period of record. Because daily mean discharges or, for reservoirs 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 6-9.

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

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

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

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

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

For some gaging stations, there are periods when no gage-height data are collected or when the recorded gage height is so imprecise or incorrect that it cannot be used to compute daily mean discharge or end-of-day contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

#### Data Presentation

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.

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**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.

**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 equal to or greater than a selected base discharge are presented under this heading. These peaks, 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 omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by 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 their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft<sup>3</sup>/s (cubic foot per second); to the nearest tenth from 1.0 to 10 ft<sup>3</sup>/s; to whole numbers from 10 to 1,000 ft<sup>3</sup>/s; and to 3 significant figures when greater than 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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



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## Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 6 - 9.

## Arrangement of Records

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

During the collection of water-quality data, assurance that the data obtained represent the in-situ quality of the water is a major concern. Certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures need to be followed when collecting the samples, when treating the samples to prevent changes in quality pending analysis, and when shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters 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 collected for the National Stream Quality Accounting Network (see definitions) are obtained from several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors that must be evaluated by the collector.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are determined from data that are recorded at 15-, 30-, or 60-minute intervals by digital recorders that punch each value on a paper tape, or with Data Collection Platforms (DCP's). 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 measured at the time of discharge measurements for water-discharge stations and are on file in the District office. For stations where water temperature is measured manually once or twice daily, it is usually measured at about the same time each day. Large streams have a small diurnal temperature change; temperatures in shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

## Sediment

Suspended-sediment concentrations are determined from samples collected by hand or by pump samplers. Samples are collected by hand using depth-integrating samplers at single or multiple verticals in the cross section.

Samples are collected by pump 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 on the basis of simultaneous samples collected at various stages by the pumping sampler and by hand. During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, every 15 minutes). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge 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. The remaining samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. If other laboratories are used, they are identified in the "Remarks" or "Cooperation" paragraph of each water-quality station description. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water Resources Investigations, Book 5, Chapter C1. Methods used by the Geological Survey laboratory are given in Techniques of Water Resources Investigations, Book 1, Chapter D2, Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4. Methods used by other laboratories are approved by the U.S. Geological Survey, Water Resources Division.

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

#### Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for constituents 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 streamflow-gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

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

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

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less often 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 constituents measured daily or more frequently. None are given for constituents measured less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

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

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

#### Remark Codes

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

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. Locations of observation wells in the basic network are shown in figures 6 and 7.

#### Data Collection and Computation

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

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 above the station description. The secondary identification number is the local well number, an alphanumeric number, derived from the county location of the well.

Water-level records are obtained from direct measurements with a steel tape, from the graph or punched tape of a water-stage recorder, or with Data Collection Platforms. 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 assistance of local (non-Survey) observers.

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

**EXTREMES FOR PERIOD OF RECORD.**--This entry contains the highest and lowest 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.

#### ACCESS TO WATSTORE DATA

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

- \* Station Header File - Contains descriptive information on over 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- \* Daily Values File - Contains over 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- \* Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- \* Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radiochemical characteristics of both surface and ground water.
- \* Ground-Water Site Inventory Data Base - Contains inventory data for over 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

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

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

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

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## DEFINITION OF TERMS

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

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.

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  $44.5^{\circ}\text{C} + 0.2^{\circ}\text{C}$  on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

Dry mass refers to the mass of residue present after drying in an oven at  $105^{\circ}\text{C}$  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.



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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<sup>3</sup>/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile [(ft<sup>3</sup>/s)/mi<sup>2</sup>]<sup>1</sup> 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.

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

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.

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

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

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

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.

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.

<sup>1</sup> 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.

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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 ( $\text{CaCO}_3$ ).

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.

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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), 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:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay .....	0.00024 - 0.004	Sedimentation
Silt .....	.004 - .062	Sedimentation
Sand .....	.062 - 2.0	Sedimentation or sieve
Gravel .....	2.0 - 64.0	Sieve

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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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<sup>3</sup>/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 (Q<sub>7 10</sub>) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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.



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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  $\mu\text{m}$  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  $\mu\text{m}$  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  $\mu\text{m}$  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.....	<u>Hexagenia</u>
Species .....	<u>Hexagenia limbata</u>

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.

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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.

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## PUBLICATION OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

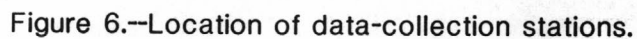
The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or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

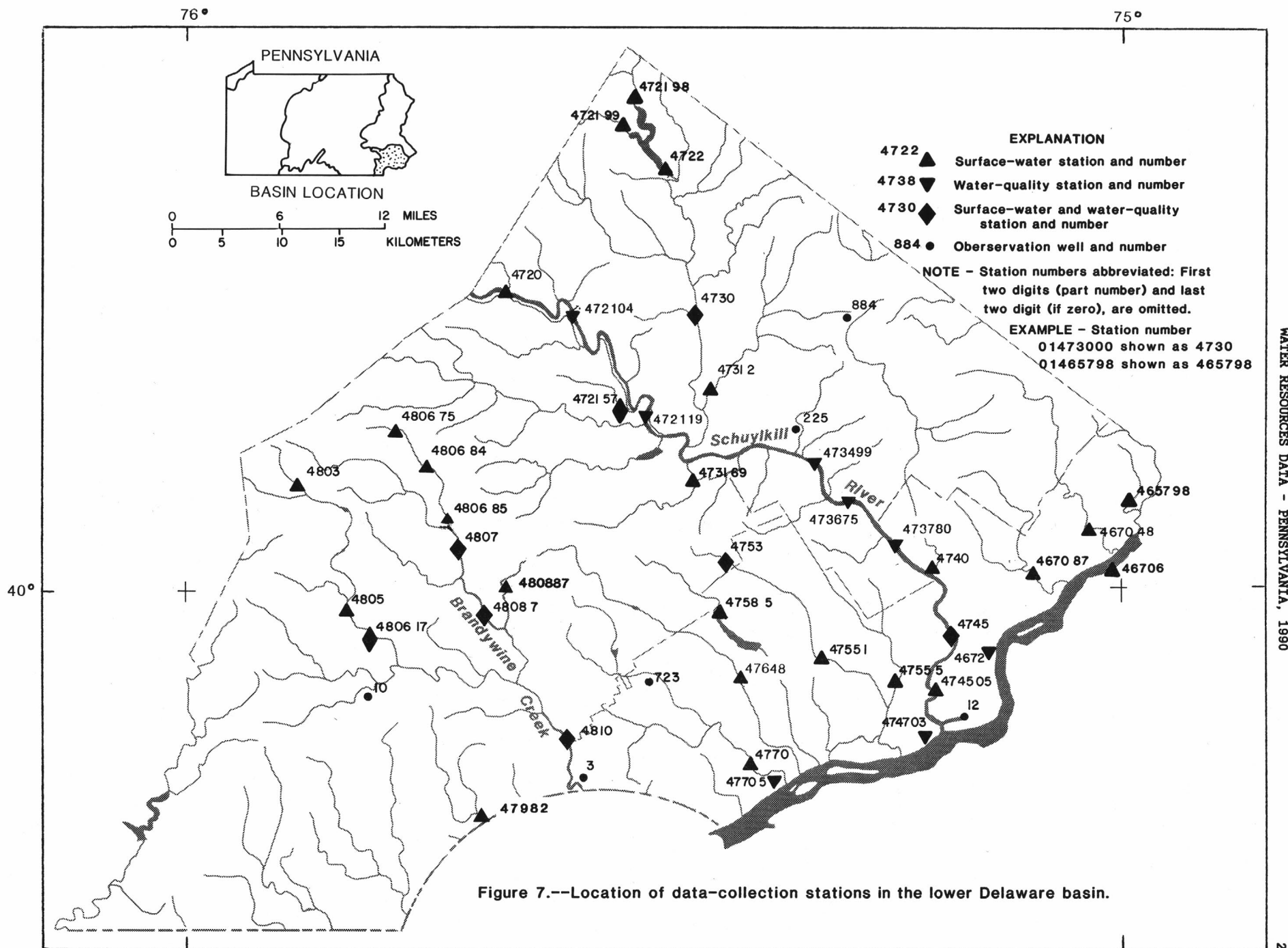
- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
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- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
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## WATER RESOURCES DATA - PENNSYLVANIA, 1990

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- 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.
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- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
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- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
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- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.







## WATER RESOURCES DATA - PENNSYLVANIA, 1990

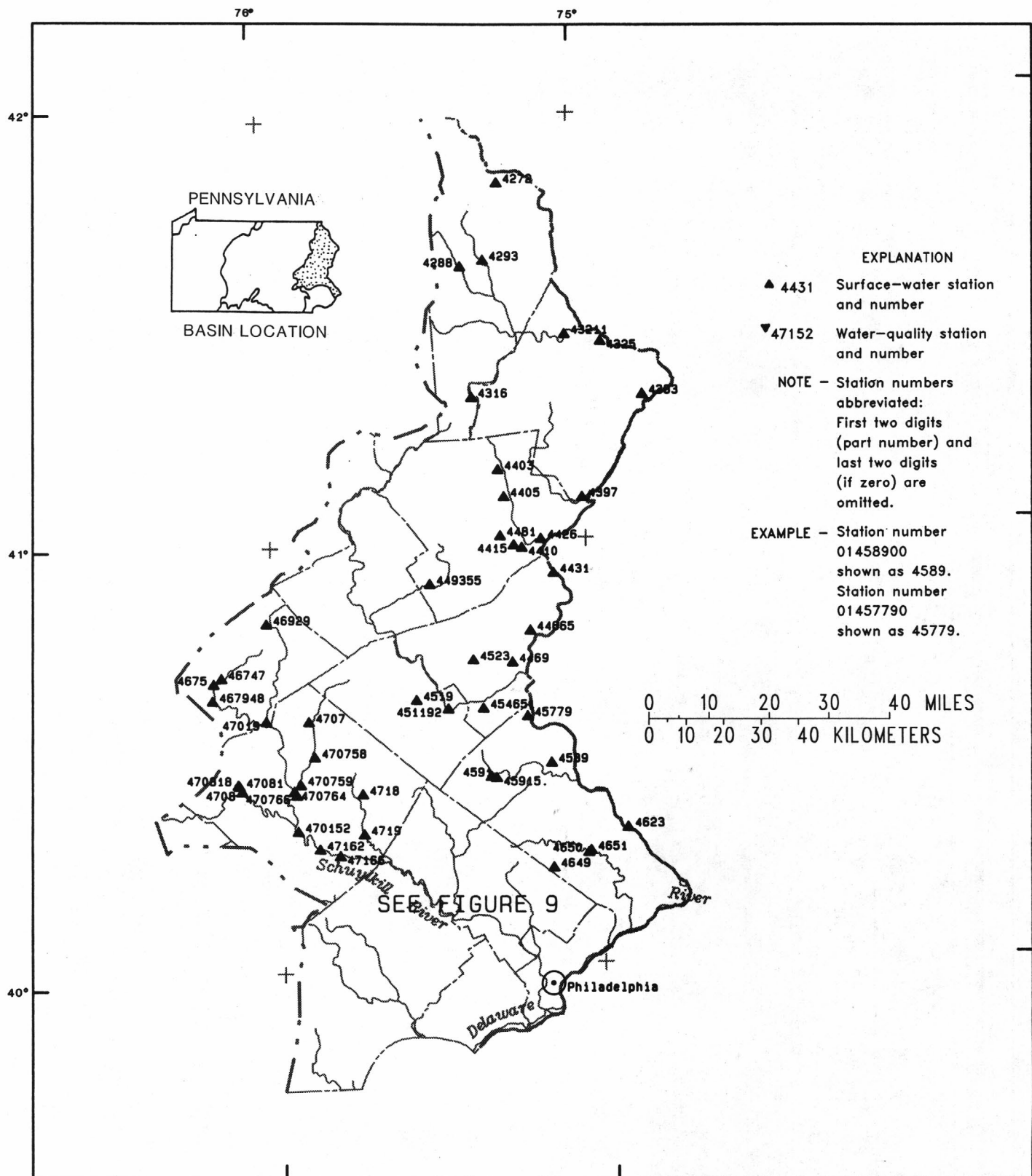


Figure 8.--Location of partial-record data-collection stations.



## DELAWARE RIVER BASIN

01427207 DELAWARE RIVER AT LORDVILLE, NY

LOCATION (CORRECTED).--Lat 41°52'02", long 75°12'51", Wayne County, Pa., Hydrologic Unit 02040101, on right bank at site of former Lordville-Equinunk Interstate Bridge at Lordville, 9.7 mi southeast of Hancock.

DRAINAGE AREA.--1,590 mi<sup>2</sup>.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1967 to August 1971, June 1973 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

INSTRUMENTATION.--Water-temperature satellite telemeter since June 1989, provides 15-minute-interval readings.

From June 1987 to June 1989, water-temperature satellite telemeter provided one-hour-interval readings. From June 1973 to November 1989, water-temperature digital recorder provided one-hour-interval readings. Prior to August 1971, water-temperature recorder provided continuous recordings.

REMARKS.--Interruption of record was due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum (water years 1968-70, 1973, 1975-86, 1989) 30.5°C, June 16, 1976, July 10, 1981; minimum (water years 1968-71, 1974, 1977-78, 1980-90), 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 25.5°C, Sept. 13, but may have been higher during periods of instrument malfunction; minimum, 0.0°C on many days during winter period.

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	12.0	13.5	---	---	---	.5	.0	.0	.0	.0	.0
2	15.0	14.5	14.5	---	---	---	.5	.0	.0	.0	.0	.0
3	14.5	12.5	14.0	---	---	---	.5	.0	.0	.0	.0	.0
4	12.0	10.0	11.0	---	---	---	.0	.0	.0	.0	.0	.0
5	12.0	9.0	10.5	---	---	---	.0	.0	.0	.0	.0	.0
6	13.5	10.5	11.5	---	---	---	.0	.0	.0	.0	.0	.0
7	13.0	11.5	12.0	---	---	---	.0	.0	.0	.0	.0	.0
8	11.5	10.0	11.0	---	---	---	.0	.0	.0	.0	.0	.0
9	10.0	8.0	9.5	---	---	---	.0	.0	.0	---	.0	---
10	9.5	7.0	8.0	---	---	---	.0	.0	.0	.0	.0	.0
11	10.0	8.5	9.0	---	---	---	.0	.0	.0	---	.0	---
12	11.5	8.0	9.5	---	---	---	.0	.0	.0	---	.0	---
13	13.5	11.0	12.0	---	---	---	.0	.0	.0	.0	.0	.0
14	12.5	11.0	12.0	---	---	---	.0	.0	.0	.0	.0	.0
15	14.5	12.0	13.0	---	---	---	.0	.0	.0	---	.0	---
16	16.5	14.5	15.0	---	---	---	.0	.0	.0	---	.0	---
17	15.5	14.0	14.5	---	---	---	.0	.0	.0	---	---	---
18	14.0	11.0	12.5	---	---	---	.0	.0	.0	---	.0	---
19	11.0	8.5	10.0	---	---	---	.0	.0	.0	---	.0	---
20	10.0	8.5	9.0	---	---	---	.0	.0	.0	.0	.0	.0
21	10.0	8.0	9.0	---	---	---	.0	.0	.0	---	.0	---
22	8.0	7.5	8.0	---	---	---	.0	.0	.0	---	.0	---
23	8.5	6.5	7.5	1.0	.5	.5	.0	.0	.0	.0	.0	.0
24	8.5	7.0	7.5	1.0	.0	.5	.0	.0	.0	---	.0	---
25	---	---	---	1.0	.0	.5	.0	.0	.0	---	.0	---
26	---	---	---	2.5	1.0	2.0	.0	.0	.0	---	.0	---
27	---	---	---	3.0	2.0	2.5	.0	.0	.0	---	---	---
28	---	---	---	5.0	3.0	4.0	.0	.0	.0	---	---	---
29	---	---	---	4.5	1.5	3.0	.0	.0	.0	---	---	---
30	---	---	---	1.0	.0	.5	.0	.0	.0	---	---	---
31	---	---	---	---	---	---	.0	.0	.0	---	---	---
MONTH	---	---	---	---	---	---	0.5	0.0	0.0	---	---	---

## DELAWARE RIVER BASIN

01427207 DELAWARE RIVER AT LORDVILLE, NY--Continued

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN JUNE	MEAN	MAX JULY	MIN	MEAN	MAX AUGUST	MIN	MEAN	MAX SEPTEMBER	MIN	MEAN
1	---	---	---	---	---	---	20.5	15.5	18.0	23.0	19.5	21.5
2	---	---	---	---	---	---	22.5	17.5	20.0	23.0	21.0	22.0
3	---	---	---	23.0	---	---	24.0	20.0	22.0	23.0	20.0	21.5
4	---	---	---	25.0	20.5	22.5	21.0	16.5	18.0	22.5	19.0	20.5
5	---	---	---	25.0	22.5	23.5	---	16.0	---	21.5	20.0	21.0
6	---	---	---	23.0	18.5	20.5	18.0	16.0	17.0	24.0	20.5	22.0
7	---	---	---	21.0	16.0	18.5	20.0	17.5	18.5	22.5	---	---
8	---	---	---	19.5	17.5	18.0	21.5	18.5	20.0	22.0	18.5	---
9	---	---	---	19.5	17.0	18.0	20.5	19.5	20.0	19.5	16.5	18.0
10	---	---	---	---	18.0	---	20.0	18.0	18.5	21.0	16.0	18.0
11	---	---	---	21.5	18.5	19.5	20.5	17.5	19.0	23.0	19.5	21.0
12	---	---	---	18.5	15.5	16.5	22.0	19.0	20.5	23.5	20.5	22.0
13	---	---	---	18.0	14.5	16.0	22.5	20.0	21.5	25.5	21.5	23.0
14	---	---	---	18.5	17.0	17.5	22.5	20.5	21.5	23.5	21.0	22.5
15	---	---	---	20.5	18.0	19.0	23.0	19.5	21.0	21.0	18.5	19.5
16	---	---	---	21.5	19.0	20.0	23.0	20.0	21.5	18.5	15.5	17.0
17	---	---	---	23.0	19.5	21.0	23.5	21.0	22.0	15.5	13.5	15.0
18	---	---	---	24.0	20.5	22.0	24.5	21.5	23.0	14.5	12.0	13.5
19	---	---	---	23.0	20.0	21.5	23.5	20.0	22.0	13.5	12.0	13.0
20	---	---	---	22.5	20.0	21.0	20.0	17.0	18.0	14.0	12.5	13.0
21	---	---	---	22.0	20.0	21.0	17.5	16.5	17.0	13.5	12.5	13.0
22	---	---	---	23.5	20.0	21.5	19.0	17.0	18.0	13.5	12.5	13.0
23	---	---	---	23.0	21.5	22.0	19.5	18.5	19.0	14.5	12.0	13.0
24	---	---	---	---	---	---	20.5	19.0	19.5	14.0	12.0	13.0
25	---	---	---	---	---	---	21.5	19.5	20.5	14.0	12.0	12.5
26	---	---	---	25.0	21.5	---	23.0	19.5	21.0	13.0	12.0	12.5
27	---	---	---	24.5	21.5	23.0	23.0	21.0	22.0	14.5	11.5	12.5
28	---	---	---	23.0	18.5	20.5	23.5	20.0	21.5	14.0	13.0	13.5
29	---	---	---	23.5	19.5	21.5	22.5	20.5	21.5	14.5	13.0	14.0
30	---	---	---	24.5	21.0	22.5	22.5	19.5	21.0	15.0	13.5	14.0
31	---	---	---	23.0	17.0	20.5	23.0	19.5	21.0	---	---	---
MONTH	---	---	---	---	---	---	---	15.5	---	25.5	---	---

## DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY

LOCATION.--Lat 41°45'24", long 75°03'30", Wayne County, Pennsylvania, Hydrologic Unit 02040101, on right bank, 0.5 mi downstream from Callicoon Creek, 0.5 mi downstream from Interstate Bridge 7, and 0.8 mi southeast of Callicoon. Water-quality sampling site at discharge station.

DRAINAGE AREA.--1,820 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1975 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area. WDR NY-86-1: 1975-84 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 734.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi<sup>2</sup> of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin), and subsequent to October 1963, entire flow from 454 mi<sup>2</sup> of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during period of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellit gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft<sup>3</sup>/s, Mar. 15, 1986, gage-height, 13.42 ft; maximum gage-height, 14.83 ft, Jan. 9, 1979 (ice jam); minimum discharge, 307 ft<sup>3</sup>/s, Aug. 23, 1985; minimum gage height, 2.20 ft, Sept. 13, 1977, Aug. 23, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,400 ft<sup>3</sup>/s, Oct. 21, gage height, 8.35 ft; maximum gage height, 10.58 ft, Jan. 26 (ice jam); minimum discharge, 547 ft<sup>3</sup>/s, Sept. 14, gage height, 2.53 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	677	1660	e1500	e1700	e6000	e3200	3560	1470	2390	1580	1010	1140
2	718	1800	e1300	e1650	e6200	e3000	3370	1400	2000	1260	827	1070
3	895	1560	e1400	e1600	e7600	e2900	5350	1240	1730	1000	703	1030
4	964	1540	e1100	e1400	e7400	e2700	7990	1200	1610	896	1260	904
5	793	1440	e1200	e1300	e6600	e2300	7400	1840	1470	932	1440	758
6	729	1360	e1200	e1000	5840	e2100	6620	2220	1320	907	2720	701
7	697	1330	e1200	e900	5300	e1800	5920	1900	1250	815	3090	737
8	748	1300	e1100	e880	4880	e1700	5190	1830	1150	927	2140	787
9	729	1610	e1050	e880	4840	e1700	4500	1770	1060	877	1510	788
10	606	2740	e1000	e880	e8000	e1800	4220	2800	986	941	1540	713
11	776	2510	e1000	e880	e9400	2100	8310	9460	898	778	3090	731
12	664	2210	e980	e880	e8200	2870	9470	9000	844	1550	2430	657
13	833	1950	e900	e840	e6600	4060	8280	9440	792	3140	1780	579
14	1190	1800	e780	e800	e5800	4810	7180	14800	717	2120	2050	653
15	951	1710	e800	e840	e5000	4640	6390	12200	687	1530	1840	1170
16	767	3310	e940	e880	6180	4310	5850	10300	976	1970	1480	1180
17	743	8070	e1200	e960	9560	4350	5030	11600	929	1620	1310	956
18	1180	4910	e1100	e2000	8190	6190	4490	11600	897	1360	1220	861
19	2210	3670	e1100	e3500	7140	5970	3880	10400	942	1340	1160	699
20	10200	3120	e1150	e3000	6140	7620	3350	8970	1010	1310	1130	733
21	18400	3070	e1200	e2500	4910	8820	3160	8800	880	1260	965	991
22	8140	2620	e1150	e2300	4490	8240	3260	9030	832	1100	935	1080
23	5260	2240	e1100	e1900	6020	8120	2870	7960	904	950	838	836
24	3820	2050	e1150	e1800	7520	8040	2520	6820	1020	935	975	832
25	3050	1860	e1200	e2000	e6000	7330	2230	5830	956	895	1920	968
26	2530	1770	e1250	e6400	e4500	6470	2170	4920	870	825	1900	1010
27	2170	1820	e1200	e7800	e3800	5590	1920	4260	794	783	1590	1140
28	1930	1810	e1150	e5400	e3500	4720	1750	3690	763	1110	1470	1230
29	1720	1980	e1100	e4100	---	4090	1550	3230	823	984	2130	1280
30	1560	e1700	e1250	e6800	---	3700	1440	3830	1570	823	1920	1150
31	1450	---	e1200	e6400	---	3520	---	3090	---	908	1340	---
TOTAL	77100	70520	34950	74170	175610	138760	139220	186900	33070	37426	49713	27364
MEAN	2487	2351	1127	2393	6272	4476	4641	6029	1102	1207	1604	912
MAX	18400	8070	1500	7800	9560	8820	9470	14800	2390	3140	3090	1280
MIN	606	1300	780	800	3500	1700	1440	1200	687	778	703	579

CAL YR 1989 TOTAL 790292 MEAN 2165 MAX 22400 MIN 529  
WTR YR 1990 TOTAL 1044803 MEAN 2862 MAX 18400 MIN 579

e Estimated.



## DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1975 to current year.

INSTRUMENTATION.--Water-temperature satellite telemeter since May 1989, provides 15-minute-interval readings.  
Prior to May 1989, water-temperature digital recorder provided one-hour-interval punches.

REMARKS.--Interruptions of record were due to malfunctions of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, (water years 1976-89), 30.5°C, July 12, 1987; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.0°C, July 26; minimum, 0.0°C on many days during winter period.

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.5	12.5	14.5	12.0	10.5	11.5	.0	.0	.0	.0	.0	.0
2	16.0	15.0	15.5	10.5	9.0	10.0	.0	.0	.0	.0	.0	.0
3	15.5	13.0	14.5	9.0	6.5	8.5	.0	.0	.0	.0	.0	.0
4	13.0	11.0	11.5	7.0	5.5	6.0	.0	.0	.0	.0	.0	.0
5	13.0	10.0	11.5	7.0	5.0	6.0	.0	.0	.0	.0	.0	.0
6	14.5	11.5	13.0	---	---	---	.0	.0	.0	.0	.0	.0
7	14.0	12.5	13.0	9.0	---	---	.0	.0	.0	.0	.0	.0
8	12.5	10.5	11.5	10.5	8.5	9.5	.0	.0	.0	.0	.0	.0
9	10.5	8.5	9.5	10.5	9.5	10.0	.5	.0	.0	.0	.0	.0
10	10.0	7.0	9.0	9.5	7.5	8.5	.5	.0	.0	.0	.0	.0
11	11.0	9.0	---	7.5	7.0	7.0	.0	.0	.0	.0	.0	.0
12	13.0	---	---	7.0	5.5	6.5	.0	.0	.0	.0	.0	.0
13	13.5	10.5	12.0	6.5	5.0	5.5	.5	.0	.0	.0	.0	.0
14	13.5	10.5	12.5	---	5.0	---	.0	.0	.0	.0	.0	.0
15	15.5	12.0	13.5	9.5	6.5	8.0	.0	.0	.0	.0	.0	.0
16	16.0	---	---	11.5	9.5	10.5	.0	.0	.0	.0	.0	.0
17	15.5	14.5	15.0	10.5	6.0	8.0	.0	.0	.0	.0	.0	.0
18	14.0	12.5	13.5	6.0	4.0	5.0	.0	.0	.0	.0	.0	.0
19	12.5	9.0	10.5	---	---	---	.0	.0	.0	.0	.0	.0
20	10.0	9.0	9.5	4.0	3.0	3.5	.0	.0	.0	.0	.0	.0
21	10.0	8.5	9.5	3.5	1.0	2.5	.0	.0	.0	.0	.0	.0
22	8.5	8.0	8.5	1.0	.5	1.0	.0	.0	.0	.0	.0	.0
23	9.0	7.5	8.0	1.5	.0	.5	.0	.0	.0	.0	.0	.0
24	9.0	7.5	8.0	1.0	.0	.5	.0	.0	.0	.0	.0	.0
25	10.5	8.0	9.0	.5	.0	.5	.0	.0	.0	.0	.0	.0
26	11.5	9.0	10.0	2.0	.5	1.5	.0	.0	.0	.0	.0	.0
27	12.5	10.0	11.0	2.5	1.0	2.0	.0	.0	.0	.5	.0	.0
28	13.0	11.0	12.0	5.0	2.5	3.5	.0	.0	.0	1.0	.0	.5
29	13.0	10.5	11.5	4.0	1.0	2.5	.0	.0	.0	.5	.0	.5
30	12.5	10.5	11.5	1.5	.0	1.0	.0	.0	.0	---	---	---
31	12.5	11.5	12.0	---	---	---	.0	.0	.0	---	---	---
MONTH	16.5	---	---	---	---	---	0.5	0.0	0.0	---	---	---

## DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY		MARCH			APRIL			MAY		
1	---	---	---	1.0	.0	.0	5.5	4.5	5.0	19.0	14.0	16.0
2	---	---	---	2.0	.0	1.0	6.0	5.0	5.5	16.5	14.0	15.5
3	---	---	---	3.5	1.0	2.0	6.0	5.5	5.5	17.0	12.0	14.5
4	---	---	---	2.0	.0	1.0	5.5	4.5	5.0	16.0	13.0	14.5
5	1.0	---	---	1.5	.0	.5	5.0	4.0	4.5	13.5	11.5	12.5
6	1.0	.0	.5	2.0	.0	1.0	5.5	4.5	5.0	15.0	10.5	12.5
7	2.5	1.0	1.5	2.0	.0	.5	6.5	4.5	5.5	13.5	11.0	12.5
8	3.0	2.0	2.5	3.0	.0	1.0	5.5	4.0	5.0	16.5	11.5	14.0
9	3.0	2.5	2.5	2.0	.0	1.0	6.0	4.0	5.0	18.0	13.0	15.5
10	3.0	2.5	3.0	4.0	1.5	2.5	6.0	5.0	5.5	16.5	14.0	15.5
11	2.5	1.5	2.0	---	3.0	---	6.5	5.5	6.0	13.5	10.0	12.0
12	2.5	1.5	2.0	6.5	4.5	5.5	5.5	4.0	4.5	10.0	8.5	9.5
13	2.0	1.0	1.5	9.0	5.5	7.0	5.5	3.5	4.5	10.5	9.5	10.0
14	3.0	2.0	2.5	9.5	7.0	8.0	5.5	4.5	5.0	13.0	10.0	11.5
15	2.5	1.5	2.0	9.5	8.0	8.5	6.5	5.5	6.0	13.5	12.5	13.0
16	2.0	1.0	1.5	10.0	8.5	9.0	8.5	6.0	7.0	13.0	12.0	12.5
17	2.5	1.5	2.0	10.5	9.0	10.0	7.5	5.5	7.0	13.0	12.0	12.5
18	1.5	.5	1.0	9.0	7.0	8.0	7.0	5.0	5.5	---	12.0	---
19	2.0	1.0	1.5	7.0	4.5	5.5	9.0	5.0	7.0	---	11.0	---
20	1.5	.5	1.0	4.5	3.5	4.0	9.5	7.0	8.0	---	---	---
21	1.5	.0	.5	4.5	3.0	3.5	9.5	8.0	8.5	---	---	---
22	1.5	1.0	1.5	5.5	4.0	5.0	12.0	8.0	9.5	---	---	---
23	4.0	2.0	3.5	6.0	4.5	5.5	14.5	10.0	12.0	---	---	---
24	4.0	2.0	3.0	4.5	3.5	4.0	15.5	11.0	13.0	14.0	11.5	---
25	2.0	.0	1.0	4.5	3.0	4.0	16.0	12.5	14.0	15.5	13.0	14.0
26	.0	.0	.0	4.5	3.0	4.0	19.5	13.5	16.5	15.0	13.5	14.5
27	.0	.0	.0	3.5	2.5	3.0	21.0	16.0	18.5	15.5	13.0	14.0
28	.0	.0	.0	4.0	2.0	3.0	21.5	17.0	19.0	18.0	14.0	16.0
29	---	---	---	5.5	3.0	4.0	19.5	17.0	18.0	16.5	14.5	16.0
30	---	---	---	4.5	3.5	4.0	16.5	15.0	16.0	16.5	13.5	15.0
31	---	---	---	4.5	3.0	4.0	---	---	---	18.0	13.5	15.5
MONTH	---	---	---	---	0.0	---	21.5	3.5	8.5	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE		JULY			AUGUST			SEPTEMBER		
1	20.0	14.5	17.5	23.0	19.5	21.5	23.0	19.5	21.5	24.0	19.5	22.0
2	21.5	16.5	19.0	23.0	19.0	21.5	24.0	18.5	21.5	24.0	21.0	22.5
3	22.5	18.5	20.5	25.0	19.5	22.5	25.5	20.5	23.5	23.5	20.5	22.0
4	21.0	17.0	19.0	27.0	21.0	24.0	26.0	22.0	24.0	23.5	19.0	21.5
5	20.0	15.0	17.5	27.5	24.5	26.0	23.0	18.0	20.0	22.5	20.0	21.5
6	20.0	15.0	17.5	25.5	21.5	23.0	19.0	17.5	18.0	24.5	21.0	22.5
7	22.0	17.0	19.5	23.5	19.0	21.5	20.5	18.0	19.0	23.5	21.5	22.5
8	20.0	17.0	18.5	22.5	19.5	20.5	23.0	19.0	20.5	22.5	19.5	21.0
9	20.0	17.0	18.5	22.5	20.0	21.5	22.5	20.0	21.0	20.5	17.5	18.5
10	20.5	18.0	19.5	24.5	20.5	22.5	21.0	19.0	20.0	21.5	17.0	19.0
11	19.5	17.0	18.0	23.0	19.5	20.5	21.5	18.5	19.5	23.0	19.0	21.0
12	21.5	15.0	18.5	20.0	16.5	18.0	23.0	19.0	21.0	23.5	20.5	22.0
13	21.0	17.0	19.5	18.0	15.5	17.0	24.0	20.0	21.5	24.5	21.5	23.0
14	20.5	18.5	19.5	19.5	17.0	18.0	23.5	20.0	22.0	24.0	22.0	23.0
15	21.5	18.5	20.0	22.0	18.5	20.0	24.0	20.0	22.0	23.0	20.5	22.0
16	25.0	19.5	22.0	23.5	20.0	21.5	25.0	20.0	22.5	20.0	17.5	18.5
17	26.5	22.0	24.5	25.0	20.0	22.5	25.5	21.0	23.5	17.5	14.5	16.0
18	25.5	22.5	23.5	26.5	21.5	24.0	26.5	22.0	24.5	16.0	12.5	14.0
19	24.5	21.5	23.0	27.0	22.0	24.5	25.0	21.0	23.0	14.5	12.5	13.0
20	24.0	20.5	22.0	26.0	22.5	24.5	21.0	18.5	19.5	14.5	13.0	13.5
21	24.0	20.5	22.0	24.0	22.0	23.5	18.5	17.5	18.0	15.5	12.0	14.0
22	24.5	20.5	22.5	26.0	21.0	23.5	19.5	17.0	18.0	15.0	13.5	14.0
23	24.0	21.0	22.5	25.0	23.0	24.0	20.0	18.0	19.0	15.0	12.5	13.5
24	22.5	20.5	21.5	25.5	22.0	24.0	21.0	19.0	20.0	14.5	12.0	13.0
25	21.5	19.0	20.5	26.0	21.5	24.0	23.0	19.5	21.0	16.0	12.0	14.0
26	23.5	18.5	21.0	27.0	22.0	24.5	24.0	20.5	22.0	14.5	12.0	13.5
27	24.0	---	---	26.0	22.5	24.5	24.5	21.0	23.0	16.0	12.5	14.0
28	24.5	21.5	23.0	27.0	23.0	25.0	25.5	21.5	23.5	16.5	13.0	15.0
29	24.0	21.5	23.0	26.0	22.0	24.5	24.5	21.5	23.0	16.5	14.0	15.5
30	24.0	20.5	22.0	26.0	22.5	24.5	24.0	20.0	22.0	17.0	14.5	15.5
31	---	---	---	25.5	22.0	23.5	24.0	19.5	21.5	---	---	---
MONTH	26.5	---	---	27.5	15.5	22.5	26.5	17.0	21.5	24.5	12.0	18.0

## DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

LOCATION.--Lat 41°30'31", long 74°59'11", Sullivan County, Hydrologic Unit 02040101, on left bank, 1.6 mi upstream from Lackawaxen River, and 4.6 mi northwest of Barryville. Water-quality sampling site at discharge station.

DRAINAGE AREA.--2,020 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi<sup>2</sup> of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire from 454 mi<sup>2</sup> of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow of these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River Basin, as directed by the Delaware River Master. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 26.40 ft, from floodmarks in gage house, from rating curve extended above 55,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 122 ft<sup>3</sup>/s, Sept. 5, 1953, gage height, 1.11 ft; minimum daily, 126 ft<sup>3</sup>/s, Sept. 4, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,500 ft<sup>3</sup>/s, Oct. 21, gage height, 11.30 ft; minimum daily discharge, 634 ft<sup>3</sup>/s, Sept. 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	862	1940	1820	e1500	6940	e3500	3910	1530	2850	1910	1190	1380
2	846	2080	1390	e1500	6690	e3300	3750	1550	2370	1690	1010	1270
3	1040	1880	e1200	e1700	9460	e3200	5760	1390	2070	1290	877	1250
4	1180	1810	e1300	e1500	9250	e3000	9320	1300	1880	1100	1070	1130
5	1020	1710	e1200	e1400	8690	e2600	8480	1870	1750	1070	1390	959
6	887	1580	e1300	e1200	6670	e2400	7390	2450	1580	1060	2950	854
7	836	1540	e1600	e1050	6010	2280	6490	2140	1510	999	3680	818
8	795	1510	e1400	e990	5470	2130	5650	1960	1420	975	2680	868
9	935	1640	e1300	e990	5370	2070	4890	1800	1300	1070	1880	884
10	757	2850	e1200	e1000	8280	2050	4410	2030	1230	1090	1590	924
11	814	2860	e1200	e1000	10800	2300	7830	9360	1130	952	3720	834
12	822	2510	e1200	e1000	8850	2920	10500	9910	1050	1220	3040	833
13	873	2230	e1100	e970	7190	4110	9060	9690	977	3770	2190	710
14	1130	2050	e960	e920	6280	4990	7730	16100	903	2780	2230	634
15	1210	1950	e960	e940	5770	4960	6790	13900	854	1920	2180	1060
16	971	2280	e1000	e1000	6540	4610	6190	11300	911	2090	1770	1310
17	862	8870	e1100	e1100	10400	4510	5330	12900	1160	1880	1530	1210
18	1350	5610	e1250	e1800	9390	6310	4770	13000	1070	1630	1400	1020
19	2400	4130	e1200	e3800	7890	6400	4140	11500	1110	1500	1320	918
20	12300	3420	e1250	e3600	6750	7730	3610	9930	1160	1490	1310	774
21	23600	3310	e1300	e3100	5340	9820	3260	9390	1090	1460	1260	949
22	10600	2990	e1250	e2600	4800	9240	3380	9800	985	1330	1220	1210
23	6400	2550	e1200	e2200	5900	8750	3030	8600	980	1150	1090	1080
24	4540	2320	e1250	e2000	8410	8750	2660	7280	1210	1080	1290	921
25	3580	2110	e1300	e2200	6910	7960	2390	6130	1160	1060	2050	945
26	2970	2020	e1300	e5800	e4400	6990	2290	5180	1060	996	2440	1120
27	2540	2070	e1300	10300	e3800	5990	2070	4500	966	927	1890	1270
28	2250	2030	e1250	6590	e3900	5070	1840	3920	909	1100	1660	1210
29	2030	2160	e1200	5020	---	4390	1680	3510	892	1170	2130	1360
30	1830	2020	e1300	9560	---	3980	1580	4480	1670	1020	2370	1340
31	1700	---	e1300	8990	---	3800	---	3720	---	970	1670	---
TOTAL	93930	78030	38880	87320	196150	150110	150180	202220	39207	43849	58077	31045
MEAN	3030	2601	1254	2817	7005	4842	5006	6523	1307	1414	1873	1035
MAX	23600	8870	1820	10300	10800	9820	10500	16100	2850	3770	3720	1380
MIN	757	1510	960	920	3800	2050	1580	1300	854	927	877	634

CAL YR 1989 TOTAL 899975 MEAN 2466 MAX 24500 MIN 660  
WTR YR 1990 TOTAL 1168998 MEAN 3203 MAX 23600 MIN 634

e Estimated.

## DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

CHEMICAL DATA: 1971-73 (a).

NUTRIENT DATA: 1971 (a).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1967 to current year (no winter record for water years 1969-76).

INSTRUMENTATION.--Water-temperature digital recorder since October 1975, provides one-hour-interval punches.

Prior to October 1975, water-temperature recorder provided continuous recordings.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum (water years 1968-75, 1980-81, 1983, 1985-90), 32.0°C, Aug. 2, 3, 1975, July 10, 1981, July 12, 1987; minimum (water years 1968, 1977-90), 0.0°C, on many days during winter periods, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.0°C, Aug. 6; minimum, 0.0°C on many days during winter period.

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.5	13.0	15.0	12.5	11.5	12.0	1.0	.0	.5	.0	.0	.0
2	16.5	15.5	16.0	11.5	10.0	11.0	.0	.0	.0	.0	.0	.0
3	18.0	14.0	16.0	10.0	8.0	9.5	.0	.0	.0	.0	.0	.0
4	14.5	12.0	13.0	8.5	7.0	7.5	.0	.0	.0	.0	.0	.0
5	15.5	11.0	13.0	8.0	6.0	7.0	.0	.0	.0	.0	.0	.0
6	15.0	12.0	13.5	8.5	7.0	7.5	.0	.0	.0	.0	.0	.0
7	15.0	13.0	14.0	9.0	7.5	8.5	.0	.0	.0	.0	.0	.0
8	13.0	11.5	12.5	10.0	8.5	9.5	.0	.0	.0	.0	.0	.0
9	11.5	9.5	11.0	11.0	10.0	10.5	.0	.0	.0	.0	.0	.0
10	11.0	8.5	10.0	9.5	8.5	9.0	.0	.0	.0	.0	.0	.0
11	12.0	10.0	10.5	8.5	7.5	8.0	.0	.0	.0	.0	.0	.0
12	13.5	9.0	11.0	7.5	6.0	7.0	.0	.0	.0	.0	.0	.0
13	15.5	11.0	13.0	7.0	5.5	6.0	.0	.0	.0	.0	.0	.0
14	14.5	11.0	13.0	7.0	5.5	6.5	.0	.0	.0	.0	.0	.0
15	16.5	12.5	14.0	9.0	6.5	8.0	.0	.0	.0	.0	.0	.0
16	17.5	14.5	16.0	11.0	9.0	10.0	.0	.0	.0	.0	.0	.0
17	16.0	15.0	15.5	9.5	7.5	9.0	.0	.0	.0	.0	.0	.0
18	15.0	13.0	14.0	7.0	4.5	6.0	.0	.0	.0	.0	.0	.0
19	13.0	10.5	11.5	4.5	3.5	4.0	.0	.0	.0	.0	.0	.0
20	10.5	10.0	10.0	4.0	3.0	3.5	.0	.0	.0	.0	.0	.0
21	10.0	9.0	9.5	3.5	1.5	3.0	.0	.0	.0	.0	.0	.0
22	9.0	8.5	9.0	1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
23	9.0	8.0	8.5	1.0	.5	1.0	.0	.0	.0	.0	.0	.0
24	9.5	8.0	8.5	.5	.0	.5	.0	.0	.0	.0	.0	.0
25	10.0	8.5	9.0	1.0	.0	.5	.0	.0	.0	.0	.0	.0
26	11.0	9.5	10.0	1.5	.5	1.0	.0	.0	.0	.0	.0	.0
27	12.0	10.0	11.0	2.0	1.0	1.5	.0	.0	.0	.5	.0	.5
28	13.5	11.0	12.0	4.5	2.0	3.5	.0	.0	.0	1.0	.5	.5
29	13.5	11.5	12.5	3.5	1.5	3.0	.0	.0	.0	1.0	.5	1.0
30	13.5	11.5	12.5	2.0	1.0	1.5	.0	.0	.0	.5	.5	.5
31	12.5	12.0	12.5	---	---	---	.0	.0	.0	1.0	.5	1.0
MONTH	18.0	8.0	12.0	12.5	0.0	6.0	1.0	0.0	0.0	1.0	0.0	0.0

## DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.5	1.0	1.5	1.0	.0	.5	5.0	4.5	4.5	19.5	15.5	17.0
2	2.0	1.5	2.0	1.5	.0	.5	6.5	5.0	6.0	17.5	15.5	16.5
3	2.0	2.0	2.0	2.5	.5	1.0	6.0	6.0	6.0	18.5	13.5	16.0
4	2.0	1.5	2.0	2.0	1.0	1.5	6.0	5.0	5.5	18.5	14.0	15.0
5	1.5	1.0	1.0	1.5	.5	1.0	5.0	4.5	5.0	15.0	13.0	14.0
6	1.0	.0	.5	2.0	.5	1.0	5.5	4.5	5.0	14.5	12.0	13.5
7	2.0	1.0	1.5	2.0	.0	1.0	6.5	5.0	5.5	14.0	12.5	13.0
8	3.0	1.5	2.5	3.0	.0	1.0	6.0	5.0	5.5	16.0	12.0	14.0
9	3.0	2.5	3.0	1.5	.0	1.0	6.0	4.5	5.0	18.0	14.0	16.0
10	3.0	2.5	3.0	3.5	1.0	2.0	6.0	5.5	5.5	16.5	16.0	16.0
11	2.5	2.0	2.0	5.5	2.5	4.0	6.5	6.0	6.5	15.5	11.5	13.5
12	2.5	2.0	2.0	7.0	4.5	5.5	6.0	5.0	5.5	11.0	10.0	10.5
13	2.0	1.5	2.0	8.5	5.5	7.0	5.5	4.0	5.0	10.5	9.5	10.0
14	2.5	2.0	2.5	9.5	8.0	8.5	6.0	4.5	5.5	13.0	10.5	11.5
15	2.5	2.0	2.5	10.0	8.5	9.5	7.0	5.5	6.5	14.0	12.5	13.5
16	2.0	1.5	2.0	10.5	9.0	10.0	8.5	6.5	7.5	13.5	13.0	13.5
17	2.5	2.0	2.0	10.5	10.5	10.5	8.5	7.0	7.5	13.5	12.5	13.0
18	2.0	1.0	1.5	10.5	8.5	9.5	7.0	6.0	6.5	13.5	12.5	13.0
19	2.5	1.0	1.5	8.0	6.0	7.0	8.0	5.5	7.0	12.5	11.5	12.0
20	2.0	1.0	1.5	6.0	4.0	5.0	8.5	8.0	8.5	13.0	11.0	12.0
21	1.5	.0	1.0	4.5	3.5	4.0	10.0	9.0	9.5	12.5	11.0	12.0
22	2.5	1.0	1.5	6.0	4.0	5.0	11.5	8.5	10.0	12.0	10.5	11.5
23	4.0	2.0	3.0	6.5	5.5	6.0	14.0	10.5	12.0	12.5	11.5	12.0
24	4.0	3.0	3.5	5.5	4.0	4.5	15.5	12.5	13.5	13.5	12.0	12.5
25	3.0	.0	1.5	5.0	3.5	4.0	16.0	13.5	14.5	15.5	13.0	14.5
26	.0	.0	.0	5.0	3.5	4.5	18.5	14.0	16.5	15.5	14.5	15.0
27	.0	.0	.0	4.0	3.0	3.5	21.0	17.0	18.5	15.5	14.0	15.0
28	.5	.0	.0	4.0	2.0	3.5	21.5	18.0	19.5	17.0	14.5	15.5
29	---	---	---	5.0	3.0	4.0	19.5	18.0	19.0	17.0	15.0	16.5
30	---	---	---	5.0	4.0	4.5	17.5	16.5	17.0	16.0	14.5	15.5
31	---	---	---	4.5	4.0	4.0	---	---	---	17.0	14.5	15.5
MONTH	4.0	0.0	2.0	10.5	0.0	4.5	21.5	4.0	9.0	19.5	9.5	14.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.0	15.5	17.5	23.5	22.0	23.0	26.0	21.5	23.5	25.0	20.5	22.5
2	20.5	17.5	19.0	24.5	21.0	22.5	27.0	21.0	24.0	26.0	21.5	23.5
3	22.5	19.0	20.5	26.0	21.0	23.5	28.0	22.0	25.0	26.0	22.0	23.5
4	21.0	18.5	20.0	28.0	22.0	25.0	27.5	23.0	25.0	25.5	20.5	23.0
5	20.5	17.0	18.5	30.0	25.0	27.0	25.0	22.5	24.0	23.5	20.5	22.0
6	20.0	16.5	18.5	25.5	22.5	24.5	22.5	19.0	20.5	25.0	21.0	23.0
7	22.0	17.5	19.5	27.0	21.0	24.0	20.5	19.0	20.0	24.5	22.0	23.0
8	20.0	18.5	19.0	23.5	21.0	22.0	22.5	20.0	21.0	24.0	19.5	22.0
9	20.5	18.0	19.0	25.5	21.5	23.0	23.0	21.0	22.0	20.0	18.5	19.0
10	21.5	18.5	19.5	27.0	22.0	24.5	22.0	21.0	21.5	23.5	18.5	20.5
11	19.5	17.5	19.0	23.5	21.0	22.0	21.0	20.5	21.0	24.0	20.0	22.0
12	23.0	16.0	19.5	21.0	19.0	20.0	23.0	20.5	22.0	24.5	21.0	22.5
13	21.5	18.0	20.0	18.5	17.5	18.0	24.0	21.5	23.0	25.5	21.5	23.0
14	21.0	19.0	20.0	19.0	18.0	18.5	24.0	21.5	23.0	24.0	22.0	23.0
15	21.0	19.0	20.0	22.0	18.5	20.0	25.0	21.5	23.0	24.5	21.5	22.5
16	25.0	19.5	22.0	23.0	20.5	22.0	26.0	22.0	23.5	21.5	19.5	20.5
17	27.0	22.0	24.5	25.0	21.5	23.0	27.0	22.5	24.5	19.5	15.5	18.0
18	26.0	23.0	24.0	27.0	22.5	24.5	27.5	23.5	25.5	19.5	14.0	16.5
19	27.0	22.5	24.0	28.0	24.0	26.0	25.5	22.5	24.5	15.5	13.5	14.5
20	25.0	22.0	23.0	28.5	24.5	26.5	22.0	20.5	21.5	16.5	14.0	15.5
21	25.5	21.5	23.0	26.0	24.5	25.5	20.0	19.0	19.5	18.0	13.0	15.5
22	27.0	21.5	24.0	28.0	23.5	25.5	20.0	18.5	19.0	15.5	15.0	15.0
23	26.5	23.0	24.0	28.0	24.5	25.5	20.5	18.5	19.5	16.5	14.0	15.0
24	23.0	21.5	22.5	28.5	23.5	25.5	21.0	19.0	20.0	16.5	12.5	14.0
25	23.5	20.5	22.0	29.0	23.5	26.0	22.5	20.0	21.0	18.0	12.5	15.0
26	25.0	19.5	22.5	28.5	23.5	26.0	24.0	21.0	22.5	16.0	14.0	15.0
27	26.5	21.0	23.5	29.0	23.5	26.5	25.0	22.0	23.5	18.0	14.0	16.0
28	27.0	22.0	24.5	29.0	24.5	26.5	26.0	22.0	24.0	19.5	15.0	16.5
29	26.5	22.5	24.5	29.5	24.5	27.0	25.5	23.0	24.0	19.0	16.0	17.5
30	25.0	23.0	24.0	29.5	24.5	26.5	24.5	22.0	23.0	19.0	16.5	17.5
31	---	---	---	26.5	23.5	25.0	24.5	21.0	22.5	---	---	---
MONTH	27.0	15.5	21.5	30.0	17.5	24.0	28.0	18.5	22.5	26.0	12.5	19.0



## LACKAWAXEN RIVER BASIN

01428750 WEST BRANCH LACKAWAXEN RIVER NEAR ALDENVILLE, PA

LOCATION.--Lat 41°40'28", long 75°22'35", Wayne County, Hydrologic Unit 02040104, on right bank at steel bridge on state highway 247, 0.3 miles downstream from Johnson Creek and 2 miles northwest of Aldenville.

DRAINAGE AREA.--40.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1, 1986 to current year. Crest stage partial record site 1975 to 1986.

GAGE.--Water-stage recorder. Datum of gage is 1,244.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated discharge, which are poor. Several observations of water temperature were made during the year. Published as station 01427950, 1975-1988.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,440 ft<sup>3</sup>/s, March 15, 1986, gage height, 7.40 ft., minimum daily discharge, 6.2 ft<sup>3</sup>/s, Oct. 4, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges, greater than base discharge of 1000 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1430	*1320	*5.23	July 15	1930	1140	4.97
May 13	2200	1060	4.86				

Minimum daily discharge, 14 ft<sup>3</sup>/s, July 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	69	e48	166	134	e60	83	38	64	45	24	34
2	35	51	e46	158	242	e58	91	34	53	22	26	31
3	33	49	e45	121	265	e56	428	32	45	17	25	29
4	24	48	e43	112	283	e54	294	37	40	16	25	26
5	21	41	e42	159	188	e52	209	148	37	15	65	24
6	21	41	e41	133	156	50	156	83	32	16	154	23
7	21	39	e41	109	130	e51	119	65	47	15	78	22
8	20	38	e38	98	131	e52	96	58	34	14	50	20
9	19	174	e36	92	210	54	82	50	34	15	41	19
10	19	131	e34	103	513	68	137	290	31	16	63	31
11	21	88	e31	99	274	110	300	338	29	15	68	23
12	20	74	e30	86	180	138	157	169	25	158	43	20
13	19	65	e29	68	139	140	116	361	23	113	41	18
14	18	60	e28	e49	143	118	98	518	22	49	50	18
15	17	57	e27	e38	128	103	101	236	22	208	33	35
16	17	394	e27	e40	323	90	87	305	21	209	27	24
17	30	288	e27	e43	438	129	86	343	20	81	24	21
18	35	159	e28	e52	209	138	83	251	22	55	21	22
19	278	117	e28	e58	159	100	67	184	22	43	46	21
20	692	106	e28	e50	118	204	61	132	18	46	43	26
21	387	119	e27	e77	121	151	73	210	18	49	82	19
22	185	84	e27	83	108	135	66	152	17	36	73	18
23	121	75	e27	68	253	126	59	107	38	30	53	18
24	93	68	e27	71	190	99	52	87	26	27	86	17
25	77	64	e27	95	121	86	57	71	21	23	63	15
26	66	68	e27	508	100	75	56	62	22	20	47	15
27	58	65	e26	226	e65	63	46	65	21	20	42	16
28	53	70	e26	148	e62	57	40	65	18	21	63	17
29	47	59	e26	130	---	51	38	110	20	19	142	18
30	43	56	e25	356	---	54	41	172	34	19	56	16
31	48	---	e30	183	---	65	---	83	---	23	40	---
TOTAL	2557	2817	992	3779	5383	2787	3379	4856	876	1455	1694	656
MEAN	82.5	93.9	32.0	122	192	89.9	113	157	29.2	46.9	54.6	21.9
MAX	692	394	48	508	513	204	428	518	64	209	154	35
MIN	17	38	25	38	62	50	38	32	17	14	21	15
CFSM	2.03	2.31	.79	3.00	4.74	2.21	2.77	3.86	.72	1.16	1.35	.54
IN.	2.34	2.58	.91	3.46	4.93	2.55	3.10	4.45	.80	1.33	1.55	.60

CAL YR 1989 TOTAL 31145 MEAN 85.3 MAX 1370 MIN 10 CFSM 2.10 IN. 28.54  
WTR YR 1990 TOTAL 31231 MEAN 85.6 MAX 692 MIN 14 CFSM 2.11 IN. 28.62

e Estimated.

## LACKAWAXEN RIVER BASIN

01428750 WEST BRANCH LACKAWAXEN RIVER NEAR ALDENVILLE, PA--Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

WATER TEMPERATURE: July 1988 to current year.

INSTRUMENTATION.--Temperature probe attached to Synergetics Data Collection Platform.

REMARKS.--Missing record due to downlink problems.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27°C, August 15, 1988; minimum, 0.0°C, many days during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25°C, July 5; minimum, 0.0°C, many days during winter period.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.0	9.0	11.5	11.5	8.5	10.5	.0	.0	.0	.0	.0	.0
2	13.5	12.5	13.0	8.5	6.5	7.5	.0	.0	.0	.0	.0	.0
3	13.5	10.0	12.5	7.5	5.0	7.0	.0	.0	.0	.0	.0	.0
4	11.0	8.5	9.5	6.0	3.5	4.5	.0	.0	.0	.0	.0	.0
5	12.0	8.0	9.5	6.5	3.5	5.0	.0	.0	.0	.0	.0	.0
6	13.0	9.5	11.0	9.0	6.0	7.5	.0	.0	.0	.0	.0	.0
7	11.5	9.5	11.0	8.5	6.0	7.5	.0	.0	.0	.0	.0	.0
8	10.0	8.0	9.0	10.0	8.0	9.0	.0	.0	.0	.0	.0	.0
9	8.5	6.0	7.5	10.0	8.0	9.5	.0	.0	.0	.0	.0	.0
10	9.0	4.5	7.0	8.0	6.0	7.0	.0	.0	.0	.0	.0	.0
11	9.5	7.5	8.5	6.0	5.0	5.5	.0	.0	.0	.0	.0	.0
12	11.5	6.0	9.0	6.5	4.5	5.5	.0	.0	.0	.0	.0	.0
13	12.5	8.0	10.0	6.0	4.0	5.0	.0	.0	.0	.0	.0	.0
14	12.0	8.0	10.0	8.5	4.5	6.0	.0	.0	.0	.0	.0	.0
15	14.5	10.0	12.0	11.0	8.5	9.5	.0	.0	.0	.0	.0	.0
16	15.5	12.0	13.0	12.0	7.5	10.5	.0	.0	.0	.0	.0	.0
17	13.5	12.0	13.0	---	---	---	.0	.0	.0	.5	.0	.0
18	12.0	9.5	11.0	4.5	3.0	4.0	.0	.0	.0	.5	.0	.5
19	9.5	8.0	8.5	---	---	---	.0	.0	.0	.5	.0	.0
20	9.5	8.0	8.5	5.5	2.5	4.0	.0	.0	.0	.0	.0	.0
21	8.5	7.5	7.5	4.0	.0	2.0	.0	.0	.0	.5	.0	.0
22	8.5	7.0	7.5	1.0	.0	.5	.0	.0	.0	1.0	.5	.5
23	9.0	6.0	7.5	1.5	.0	1.0	.0	.0	.0	1.5	.5	.5
24	9.0	5.5	7.5	1.5	.0	.5	---	---	---	2.0	.5	1.0
25	11.0	7.0	9.0	2.0	.0	1.0	.0	.0	.0	1.5	1.0	1.0
26	11.5	7.5	9.5	4.0	2.0	3.0	.0	.0	.0	1.0	.0	.5
27	11.5	8.0	9.5	3.5	1.5	2.5	.0	.0	.0	1.5	.0	.5
28	12.5	8.5	10.5	6.0	3.5	4.5	.0	.0	.0	2.0	.5	1.0
29	12.0	8.5	10.0	4.0	.0	1.5	.0	.0	.0	1.5	.0	.5
30	12.0	8.5	10.0	1.0	.0	.5	.0	.0	.0	1.0	.0	.5
31	12.0	10.5	11.0	---	---	---	.0	.0	.0	.5	.0	.0
MONTH	15.5	4.5	9.8	12.0	.0	5.1	.0	.0	.0	2.0	.0	.2

## LACKAWAXEN RIVER BASIN

01428750 WEST BRANCH LACKAWAXEN RIVER NEAR ALDENVILLE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	1.5	.0	.5	.5	.0	.0	4.0	3.5	4.0	17.5	11.0	14.0
2	2.0	1.0	1.5	.5	.0	.0	7.0	4.0	5.0	14.0	10.0	12.0
3	1.5	.5	1.0	1.0	.0	.5	6.0	4.5	5.0	15.0	7.5	11.0
4	1.0	.0	.5	.5	.0	.0	5.0	3.5	4.0	12.0	9.5	10.5
5	.5	.0	.0	.5	.0	.0	5.0	3.0	4.0	11.0	9.0	10.0
6	1.5	.0	.5	1.0	.0	.0	5.5	4.0	4.5	13.5	8.5	10.5
7	3.0	.5	1.5	.5	.0	.0	6.5	3.0	4.5	11.0	8.5	10.0
8	3.0	.0	1.5	.5	.0	.0	5.5	2.5	4.0	16.0	9.0	12.0
9	3.5	1.0	2.0	.5	.0	.0	7.0	1.5	4.5	17.0	11.0	13.5
10	2.0	.5	1.5	2.0	.5	1.0	6.5	5.0	5.5	13.5	12.0	13.0
11	2.0	.0	1.0	3.0	1.0	1.5	7.0	4.0	6.0	11.5	8.5	10.0
12	2.0	.5	1.5	6.0	1.5	3.5	5.5	2.5	4.0	11.5	7.0	9.5
13	2.5	.0	1.0	9.5	3.5	6.5	7.0	1.5	4.0	11.5	9.5	10.5
14	2.5	2.0	2.5	9.5	5.0	7.5	7.0	2.5	5.0	15.0	10.0	12.0
15	1.5	.5	1.0	10.0	6.0	8.0	8.5	5.5	7.0	15.0	11.0	13.0
16	2.0	1.0	1.5	11.5	7.5	9.5	10.0	4.5	7.5	13.0	12.5	13.0
17	1.5	.0	1.0	11.0	9.0	10.0	7.0	4.5	6.0	15.0	12.5	13.5
18	.5	.0	.5	8.5	5.0	7.5	8.0	3.0	5.0	13.0	11.0	12.0
19	2.5	.5	1.0	5.0	4.0	4.5	10.0	3.0	6.5	13.5	10.0	11.5
20	.5	.0	.0	4.5	2.5	3.5	8.5	6.0	7.5	14.0	10.5	12.0
21	.5	.0	.0	5.5	1.5	3.0	10.0	8.0	8.5	12.0	10.0	10.5
22	3.0	.0	1.5	7.5	2.5	5.0	13.0	6.5	9.5	12.0	9.0	10.5
23	5.0	2.5	4.0	6.5	3.5	5.5	14.5	8.0	11.0	12.0	9.0	10.5
24	2.5	.5	1.5	4.0	2.0	3.0	14.5	8.0	11.5	14.0	9.5	11.5
25	.5	.0	.0	5.5	1.5	3.5	15.5	10.0	12.5	15.5	9.5	12.5
26	.0	.0	.0	4.5	1.5	3.0	19.0	11.5	15.0	13.0	11.0	12.0
27	.0	.0	.0	3.5	.0	1.5	20.0	12.5	16.0	16.0	10.5	13.0
28	.5	.0	.0	4.5	.0	2.0	18.5	13.0	15.5	16.5	11.0	14.0
29	---	---	---	6.0	.5	3.0	15.5	13.0	14.0	14.5	11.5	13.0
30	---	---	---	3.5	1.0	2.0	13.0	12.0	12.5	14.5	11.0	12.5
31	---	---	---	4.5	2.0	3.5	---	---	---	15.5	10.0	12.5
MONTH	5.0	.0	1.0	11.5	.0	3.2	20.0	1.5	7.6	17.5	7.0	11.8
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.0	10.5	14.0	19.5	17.0	18.5	22.0	16.5	19.0	19.0	14.0	16.5
2	18.0	12.5	15.0	20.0	16.0	18.0	22.0	16.0	19.0	21.0	16.0	18.0
3	19.5	15.5	17.0	21.5	15.0	18.0	23.5	17.5	20.5	19.5	15.5	17.5
4	16.0	12.0	14.5	24.0	16.0	20.0	23.5	18.0	21.0	18.5	13.5	16.0
5	16.5	10.5	13.0	25.0	20.0	22.0	20.0	17.5	18.5	18.0	15.0	16.5
6	16.5	11.0	13.5	19.5	16.5	18.5	18.5	17.5	18.0	20.5	16.5	18.0
7	18.5	14.0	16.0	21.0	14.0	17.5	20.0	18.0	18.5	19.5	17.5	18.5
8	14.5	12.5	13.5	18.5	14.5	17.0	20.5	17.0	18.5	19.0	14.0	16.5
9	17.0	13.0	15.0	21.5	17.0	19.0	19.5	17.0	18.5	13.5	12.0	13.0
10	17.0	14.0	15.5	23.0	18.5	20.5	18.5	17.5	18.0	18.5	13.5	16.0
11	14.5	12.5	14.0	18.5	16.5	17.5	20.5	17.5	18.5	19.0	14.5	16.5
12	18.5	11.0	14.5	17.5	15.0	16.0	21.5	17.0	19.0	19.5	16.0	17.5
13	17.0	12.0	15.0	17.5	14.5	16.0	21.5	17.5	19.5	20.5	16.5	18.0
14	16.5	14.0	15.5	18.0	15.5	16.5	20.0	17.5	19.0	20.0	16.0	18.0
15	18.5	14.5	16.5	20.0	16.5	18.0	20.5	15.5	18.0	18.5	16.0	17.5
16	22.0	15.5	18.5	20.0	18.0	19.0	21.0	15.5	18.0	16.0	13.5	15.0
17	22.0	16.5	19.0	21.5	17.0	19.0	22.0	16.5	19.5	14.0	10.5	12.5
18	19.0	17.0	18.0	22.5	17.5	20.0	23.0	---	---	13.5	9.0	11.0
19	21.0	16.5	18.5	22.5	18.0	20.0	20.0	17.0	19.0	10.5	8.5	10.0
20	---	---	---	23.5	19.0	21.0	16.5	15.0	16.0	13.0	11.0	12.0
21	20.5	16.0	17.5	21.0	19.0	20.0	15.5	14.5	15.0	13.5	9.0	11.5
22	21.0	15.0	18.0	23.0	17.5	20.5	17.0	15.0	16.0	12.5	11.5	12.0
23	20.0	17.0	18.0	22.0	19.0	20.5	17.0	15.5	16.0	13.0	10.0	11.5
24	17.5	15.5	16.5	22.0	18.0	20.0	18.0	16.0	17.0	12.5	10.0	11.0
25	17.5	15.0	16.0	22.5	16.5	19.5	19.5	17.0	18.0	13.5	8.5	11.0
26	20.0	13.5	16.5	23.0	16.5	19.5	20.5	16.5	18.5	12.0	9.5	11.0
27	20.0	15.0	17.5	22.5	16.5	19.5	20.5	16.5	18.5	14.5	9.5	12.0
28	21.5	15.5	18.5	24.0	18.0	21.0	21.5	17.5	19.5	15.0	10.5	12.5
29	21.0	16.5	18.5	23.5	18.0	20.5	20.5	18.0	19.5	16.0	11.5	13.5
30	21.0	17.5	19.0	24.0	18.0	20.5	20.0	16.0	18.0	16.0	12.5	14.0
31	---	---	---	20.0	18.0	19.5	19.0	14.5	16.5	---	---	---
MONTH	22.0	10.5	16.3	25.0	14.0	19.1	23.5	14.5	18.3	21.0	8.5	14.5

## LACKAWAXEN RIVER BASIN

01429000 WEST BRANCH LACKAWAXEN RIVER AT PROMPTON, PA

LOCATION.--Lat 41°35'14", long 75°19'38", Wayne County, Hydrologic Unit 02040103, on left bank 500 ft downstream from Prompton Reservoir, 1,500 ft upstream from bridge on U.S. Highway 6 at Prompton, and 2,000 ft upstream from Van Auken Creek.

DRAINAGE AREA.--59.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1944 to current year. Prior to October 1952, published as Lackawaxen River at Prompton.

REVISED RECORDS.--WSP 1432: 1948-49. WDR PA-71-1: 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,083.78 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated since 1960 by Prompton Reservoir (station 01428900) 500 ft upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 109 ft<sup>3</sup>/s, 24.72 in/yr, adjusted for storage since January 1961.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,860 ft<sup>3</sup>/s Aug. 18, 1955, gage height, 9.24 ft, from rating curve extended above 3,600 ft<sup>3</sup>/s; no flow July 26 to Aug. 25, 1960, result of construction work upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1942, reached a stage of 16.7 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 778 ft<sup>3</sup>/s, Oct. 21, gage height, 3.35 ft; minimum daily, 27 ft<sup>3</sup>/s, Oct. 16, July 11, Sept. 28, 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	82	69	33	264	109	102	58	124	34	32	57
2	34	80	57	35	269	103	118	55	97	35	31	49
3	37	75	56	36	357	105	269	50	80	35	31	44
4	37	72	51	37	365	99	391	50	69	33	30	40
5	35	66	50	38	353	87	335	101	62	32	32	37
6	34	61	50	40	271	82	271	122	56	31	74	36
7	32	60	52	41	240	69	220	105	57	30	117	35
8	31	59	51	42	216	65	181	94	57	29	96	34
9	30	92	48	42	225	65	153	85	55	28	74	33
10	30	171	46	43	417	68	138	124	52	28	74	33
11	30	151	45	46	437	95	261	364	49	27	114	33
12	30	126	44	48	325	137	250	289	46	33	99	33
13	30	105	42	47	249	164	199	285	43	86	76	33
14	29	94	40	45	214	177	164	579	40	88	73	31
15	28	84	40	44	204	151	150	426	40	76	66	31
16	27	152	39	44	248	139	141	350	39	216	55	31
17	28	e245	39	46	464	137	126	414	38	171	48	31
18	29	e198	38	140	350	173	124	370	38	115	42	30
19	63	e170	38	233	268	159	109	311	38	79	40	30
20	405	157	38	170	215	196	95	253	37	63	44	30
21	642	153	38	146	167	217	93	232	36	60	57	30
22	394	135	37	137	152	202	95	238	35	56	84	30
23	266	116	37	118	208	187	90	202	35	49	80	30
24	195	101	37	104	259	165	83	164	37	43	83	30
25	152	91	36	114	219	144	79	134	37	39	88	29
26	127	87	35	352	163	127	81	111	36	37	79	28
27	104	89	34	377	133	109	76	96	35	36	66	28
28	91	89	34	278	123	95	67	93	33	36	60	27
29	82	87	33	224	---	86	62	91	33	35	106	27
30	75	75	33	382	---	84	59	167	33	34	99	27
31	73	---	33	344	---	88	---	157	---	33	70	---
TOTAL	3235	3323	1320	3826	7375	3884	4582	6170	1467	1727	2120	997
MEAN	104	111	42.6	123	263	125	153	199	48.9	55.7	68.4	33.2
MAX	642	245	69	382	464	217	391	579	124	216	117	57
MIN	27	59	33	33	123	65	59	50	33	27	30	27
MEAN#	107	111	37.7	134	258	124	152	202	42.3	55.0	72.3	27.5
CFSM#	1.79	1.86	.63	2.24	4.32	2.08	2.55	3.38	.71	.92	1.21	.46
IN.#	2.07	2.07	.73	2.59	4.50	2.39	2.84	3.90	.79	1.06	1.40	.51

CAL YR 1989 TOTAL 38280 MEAN 105 MAX 1200 MIN 12 MEAN# 105 CFSM# 1.75 IN.# 23.81  
WTR YR 1990 TOTAL 40026 MEAN 110 MAX 642 MIN 27 MEAN# 110 CFSM# 1.84 IN.# 24.94

e Estimated.

## LACKAWAXEN RIVER BASIN

01429000 WEST BRANCH LACKAWAXEN RIVER AT PROMPTON, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURE: October 1987 to current year.

INSTRUMENTATION.--Temperature probe attached to Synergetics Data Collection Platform.

REMARKS.--Missing record due to probe malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.5°C, September 10, 1989; minimum, 1.0°C, Jan. 28, 29, 31, Feb. 1, 2, 6, 7, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.0°C, August 8; minimum, 1.0°C, Jan. 28, 29, 31, Feb. 1, 2, 6, 7.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.5	14.0	14.5	---	---	---	2.0	1.5	2.0	3.5	2.5	3.0
2	15.0	14.5	15.0	11.0	10.5	10.5	---	---	---	4.0	2.5	3.0
3	16.0	14.5	15.0	10.5	9.5	10.0	---	---	---	4.0	2.5	3.0
4	15.5	13.5	14.0	---	---	---	2.5	1.5	1.5	3.5	3.0	3.5
5	15.5	13.0	14.0	---	---	---	2.5	1.5	2.0	4.0	3.0	3.0
6	15.0	13.5	14.0	---	---	---	2.5	2.0	2.5	4.0	3.0	3.0
7	14.5	13.5	13.5	---	---	---	2.5	2.0	2.0	4.0	3.0	3.0
8	14.0	12.5	13.0	10.0	8.5	9.0	2.5	2.0	2.5	3.5	3.0	3.0
9	13.0	11.5	12.5	9.5	9.0	9.5	3.0	2.0	2.5	4.0	3.0	3.5
10	13.5	11.5	12.0	9.0	8.5	9.0	3.0	2.0	2.5	3.5	3.0	3.5
11	13.0	11.5	12.0	8.5	8.5	8.5	3.5	2.5	3.0	3.5	3.0	3.0
12	14.5	11.5	12.0	8.5	8.0	8.0	3.5	2.5	3.0	3.5	2.5	3.0
13	14.5	11.0	12.0	8.0	7.5	8.0	3.5	2.0	2.5	3.5	2.5	2.5
14	13.5	11.5	12.0	---	---	---	3.0	2.5	2.5	3.5	2.5	3.0
15	15.0	11.5	12.5	8.5	---	---	3.5	2.0	2.5	3.5	2.5	3.0
16	14.5	12.0	12.5	---	---	---	3.0	2.0	2.5	4.0	3.0	3.5
17	13.0	12.0	12.5	---	---	---	3.5	2.0	2.5	4.0	3.0	3.5
18	13.0	12.0	12.5	---	---	---	3.5	2.0	2.5	3.0	2.5	2.5
19	13.0	11.0	12.0	---	---	---	3.0	2.0	2.5	2.5	2.0	2.5
20	12.5	11.5	12.5	7.0	6.5	7.0	3.0	2.0	2.5	2.0	---	---
21	11.5	10.0	10.5	6.5	4.5	5.5	3.0	2.0	2.5	2.0	1.5	1.5
22	10.0	10.0	10.0	---	---	---	3.0	1.5	2.0	1.5	1.5	1.5
23	10.0	9.0	9.5	3.5	3.0	3.5	3.0	1.5	2.0	2.0	1.5	1.5
24	9.5	9.0	9.0	---	3.0	---	---	---	---	2.0	1.5	1.5
25	---	---	---	---	---	---	3.0	2.0	2.5	1.5	1.5	1.5
26	11.0	---	---	---	---	---	3.0	1.5	2.5	2.0	1.5	2.0
27	---	9.5	---	---	---	---	3.0	1.5	2.0	1.5	1.5	1.5
28	---	---	---	---	---	---	3.0	2.0	2.5	1.5	1.0	1.5
29	---	---	---	---	---	---	---	2.0	---	1.5	1.0	1.5
30	---	---	---	3.0	2.0	2.5	3.0	2.0	2.5	1.5	1.5	1.5
31	10.5	10.0	10.0	---	---	---	3.0	3.0	3.0	1.5	1.0	1.0
MONTH	16.5	9.0	12.4	11.0	2.0	7.6	3.5	1.5	2.4	4.0	1.0	2.5



## LACKAWAXEN RIVER BASIN

01429000 WEST BRANCH LACKAWAXEN RIVER AT PROMPTON, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	1.5	1.0	1.5	2.5	2.0	2.0	5.0	5.0	5.0	15.5	12.5	13.5
2	1.5	1.0	1.0	2.5	2.0	2.0	6.0	5.0	5.0	16.0	12.5	14.0
3	1.5	1.5	1.5	2.5	1.5	2.0	5.5	5.0	5.5	16.5	12.5	14.0
4	1.5	1.5	1.5	2.5	1.5	2.0	5.5	5.5	5.5	14.0	11.0	13.0
5	1.5	1.5	1.5	2.5	2.0	2.5	5.5	5.0	5.5	15.0	12.0	14.0
6	1.5	1.0	1.5	3.0	2.0	2.0	5.5	5.5	5.5	15.5	14.0	14.5
7	1.5	1.0	1.5	3.5	2.0	2.0	6.0	5.5	5.5	15.0	14.0	14.5
8	1.5	1.5	1.5	3.5	2.0	2.5	6.0	5.0	5.5	15.0	13.5	14.0
9	1.5	1.5	1.5	2.5	2.0	2.5	6.0	5.0	5.5	15.0	13.0	13.5
10	2.0	1.5	1.5	3.0	2.5	2.5	5.5	5.5	5.5	14.5	12.5	13.0
11	2.0	2.0	2.0	3.0	2.5	2.5	6.0	5.5	6.0	14.5	14.0	14.5
12	2.0	1.5	2.0	---	2.5	---	6.5	6.0	6.0	14.0	12.5	13.5
13	2.0	1.5	2.0	3.5	2.5	3.0	7.5	6.0	6.5	13.0	12.5	13.0
14	2.0	2.0	2.0	3.5	3.0	3.5	7.0	6.0	6.5	14.5	13.0	13.5
15	---	---	---	4.0	3.5	3.5	7.0	6.5	6.5	13.5	12.0	12.5
16	2.5	2.0	2.0	4.5	3.5	4.0	8.5	6.5	7.5	14.0	13.5	13.5
17	2.0	2.0	2.0	4.5	4.0	4.0	8.0	7.0	7.5	14.5	13.0	14.0
18	2.5	2.0	2.0	4.5	4.0	4.5	8.0	7.0	7.5	15.0	14.0	14.5
19	2.0	2.0	2.0	4.0	3.5	4.0	8.5	7.0	7.5	15.0	14.0	14.5
20	2.0	2.0	2.0	4.5	4.0	4.5	7.5	7.0	7.5	14.5	13.5	14.0
21	2.5	2.0	2.0	5.0	4.0	4.5	9.0	7.5	8.0	14.0	13.5	13.5
22	2.5	2.0	2.0	5.5	5.0	5.0	10.5	8.0	9.0	14.5	13.5	14.0
23	2.5	2.0	2.0	6.0	5.0	5.5	12.0	9.0	10.5	14.5	13.5	14.0
24	2.5	2.0	2.0	5.5	5.0	5.0	11.5	9.5	10.5	15.0	13.5	14.5
25	2.5	2.0	2.0	6.0	5.0	5.5	12.5	10.0	11.0	17.5	13.5	15.0
26	2.5	2.0	2.5	6.0	5.0	5.5	15.5	11.5	13.0	15.0	13.0	14.0
27	2.5	2.0	2.0	5.5	4.5	5.0	15.5	12.5	13.5	15.0	13.0	14.0
28	2.5	2.0	2.0	6.0	4.5	5.0	14.5	11.5	13.0	16.5	13.5	15.0
29	---	---	---	6.0	5.0	5.0	13.0	12.5	13.0	15.5	13.5	14.5
30	---	---	---	5.0	4.5	5.0	12.5	12.5	12.5	16.5	15.0	15.5
31	---	---	---	5.5	5.0	5.0	---	---	---	17.0	15.0	16.0
MONTH	2.5	1.0	1.8	6.0	1.5	3.7	15.5	5.0	7.9	17.5	11.0	14.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	15.5	16.5	20.0	18.5	19.0	22.5	19.0	20.5	21.0	20.0	20.5
2	17.5	15.5	16.0	22.0	18.0	19.0	21.0	19.5	20.5	20.5	20.0	20.0
3	16.5	15.0	15.5	21.5	18.0	19.5	21.5	20.0	20.5	20.0	19.5	20.0
4	17.5	16.0	16.5	22.5	19.0	20.0	21.0	20.0	20.5	20.0	19.5	19.5
5	18.5	15.0	16.0	23.0	18.5	20.5	21.0	20.0	20.5	19.5	19.0	19.5
6	16.0	14.5	15.5	20.5	18.5	19.5	22.5	20.5	21.5	19.5	19.0	19.5
7	19.5	14.0	16.5	22.0	18.5	19.5	22.5	22.0	22.5	19.5	19.0	19.5
8	16.5	16.0	16.0	20.5	19.0	19.5	24.0	21.5	22.5	19.5	19.0	19.0
9	16.5	15.5	16.0	21.5	19.5	20.5	22.5	21.0	22.0	19.5	19.0	19.0
10	18.0	16.0	16.5	23.5	19.5	21.0	21.5	21.0	21.0	20.5	18.5	19.5
11	18.0	17.0	17.5	20.0	19.0	19.5	23.5	21.5	22.0	19.0	18.5	19.0
12	20.0	16.5	17.5	20.0	17.0	18.0	23.5	22.0	22.5	19.0	19.0	19.0
13	18.0	16.5	17.0	21.0	20.0	20.5	22.0	20.0	21.5	19.5	18.5	19.0
14	17.5	16.5	17.0	20.0	19.5	19.5	22.0	21.0	21.5	19.5	18.5	19.0
15	18.0	16.5	17.0	20.5	19.0	19.5	22.5	21.0	22.0	21.0	19.0	20.0
16	19.0	17.0	17.5	23.0	21.0	22.0	21.5	21.0	21.5	20.5	19.5	20.0
17	19.0	17.0	17.5	23.5	21.5	22.0	21.5	20.5	21.0	20.0	18.5	19.5
18	17.5	17.0	17.0	23.5	21.5	22.0	21.0	20.5	20.5	19.0	18.0	18.5
19	18.0	17.0	17.5	23.0	21.5	22.5	20.5	20.0	20.5	18.5	18.0	18.0
20	---	17.0	---	22.5	21.5	22.0	20.5	20.0	20.5	18.0	17.5	17.5
21	19.0	17.0	17.5	21.5	21.0	21.5	20.5	20.0	20.5	17.5	16.5	17.0
22	18.5	16.5	17.5	21.5	20.5	21.0	20.5	20.0	20.5	16.0	15.5	15.5
23	19.5	16.5	17.5	21.0	20.0	20.5	20.0	19.5	20.0	16.5	15.5	16.0
24	17.5	16.5	17.0	20.5	20.0	20.0	20.5	19.5	20.0	16.0	15.5	16.0
25	18.5	16.5	17.5	20.5	19.5	20.0	21.5	20.0	20.5	16.0	15.0	15.5
26	19.5	16.5	17.5	20.0	19.5	20.0	22.5	20.5	21.5	15.0	15.0	15.0
27	19.5	17.0	18.0	20.0	19.5	19.5	21.5	20.5	21.0	15.5	15.0	15.0
28	20.0	17.5	18.5	20.0	19.5	19.5	22.0	20.5	21.0	15.0	14.5	15.0
29	19.5	18.0	18.5	20.0	19.5	19.5	23.5	21.5	22.5	15.0	14.5	15.0
30	20.5	18.0	18.5	20.0	19.5	20.0	23.0	22.0	22.5	15.0	14.5	15.0
31	---	---	---	20.0	19.5	20.0	22.5	21.0	21.5	---	---	---
MONTH	20.5	14.0	17.1	23.5	17.0	20.2	24.0	19.0	21.2	21.0	14.5	18.0

## LACKAWAXEN RIVER BASIN

01429500 DYBERRY CREEK NEAR HONESDALE, PA

LOCATION.--Lat 41°36'25", long 75°16'00", Wayne County, Hydrologic Unit 02040103, on right bank 180 ft upstream from unnamed tributary, 1,700 ft downstream from General Edgar Jadwin Reservoir, 2.1 mi north of Honesdale, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--64.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year. Published as "at Dyberry" October 1943 to September 1959 and as "near Dyberry" October 1959 to September 1961.

REVISED RECORDS.--WSP 1382: 1947(M), 1950(M), 1951-53.

GAGE.--Water-stage recorder. Datum of gage is 970.70 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1957, nonrecording gage at site 1.9 mi upstream at datum 13.70 ft higher.

REMARKS.--Record good except for periods of estimated discharge which are poor. Flow regulated since October 1959 by General Edgar Jadwin Reservoir (station 01429400) 1,700 ft upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 113 ft<sup>3</sup>/s, 23.77 in/yr, adjusted for storage since October 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft<sup>3</sup>/s July 10, 1952, gage height, 14.6 ft, site and datum then in use, from rating curve extended above 2,500 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 13.78 ft, site and datum then in use; no flow Oct. 2, 3, 1968, result of shutoff at General Edgar Jadwin Reservoir.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1942, reached a stage of 15.86 ft, site and datum then in use, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft<sup>3</sup>/s, Oct. 20, gage height, 5.53 ft; minimum daily, 15 ft<sup>3</sup>/s July 30, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	122	64	64	233	111	135	61	97	97	28	46
2	50	94	51	61	335	115	130	55	81	55	19	41
3	66	90	e48	46	464	121	490	49	74	39	17	51
4	48	90	e43	42	532	109	438	51	67	31	15	40
5	39	82	e42	50	407	92	271	181	62	27	100	36
6	33	79	e41	50	256	86	206	118	56	24	420	34
7	29	77	e40	42	242	77	172	88	66	22	204	32
8	26	73	e39	40	233	84	146	79	58	20	104	29
9	24	168	e37	38	271	86	129	71	59	19	65	26
10	30	168	e34	43	579	99	136	216	58	19	135	59
11	33	121	e33	50	414	132	329	444	52	18	437	44
12	32	104	e32	46	258	176	205	195	47	163	154	39
13	28	89	e31	39	207	178	157	374	41	237	102	32
14	25	88	e31	40	199	155	137	848	38	92	118	29
15	22	84	e31	38	196	135	137	344	41	67	78	42
16	21	210	e30	39	354	123	129	342	39	148	60	40
17	37	213	e30	57	568	143	118	521	36	80	50	32
18	63	144	e30	197	263	175	117	360	49	55	44	30
19	294	120	e30	169	216	130	102	247	49	43	43	27
20	790	115	e29	108	176	240	92	191	41	36	53	42
21	1060	126	e29	115	147	209	97	249	35	36	97	35
22	358	105	e29	106	148	182	95	215	31	34	98	34
23	196	99	e29	93	269	154	83	164	54	29	70	35
24	160	90	e29	91	272	131	75	136	63	27	77	30
25	134	84	e28	114	177	121	79	116	43	24	76	28
26	117	88	e28	548	130	111	80	102	35	21	61	25
27	108	90	e28	291	115	97	70	94	29	19	52	24
28	96	90	e28	198	128	89	63	96	26	18	48	23
29	88	86	e27	178	---	86	59	106	26	17	167	23
30	79	73	e26	729	---	91	61	241	67	15	77	21
31	78	---	40	358	---	104	---	129	---	18	56	---
TOTAL	4197	3262	1067	4080	7789	3942	4538	6483	1520	1550	3125	1029
MEAN	135	109	34.4	132	278	127	151	209	50.7	50.0	101	34.3
MAX	1060	213	64	729	579	240	490	848	97	237	437	59
MIN	21	73	26	38	115	77	59	49	26	15	15	21
MEAN*	135	109	34.4	132	278	127	151	209	50.7	50.0	101	34.3
CFSM*	2.10	1.68	.53	2.04	4.31	1.97	2.34	3.24	.78	.77	1.56	.53
IN.*	2.42	1.88	.61	2.35	4.49	2.27	2.61	3.73	.88	.89	1.80	.59

CAL YR 1989 TOTAL 42454.8 MEAN 116 MAX 1470 MIN 9.8 MEAN\* 116 CFSM\* 1.80 IN.\* 24.45  
WTR YR 1990 TOTAL 42582 MEAN 117 MAX 1060 MIN 15 MEAN\* 117 CFSM\* 1.81 IN.\* 24.52

\* Adjusted for change in contents of General Edgar Jadwin Reservoir.  
e Estimated.

## LACKAWAXEN RIVER BASIN

01430000 LACKAWAXEN RIVER NEAR HONESDALE, PA

LOCATION.--Lat 41°33'43", Long 75°14'54", Wayne County, Hydrologic Unit 02040103, on right bank at Lemmitzer Bridge (Brown Street), on U.S. Highway 6, 1.2 miles downstream from Dyberry Creek.

DRAINAGE AREA.--164 mi .

PERIOD OF RECORD.--October 1948 to September 1969, October 1985 to current year. Operated as crest stage partial record gage July 1973 to September 1985.

REVISED RECORDS.--WDR PA-90-1: 1989.

GAGE.--Water stage recorder. Datum of gage is 946.34 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated since 1960 by Prompton Reservoir (station 01428900) and, at high flow, since 1959 by General Edgar Jadwin Reservoir (station 01429400).

AVERAGE DISCHARGE.--26 yrs, (1948-1969, 1986-1990) 275 ft<sup>3</sup>/s, 22.79 in/yr, adjusted for storage since October 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft<sup>3</sup>/s, Aug. 18, 1955 (gage height, 15.52), from rating curve extended above 11,000 ft<sup>3</sup>/s; minimum observed, 6.2 ft<sup>3</sup>/s, Sep. 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 1942 reached a stage of 24.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,210 ft<sup>3</sup>/s, Oct. 20, gage height, 5.42 ft, minimum daily, 56 ft<sup>3</sup>/s, July 11.

REVISIONS.--Revised figures of discharge for the water year 1989, superseding those published in the report for 1989 are given below.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e26	e43	193	117	150	127	1020	125	190	251	74	48
2	e25	e51	176	113	155	118	779	1330	290	209	74	44
3	e23	e60	161	110	156	114	651	1130	233	176	79	43
4	e22	56	148	e82	143	115	621	675	183	156	74	40
5	e27	79	137	e80	126	115	568	520	e170	440	77	37
6	e25	465	129	e78	123	124	556	3830	e165	633	75	35
7	e24	290	125	e78	114	115	558	3560	e200	438	70	36
8	e23	226	121	e79	105	111	483	2400	e230	414	64	36
9	e22	185	114	e80	e94	99	420	1240	e240	335	59	36
10	e21	157	111	e80	e82	89	386	1190	e700	275	55	36
11	e20	138	107	e80	e75	85	326	2390	e510	240	52	35
12	e20	124	e100	97	e68	88	277	1960	e350	216	54	35
13	e20	155	e97	117	e62	85	250	1140	e340	222	85	33
14	e19	286	e92	135	e60	85	242	859	e480	199	81	45
15	e19	234	e85	119	134	94	235	776	1400	169	69	68
16	e19	194	e82	126	207	119	348	742	1450	162	60	54
17	e18	198	e81	113	158	111	341	1400	1230	167	55	108
18	e18	222	e80	108	127	118	297	957	1090	145	51	87
19	e17	191	e80	111	106	163	265	662	734	114	49	95
20	e17	712	e81	113	91	133	230	515	542	171	75	390
21	e17	1530	e81	114	449	125	204	423	482	236	71	259
22	e80	801	e82	e110	630	117	182	347	557	215	64	184
23	e140	522	e82	104	378	117	165	296	503	310	63	193
24	e100	405	e95	87	237	215	150	362	824	190	62	197
25	e90	332	e150	84	196	877	141	324	908	148	55	145
26	e73	283	136	86	156	870	133	270	687	120	49	155
27	e62	250	124	153	152	708	123	282	495	105	46	156
28	e56	239	130	136	132	607	114	261	443	102	45	124
29	e50	238	152	127	---	812	110	214	390	90	44	101
30	e50	212	136	130	---	1030	109	184	309	81	67	94
31	e48	---	134	148	---	1130	---	177	---	77	55	---
TOTAL	1191	8878	3602	3295	4666	8816	10284	30541	16325	6806	1953	2949
MEAN	38.4	296	116	106	167	284	343	985	544	220	63.0	98.3
MAX	140	1530	193	153	630	1130	1020	3830	1450	633	85	390
MIN	17	43	80	78	60	85	109	125	165	77	44	33
MEAN*	39.1	305	114	108	167	288	337	986	549	217	56.5	102
CFSM*	.24	1.86	.70	.66	1.02	1.76	2.05	6.01	3.35	1.32	.34	.62
IN.*	.27	2.08	.80	.76	1.06	2.02	2.29	6.93	3.74	1.53	.40	.69

CAL YR 1988 TOTAL 71807 MEAN 196 MAX 1820 MIN 14 MEAN\* 196 CFSM\* 1.20 IN.\* 16.29  
WTR YR 1989 TOTAL 99306 MEAN 272 MAX 3830 MIN 17 MEAN\* 273 CFSM\* 1.66 IN.\* 22.61

\* Adjusted for change in contents of General Edgar Jadwin Reservoir and Prompton Reservoir.  
e Estimated.

## LACKAWAXEN RIVER BASIN

01430000 LACKAWAXEN RIVER NEAR HONESDALES, PA--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	283	169	e306	712	289	278	147	299	162	80	146
2	96	247	e144	e198	831	272	288	137	243	115	70	123
3	126	228	e138	e160	1180	288	904	126	211	92	66	118
4	102	223	e136	e135	1290	273	1080	128	189	78	63	105
5	87	205	e134	e140	1090	225	797	401	170	71	160	95
6	79	195	e134	e142	728	216	616	352	152	69	729	91
7	74	194	e132	127	662	194	487	279	170	65	534	87
8	68	190	e126	118	611	195	402	247	163	63	306	81
9	65	313	e118	112	666	178	339	226	159	62	201	75
10	64	489	e108	122	1280	203	318	470	156	60	277	111
11	72	386	106	136	1140	286	666	1140	146	56	821	101
12	71	320	102	132	765	383	546	699	134	e200	387	93
13	66	268	103	132	578	428	415	842	122	e630	246	82
14	60	247	e102	e115	533	402	349	1970	113	e400	263	76
15	59	235	e102	110	513	356	330	1110	112	e270	205	87
16	57	492	e101	112	771	321	317	929	109	e390	159	89
17	83	740	e101	144	1290	337	282	1300	103	e330	130	81
18	118	521	e101	433	786	432	280	1030	108	e230	112	76
19	493	405	e100	560	610	353	246	771	112	167	102	74
20	1960	355	e100	375	483	541	219	588	106	137	109	92
21	2520	355	e100	357	381	542	217	591	98	133	180	88
22	1170	305	e100	345	368	472	225	567	94	127	252	84
23	660	275	e100	296	572	413	207	454	124	112	209	84
24	486	241	e99	275	681	350	190	377	152	99	214	80
25	391	221	e99	331	495	308	187	318	120	89	221	75
26	332	223	e98	1280	411	277	198	276	103	81	190	71
27	296	230	e98	989	318	239	181	249	90	77	155	66
28	262	223	e98	657	306	210	163	239	82	72	144	63
29	232	216	e97	545	---	197	149	264	78	70	405	60
30	214	181	e94	1700	---	201	148	552	118	67	271	61
31	208	---	e140	1070	---	220	---	390	---	66	190	---
TOTAL	10653	9006	3480	11654	20051	9601	11024	17169	4136	4640	7451	2615
MEAN	344	300	112	376	716	310	367	554	138	150	240	87.2
MAX	2520	740	169	1700	1290	542	1080	1970	299	630	821	146
MIN	57	181	94	110	306	178	148	126	78	56	63	60
MEAN*	347	300	107	387	711	309	306	557	131	149	244	81.5
CFSM*	2.12	1.83	.65	2.36	4.34	1.88	2.23	3.40	.80	.81	1.49	.50
IN.*	2.44	2.04	.75	2.72	4.52	2.17	2.49	3.92	.89	1.05	1.72	.55

CAL YR 1989 TOTAL 108774 MEAN 298 MAX 3830 MIN 33 MEAN\* 299 CFSM\* 1.82 IN.\* 24.05  
WTR YR 1990 TOTAL 111480 MEAN 305 MAX 2520 MIN 56 MEAN\* 305 CFSM\* 1.86 IN.\* 25.29

\* Adjusted for change in contents in General Jadwin Reservoir and Prompton Reservoir.  
e Estimated.

## LACKAWAXEN RIVER BASIN

01431500 LACKAWAXEN RIVER AT HAWLEY, PA

LOCATION.--Lat 41°28'34", long 75°10'21", Wayne County, Hydrologic Unit 02040103, on left bank at Church Street Bridge in Hawley, 700 ft upstream from Wallenpaupack Creek, and 3,000 ft downstream from Middle Creek.

DRAINAGE AREA.--290 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1908 to September 1917, August 1938 to current year. Monthly discharge 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.

REVISED RECORDS.--WSP 1951: 1938-41. WSP 1302: 1909-17. WSP 1432: 1942. WSP 1502: 1956.

GAGE.--Water-stage recorder, and crest-stage gage. Datum of gage is 869.00 ft above National Geodetic Vertical Datum of 1929. Prior to 1938, nonrecording gage at same site and datum. Aug. 10, 1938, to Aug. 19, 1955, water-stage recorder and Aug. 20, 1955, to Feb. 13, 1956, nonrecording gage at site 1,000 ft downstream at same datum.

REMARKS.--Records fair except for periods of estimated record, which are poor. Regulation since 1960 by Prompton Reservoir (station 01428900) and, at high flow, since 1959 by General Edgar Jadwin Reservoir (station 01429400) located 14.9 mi and 13.0 mi upstream, respectively. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--61 years, (water years 1908-17, 1938-90), 483 ft<sup>3</sup>/s, 22.62 in/yr, adjusted for storage since October 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,900 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 24.8 ft at present site, 20.6 ft at former site, from floodmark, from rating curve extended above 12,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 24.2 ft at present site, 20.1 ft at former site; minimum daily, 8 ft<sup>3</sup>/s, Sept. 8, 1909.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 19.1 ft at present site, 13.9 ft at former site, from floodmarks, discharge, 27,600 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,150 ft<sup>3</sup>/s, Oct. 20, gage height 8.02 ft; minimum daily, 79 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	417	262	e620	1410	474	520	249	535	240	92	214
2	115	376	223	e250	1550	461	548	229	424	205	89	180
3	177	328	e210	e220	2330	505	1540	200	364	157	80	165
4	151	322	e208	e198	2320	484	2000	193	324	127	79	145
5	124	298	e203	e225	2110	401	1440	653	288	114	102	130
6	111	277	e202	e265	1380	378	1110	616	255	109	894	126
7	103	272	e200	e230	1260	317	880	465	285	101	859	125
8	98	259	e195	e200	1150	308	730	397	288	93	494	112
9	93	344	e180	e180	1190	328	616	355	273	91	305	102
10	90	686	e174	e188	1950	364	552	567	269	92	298	132
11	95	547	e168	e202	1890	494	961	1850	241	93	1160	142
12	97	443	e162	e201	1300	648	878	1110	217	321	644	122
13	97	364	e150	e190	986	702	672	1060	196	987	399	110
14	93	338	e148	e160	896	651	566	2510	183	558	399	101
15	90	321	e148	e160	873	578	559	1610	183	371	327	121
16	86	630	e146	e160	1220	524	573	1250	179	580	249	124
17	113	1110	e146	e220	2010	534	535	1860	165	510	197	107
18	254	770	e146	852	1300	758	528	1520	158	342	170	97
19	731	588	e145	1030	1010	613	478	1180	168	250	152	95
20	3470	502	e145	607	813	880	425	926	167	197	151	117
21	4490	532	e145	593	645	984	404	888	155	185	226	120
22	2100	458	e145	639	616	842	459	916	144	178	366	109
23	1150	419	e144	535	943	724	408	723	155	159	320	112
24	816	369	e144	481	1290	620	355	613	234	140	364	105
25	640	339	e144	640	943	553	348	515	191	123	373	98
26	522	346	e144	2400	677	497	384	449	161	109	307	92
27	451	365	e143	1910	581	438	346	412	139	104	240	89
28	390	348	e143	1210	550	375	296	383	124	96	210	85
29	343	338	e142	963	---	347	255	409	117	91	513	82
30	306	282	e139	3210	---	358	253	1120	155	86	417	81
31	289	---	e225	2240	---	400	---	757	---	86	282	---
TOTAL	17799	12988	5219	21179	35193	16540	19619	25985	6737	6895	10758	3540
MEAN	574	433	168	683	1257	534	654	838	225	222	347	118
MAX	4490	1110	262	3210	2330	984	2000	2510	535	987	1160	214
MIN	86	259	139	160	550	308	253	193	117	86	79	81
MEAN*	577	433	163	694	1252	533	653	841	218	221	351	112
CFSM*	1.99	1.49	.56	2.39	4.32	1.84	2.25	2.90	.75	.76	1.21	.39
IN.*	2.29	1.67	.65	2.76	4.50	2.12	2.51	3.34	.84	.88	1.40	.43

CAL YR 1989 TOTAL 185955 MEAN 509 MAX 6390 MIN 55 MEAN\* 509 CFSM\* 1.76 IN.\* 23.85  
WTR YR 1990 TOTAL 182452 MEAN 500 MAX 4490 MIN 79 MEAN\* 500 CFSM\* 1.72 IN.\* 23.40

\* Adjusted for change in contents in Prompton Reservoir and Edgar Jadwin Reservoir.  
e Estimated.



## LACKAWAXEN RIVER BASIN

01432000 WALLENPAUPACK CREEK AT WILSONVILLE, PA

LOCATION.--Lat 41°27'33", long 75°11'08", Pike County, Hydrologic Unit 02040103, at hydroelectric plant of Pennsylvania Power and Light Co., at lower end of penstock, at Kimble, 3 mi east of dam at Wilsonville, 1.2 mi south of Hawley.

DRAINAGE AREA.--228 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1918, 1923-24. WSP 1432: 1920-21. WSP 2102: 1966 (monthly mean).

GAGE.--Daily discharge determined from flow through turbines, computed from records of generator output and flow over roller gates, computed on basis of head on gates. Prior to Nov. 3, 1925, nonrecording gage at site 1,000 ft downstream from dam at datum 1,146.78 ft National Geodetic Vertical Datum of 1929.

REMARK.--No estimated daily discharges in the water year. Records good. No flow over spillway or roller gates. Flow regulated since 1925, by Lake Wallenpaupack (station 01431700).

COOPERATION.--Records of generator load, operation of power plant, net operation head, water-surface elevations in lake and daily discharges furnished by Pennsylvania Power and Light Co., in connection with a Federal Power Commission project.

AVERAGE DISCHARGE.--81 years, 366 ft<sup>3</sup>/s, 21.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,440 ft<sup>3</sup>/s June 30, 1973; no flow at times each year subsequent to Nov. 3, 1925.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	894	.00	.00	454	1080	.00	226	925	.00	457	77
2	321	1430	.00	227	464	1110	.00	227	.00	508	447	78
3	354	1460	286	.00	.00	1130	117	224	.00	517	394	77
4	284	1460	606	.00	.00	1080	115	229	811	.00	.00	751
5	354	1460	281	116	832	1080	115	.00	448	591	.00	880
6	343	1160	231	.00	935	1120	113	.00	833	551	220	832
7	.00	977	285	.00	925	1130	.00	116	864	.00	220	77
8	.00	1440	789	629	907	1150	.00	128	576	.00	229	737
9	402	1430	203	167	926	981	105	.00	.00	557	222	75
10	358	1320	131	171	698	.00	111	.00	.00	523	225	764
11	337	820	263	169	696	.00	110	.00	769	508	.00	772
12	348	356	407	184	1050	454	110	.00	460	507	.00	810
13	349	837	223	.00	1100	451	108	.00	457	522	480	798
14	.00	845	264	.00	1100	457	.00	109	461	.00	215	162
15	.00	.00	280	174	1110	474	.00	.00	462	.00	227	.00
16	316	.00	180	171	1120	462	110	.00	.00	782	223	.00
17	362	120	.00	171	1090	.00	222	899	.00	790	249	.00
18	345	.00	196	169	1080	.00	207	877	767	816	341	.00
19	346	.00	99	174	1100	34	226	.00	449	896	.00	91
20	812	.00	268	.00	1110	.00	233	.00	522	910	342	112
21	.00	.00	402	.00	1100	185	.00	453	457	787	346	111
22	.00	.00	935	.00	1110	.00	.00	797	689	683	341	114
23	.00	.00	262	.00	1110	.00	237	818	.00	953	346	114
24	.00	.00	272	.00	1120	.00	224	822	.00	882	339	117
25	.00	.00	283	.00	1110	.00	229	536	447	763	.00	107
26	223	.00	286	.00	1180	226	753	.00	732	795	.00	109
27	496	.00	227	.00	1080	231	607	.00	759	739	680	109
28	223	.00	285	.00	518	224	.00	.00	778	.00	616	109
29	.00	306	234	228	---	228	.00	933	751	.00	346	110
30	492	149	.00	210	---	231	223	1610	.00	512	337	106
31	676	---	.00	228	---	.00	---	1450	---	546	335	---
TOTAL	7741.00	16464.00	8178.00	3188.00	25025.00	13518.00	4275.00	10454.00	13417.00	15638.00	8177.00	8199.00
MEAN	250	549	264	103	894	436	142	337	447	504	264	273
MAX	812	1460	935	629	1180	1150	753	1610	925	953	680	880
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1989 TOTAL 145474.00 MEAN 399 MAX 1860 MIN .00 CFSM 1.75 IN. 23.74  
WTR YR 1990 TOTAL 134274.00 MEAN 368 MAX 1610 MIN .00 CFSM 1.61 IN. 21.91

## LACKAWAXEN RIVER BASIN

## LAKES AND RESERVOIRS IN LACKAWAXEN RIVER BASIN

01428900 PROMPTON RESERVOIR.--Lat 41°35'18", long 75°19'39", Wayne County, Hydrologic Unit 02040103, at dam on West Branch Lackawaxen River, 0.3 mi north of Prompton, 0.4 mi upstream from highway bridge and 0.5 mi upstream from Van Auker Creek. DRAINAGE AREA, 59.6 mi<sup>2</sup>. PERIOD OF RECORD, December 1960 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earth and rockhill dam with ungated bedrock spillway at elevation 1,205.00 ft. Storage began July 1960. Capacity at elevation 1,205.00 ft is 51,700 acre-ft. Ordinary minimum (conservation) pool elevation, 1,125.00 ft, capacity, 3,420 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by discharge through an undated tunnel. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 8,170 acre-ft, June 29, 1973, elevation, 1,138.40 ft; minimum (after first filling), 2,800 acre-ft, Mar. 8, 1986, elevation, 1,123.20 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 4,500 acre-ft, Oct. 20, elevation, 1,128.58 ft; minimum, 3,120 acre-ft, Dec. 19., elevation, 1,123.65 ft.

01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15'55", Wayne County, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.45 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, and 2.9 mi upstream from mouth. DRAINAGE AREA, 64.5 mi<sup>2</sup>. PERIOD OF RECORD, October 1959 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earth and rockfill dam with ungated, concrete spillway at elevation 1,053.00 ft. Storage began in October 1959. Capacity at elevation 1,053.00 ft is 24,500 acre-ft. Reservoir is used for flood control. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 6,520 acre-ft, June 19, 1973, elevation, 1,017.40 ft; no storage many times.

EXTREMES FOR CURRENT YEAR: Maximum contents, 4.8 acre-ft, Oct. 20, elevation, 978.24 ft; no storage many days.

01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek, at Wilsonville, 1.2 mi south of Hawley and 1.5 mi upstream from mouth. DRAINAGE AREA, 228 mi<sup>2</sup>. PERIOD OF RECORD, January 1926 to current year. GAGE, vertical staff. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Power and Light Co.).

Reservoir formed by concrete gravity-type and earthfill dam, with concrete spillway at elevation 1,176.00 ft in two sections. Spillway equipped with roller gate, 14 ft high on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation in January 1926. Total capacity at elevation 1,190.00 ft, top of gates, is 209,300 acre-ft, of which 108,900 acre-ft is controlled storage above elevation 1,170.00 ft, minimum pool (prior to 1984, minimum pool 1,160.00 ft). Reservoir is used for generation of hydroelectric power. Figures given herein represent usable contents. Records furnished by Pennsylvania Power and Light Co. Records prior to 1984 included 48,900 acre-ft more usable contents.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 129,300 acre-ft, Aug. 19-21, 1955, elevation, 1,193.45 ft; minimum (after first filling), 12,280 acre-ft, (old minimum pool) Mar. 28, 1958, elevation, 1,162.60 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 90,720 acre-ft, May 21, elevation, 1,187.00 ft; minimum, 31,600 acre-ft, Nov. 14, elevation, 1,176.4 ft.

## LACKAWAXEN RIVER BASIN

## LAKES AND RESERVOIRS IN LACKAWAXEN RIVER BASIN--Continued

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

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)
<u>01428900 Prompton Reservoir</u>				<u>01429400 General Edgar Jadwin Reservoir</u>		
Sept. 30 .....	1,124.67	3,410	--	965.83	0	--
Oct. 31 .....	1,125.27	3,570	+ 2.6	968.16	0	0
Nov. 30 .....	1,125.25	3,570	0	966.42	0	0
Dec. 31 .....	1,124.18	3,270	- 4.9	966.12	0	0
CAL YR 1989 .....	--	--	- 0.2	--	--	0
Jan. 31 .....	1,126.60	3,950	+ 11.1	969.47	0	0
Feb. 28 .....	1,125.59	3,660	- 5.2	967.31	0	0
Mar. 31 .....	1,125.43	3,620	- 0.7	967.27	0	0
Apr. 30 .....	1,125.17	3,550	- 1.2	967.09	0	0
May 31 .....	1,125.90	3,750	+ 3.3	968.01	0	0
June 30 .....	1,124.51	3,360	- 6.6	966.11	0	0
July 31 .....	1,124.37	3,320	- 0.7	966.74	0	0
Aug. 31 .....	1,125.22	3,560	+ 3.9	966.42	0	0
Sept. 30 .....	1,124.02	3,220	- 5.7	965.64	0	0
WTR YR 1990 .....	--	--	- 0.3	--	--	0
<u>01431700 Lake Wallenpaupack</u>						
Sept. 30 .....	1,178.4	44,060	--			
Oct. 31 .....	1,180.9	56,860	+ 208			
Nov. 30 .....	1,178.6	43,200	- 229			
Dec. 31 .....	1,177.1	34,910	- 135			
CAL YR 1989 .....	--	--	- 35.1			
Jan. 31 .....	1,182.0	62,390	+ 447			
Feb. 28 .....	1,181.0	57,340	- 90.9			
Mar. 31 .....	1,180.3	54,050	- 53.5			
Apr. 30 .....	1,183.9	73,200	+ 322			
May 31 .....	1,186.4	87,460	+ 232			
June 30 .....	1,184.6	77,650	- 165			
July 31 .....	1,181.6	60,320	- 282			
Aug. 31 .....	1,181.0	57,340	- 48.4			
Sept. 30 .....	1,178.9	45,080	- 206			
WTR YR 1990 .....	--	--	+ 1.4			

## DELAWARE RIVER BASIN

01432160 DELAWARE RIVER AT BARRYVILLE, NY

LOCATION.--Lat 41°28'31", long 74°54'46", Pike County, Pa., Hydrologic Unit 02040104, at Shohola-Barryville Bridge at Barryville, just upstream from Halfway Brook, and 1,000 ft upstream from Shohola Brook.

DRAINAGE AREA.--2,659 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1958, 1968 to current year.

CHEMICAL DATA: 1958 (d), 1969 (a), 1973 (b), 1974 (d), 1975 (b).

NUTRIENT DATA: 1973 (b), 1974 (d), 1975 (b).

BIOLOGICAL DATA:

Bacteria.--1973 (b), 1974 (d), 1975 (b).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1967 to September 1973, March 1975 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since March 1975, provides one-hour-interval punches. Prior to September 1973, water-temperature recorder provided continuous recordings.

REMARKS.--Unpublished records of daily temperatures for May to September 1964-66 are available in files of the Geological Survey. Temperature probe may be influenced by solar radiation during periods of low flow.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum (water years 1968-73, 1976-78, 1980-82, 1986-88), 32.0°C, July 20, 21, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 28.5°C, July 29, 30; minimum, 0.0°C on many days during winter period.

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER		NOVEMBER			DECEMBER			JANUARY		
1	17.0	13.5	15.0	13.0	11.5	12.5	1.5	.0	.5	.0	.0	.0
2	17.0	15.5	16.5	11.5	11.0	11.5	.0	.0	.0	.0	.0	.0
3	17.0	15.5	16.5	11.1	9.5	10.5	.0	.0	.0	.0	.0	.0
4	15.0	13.0	13.5	9.5	8.5	9.0	.0	.0	.0	.0	.0	.0
5	14.0	12.0	13.0	9.5	8.0	9.0	.0	.0	.0	.0	.0	.0
6	15.5	13.0	14.0	10.0	9.0	9.5	.0	.0	.0	.0	.0	.0
7	15.0	13.0	14.0	10.0	9.5	9.5	.0	.0	.0	.0	.0	.0
8	13.5	11.0	12.5	11.0	9.5	10.5	.0	.0	.0	.0	.0	.0
9	11.5	10.0	11.0	11.5	10.5	11.0	.5	.0	.0	.0	.0	.0
10	12.5	9.0	11.0	10.5	9.0	10.0	.5	.0	.0	.0	.0	.0
11	13.5	11.0	12.0	9.0	7.5	8.5	.5	.0	.0	.0	.0	.0
12	14.0	10.0	12.0	8.5	7.0	7.5	.5	.0	.0	.0	.0	.0
13	15.0	12.0	13.5	8.0	6.5	7.0	.5	.0	.0	.0	.0	.0
14	14.5	12.0	13.0	9.0	6.0	7.5	.5	.0	.0	.0	.0	.0
15	15.0	13.0	14.0	9.5	8.0	9.0	.5	.0	.0	.0	.0	.0
16	17.0	15.0	16.0	11.0	9.5	10.5	.5	.0	.5	.0	.0	.0
17	16.5	15.5	16.0	9.0	7.0	8.5	.5	.0	.5	.0	.0	.0
18	15.0	13.5	14.5	7.0	5.0	6.0	.0	.0	.0	.0	.0	.0
19	13.5	11.0	12.0	4.5	3.5	4.0	.5	.0	.0	.0	.0	.0
20	11.0	10.0	10.5	4.5	3.5	4.0	.0	.0	.0	.0	.0	.0
21	10.5	9.5	10.0	4.0	1.5	3.0	.0	.0	.0	.0	.0	.0
22	9.5	9.0	9.0	1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
23	9.5	8.0	9.0	1.0	.5	1.0	.0	.0	.0	.0	.0	.0
24	9.5	8.5	9.0	.5	.0	.0	.0	.0	.0	.0	.0	.0
25	10.5	8.5	9.5	1.0	.0	.5	.0	.0	.0	.5	.0	.5
26	11.0	9.5	10.5	2.0	1.0	1.5	.0	.0	.0	.5	.0	.5
27	12.0	10.5	11.0	2.5	1.5	2.0	.0	.0	.0	.5	.0	.5
28	13.0	11.5	12.0	4.5	2.5	3.5	.0	.0	.0	1.0	.0	.5
29	13.0	11.5	12.0	2.0	1.5	1.5	.0	.0	.0	1.0	.5	.5
30	13.0	11.5	12.0	2.0	1.5	1.5	.0	.0	.0	1.0	.5	.5
31	13.0	12.5	12.5	---	---	---	.0	.0	.0	1.5	.5	1.0
MONTH	17.0	8.0	12.5	13.0	0.0	6.5	1.5	0.0	0.0	1.5	0.0	0.0

## DELAWARE RIVER BASIN

01432160 DELAWARE RIVER AT BARRYVILLE, NY--Continued

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.0	.5	1.0	2.0	.0	1.0	5.0	4.5	5.0	18.0	15.0	16.5
2	2.5	1.5	2.0	3.0	.0	1.5	7.0	5.0	6.0	17.0	15.5	16.5
3	2.0	1.5	2.0	3.5	1.0	2.0	6.5	5.5	6.0	15.5	14.5	15.0
4	1.5	1.0	1.5	2.5	1.0	2.0	6.5	5.5	6.0	15.5	14.5	15.0
5	1.5	.5	1.0	2.5	1.0	1.5	5.5	5.0	5.5	14.0	13.0	13.52
6	2.0	.0	1.0	2.5	1.0	1.5	5.5	5.5	5.5	14.5	13.0	14.0
7	2.5	1.0	1.5	3.0	.0	1.5	6.5	5.5	6.0	14.5	13.0	14.0
8	3.0	1.5	2.0	3.5	.0	1.5	6.0	5.5	6.0	15.0	13.0	14.0
9	3.0	2.0	2.5	2.5	.5	1.5	6.5	5.0	5.5	16.5	15.0	15.5
10	3.0	2.5	3.0	3.5	2.0	2.5	6.5	6.0	6.0	16.5	16.0	16.5
11	2.5	1.5	2.0	5.5	3.0	4.0	7.0	6.5	7.0	16.0	12.5	14.0
12	2.5	1.5	2.0	7.0	5.0	6.0	6.5	5.5	6.0	12.0	10.5	11.0
13	3.0	1.0	2.0	8.5	5.5	7.0	6.5	4.5	5.5	11.0	10.0	10.5
14	3.0	2.0	2.5	9.5	7.5	8.5	6.5	5.0	6.0	13.0	11.0	12.0
15	3.0	2.5	2.5	10.0	8.5	9.0	7.5	6.5	6.5	14.5	12.5	13.5
16	2.5	2.0	2.5	11.0	9.0	10.0	9.5	7.0	8.0	14.0	13.5	14.0
17	2.5	2.0	2.5	11.0	10.0	10.5	9.0	7.5	8.5	14.0	13.0	13.5
18	2.0	.5	1.5	11.0	9.0	10.0	7.5	6.5	7.0	14.0	13.0	13.5
19	3.0	1.0	2.0	8.5	6.5	7.5	8.5	6.5	7.5	13.5	12.0	13.0
20	2.5	1.0	1.5	6.5	4.5	5.5	9.5	7.5	8.5	13.5	11.5	12.5
21	2.5	.0	1.5	5.0	4.0	4.5	10.0	9.0	9.5	13.0	12.0	12.5
22	3.0	1.5	2.0	6.5	4.5	5.5	12.0	9.0	10.5	12.5	11.0	12.0
23	4.5	3.0	3.5	7.0	6.0	6.5	13.5	10.5	12.0	13.0	11.5	12.5
24	4.0	3.0	3.5	6.0	4.5	5.0	14.5	12.0	13.5	14.0	12.0	13.0
25	3.0	.5	2.0	5.0	4.0	4.5	15.0	13.5	14.5	15.5	13.0	14.0
26	.5	.0	.0	5.5	4.0	5.0	18.0	15.0	16.0	15.5	14.5	15.0
27	1.0	.0	.5	4.5	3.5	4.0	19.0	15.5	17.5	16.0	14.5	15.0
28	1.0	.0	.5	5.0	2.5	4.0	20.0	17.0	18.5	17.0	15.0	16.0
29	---	---	---	5.5	3.5	4.5	19.5	17.5	19.0	17.0	15.0	16.5
30	---	---	---	5.5	4.5	5.0	17.5	16.0	17.0	15.5	14.0	15.0
31	---	---	---	4.5	4.5	4.5	---	---	---	16.5	13.5	15.0
MONTH	4.5	0.0	2.0	11.0	0.0	5.0	20.0	4.5	9.0	18.0	10.0	14.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	14.5	16.5	24.0	22.5	323.0	25.0	21.0	22.5	23.0	20.5	21.5
2	19.5	16.5	18.0	22.5	21.0	22.0	25.0	20.5	23.0	24.0	22.0	23.0
3	22.0	19.5	20.5	24.0	20.5	22.0	27.5	21.5	24.0	23.5	22.0	23.0
4	21.5	17.0	20.0	26.0	21.5	24.0	27.5	21.5	24.5	23.5	21.0	22.0
5	19.0	16.0	17.5	27.5	23.5	26.0	25.0	22.5	24.0	22.0	20.0	21.0
6	18.5	16.5	17.5	25.0	21.0	23.5	22.5	19.5	21.5	24.0	20.5	22.0
7	20.0	17.5	18.5	25.5	20.0	23.0	21.0	19.0	20.0	23.5	21.0	22.0
8	19.0	17.0	18.0	24.0	21.5	22.5	23.0	20.0	21.0	23.5	19.5	21.5
9	20.0	17.0	18.5	24.5	21.5	22.5	22.5	20.5	21.5	20.0	18.0	20.0
10	20.0	18.5	19.5	25.5	21.5	23.5	21.5	21.0	21.5	22.0	18.0	20.0
11	19.5	16.0	18.5	22.5	19.5	21.5	21.5	20.0	21.0	23.5	19.5	21.0
12	20.0	15.0	18.0	19.5	17.5	19.0	23.5	20.5	22.0	23.5	20.5	22.0
13	21.0	17.5	19.0	18.5	17.5	18.0	24.5	21.5	22.5	24.5	20.5	22.0
14	20.5	18.0	19.0	19.5	17.5	19.5	24.0	21.5	22.5	24.0	20.5	22.0
15	20.0	17.5	19.0	22.0	18.5	20.0	24.0	21.0	22.5	22.5	20.0	21.5
16	23.5	18.0	21.0	22.5	21.0	21.5	25.0	21.5	23.0	21.5	19.5	20.5
17	25.0	22.0	23.5	24.0	20.5	22.0	25.5	22.5	24.0	19.5	16.0	18.0
18	25.0	21.0	23.5	24.5	21.5	23.0	25.5	23.0	24.5	17.0	15.0	16.0
19	25.0	20.0	22.5	26.0	22.5	24.0	24.5	22.0	24.0	16.0	14.5	15.0
20	23.0	20.5	21.5	26.5	23.0	24.5	22.0	19.5	21.0	17.0	14.0	15.0
21	23.0	20.0	21.5	25.0	23.0	24.0	19.5	18.0	19.0	18.0	14.0	15.5
22	25.0	20.5	22.5	26.0	22.0	24.0	19.5	18.0	18.5	16.0	15.0	15.5
23	24.5	20.5	22.5	25.5	22.5	24.0	19.5	18.5	19.0	16.0	14.5	15.0
24	22.5	21.5	22.0	25.5	21.5	23.5	20.0	19.0	19.5	15.5	13.5	14.5
25	22.0	19.5	21.0	26.0	21.5	24.0	22.0	19.0	20.5	16.5	13.0	14.5
26	22.5	19.5	21.0	27.0	22.0	24.0	23.5	20.5	22.0	15.5	14.5	15.0
27	24.5	19.5	22.0	27.5	22.0	24.5	24.0	22.0	23.0	16.5	14.5	15.5
28	25.5	20.5	22.5	28.0	22.5	25.0	24.5	21.5	23.0	17.0	15.5	16.5
29	25.0	20.5	22.0	28.5	25.0	26.5	24.5	22.5	23.5	18.0	16.0	17.0
30	25.0	20.5	23.0	28.5	24.0	26.0	24.0	22.5	23.5	18.0	16.0	17.0
31	---	---	---	36.0	21.5	24.0	23.5	20.5	22.0	---	---	---
MONTH	25.5	14.5	20.5	28.5	17.5	23.0	27.5	18.0	22.0	24.5	13.0	19.0



## DELAWARE RIVER BASIN

01432805 DELAWARE RIVER AT POND EDDY, NY

LOCATION.--Lat 41°26'20", long 74°49'11", Pike County, Pa., Hydrologic Unit 02040104, at interstate bridge at Pond Eddy, 450 ft downstream from Mill Brook, and 4.5 mi upstream from Mongaup River.

DRAINAGE AREA.--2,820 mi<sup>2</sup>.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1973 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since October 1973, provides one-hour-interval punches.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum (water years 1976, 1978, 1980-81, 1983-84, 1986, 1989) 31.0°C, July 21, 1980; minimum (water years 1974, 1977-78, 1980, 1983-89), 0.0°C on many days during winter periods, except 1978, 1980, and 1985.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.0°C, Aug. 6; minimum, 0.0°C on many days during winter period.

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.0	14.0	15.0	12.5	11.5	12.5	1.0	.0	.5	.0	.0	.0
2	16.0	15.0	15.5	11.5	10.5	11.0	.0	.0	.0	.0	.0	.0
3	17.0	15.5	16.0	11.0	9.5	10.5	.0	.0	.0	.0	.0	.0
4	15.5	13.0	14.0	9.5	8.0	8.5	.0	.0	.0	.0	.0	.0
5	14.5	12.0	13.0	8.5	7.5	8.0	.0	.0	.0	.0	.0	.0
6	15.5	12.5	14.0	9.5	8.5	9.0	.5	.0	.0	.0	.0	.0
7	15.0	13.5	14.0	9.5	9.0	9.0	.0	.0	.0	.0	.0	.0
8	14.0	12.0	13.0	10.5	9.5	10.0	.0	.0	.0	.0	.0	.0
9	12.0	10.5	11.0	11.0	10.5	11.0	.5	.0	.0	.0	.0	.0
10	11.5	9.5	10.5	10.5	9.0	9.5	.5	.0	.0	.0	.0	.0
11	12.5	10.5	11.5	9.0	7.5	8.0	.5	.0	.0	.0	.0	.0
12	13.5	10.5	11.5	8.0	7.0	7.5	.0	.0	.0	.0	.0	.0
13	15.0	11.5	13.0	7.0	6.0	6.5	.0	.0	.0	.0	.0	.0
14	14.5	12.5	13.5	7.5	7.0	7.0	.5	.0	.0	.0	.0	.0
15	15.0	13.0	14.0	9.5	8.0	8.5	.5	.0	.0	.0	.0	.0
16	16.5	14.5	15.5	11.0	9.5	10.0	.0	.0	.0	.0	.0	.0
17	16.0	15.5	16.0	9.5	7.5	8.5	.0	.0	.0	.0	.0	.0
18	15.5	13.0	14.5	7.5	5.0	6.0	.0	.0	.0	.0	.0	.0
19	13.0	10.5	12.0	5.0	4.0	4.0	.0	.0	.0	.0	.0	.0
20	11.0	10.0	10.5	4.5	3.5	4.0	.0	.0	.0	.0	.0	.0
21	10.0	9.5	9.5	4.0	2.0	3.0	.0	.0	.0	.0	.0	.0
22	9.0	8.5	9.0	1.5	1.0	1.5	.0	.0	.0	.0	.0	.0
23	9.0	8.0	8.5	1.0	.5	1.0	.0	.0	.0	.0	.0	.0
24	9.0	8.0	8.5	.5	.0	.0	.0	.0	.0	.5	.0	.0
25	10.0	8.5	9.0	.5	.0	.5	.0	.0	.0	.5	.0	.5
26	10.5	9.5	10.0	1.5	1.0	1.5	.0	.0	.0	.5	.0	.0
27	11.5	10.0	10.5	2.0	1.5	1.5	.0	.0	.0	.5	.0	.5
28	12.5	11.0	12.0	4.0	2.5	3.0	.0	.0	.0	1.0	.5	1.0
29	12.5	11.5	12.0	4.0	1.5	3.0	.0	.0	.0	1.0	.5	1.0
30	12.5	12.0	12.5	2.0	1.0	1.5	.0	.0	.0	1.0	1.0	1.0
31	12.5	12.5	12.5	---	---	---	.0	.0	.0	1.5	.5	1.0
MONTH	17.0	8.0	12.5	12.5	0.0	6.0	1.0	0.0	0.0	1.5	0.0	0.0

## DELAWARE RIVER BASIN

01432805 DELAWARE RIVER AT POND EDDY, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.0	1.0	1.5	1.5	.0	.5	5.0	4.5	5.0	18.0	15.0	16.5
2	2.5	2.0	2.0	2.0	.0	1.0	6.5	5.0	5.5	17.0	15.5	16.5
3	2.5	1.5	2.0	3.0	1.0	2.0	6.5	6.0	6.5	16.5	14.0	15.5
4	2.0	1.5	1.5	2.5	1.0	1.5	6.0	5.5	6.0	15.5	14.5	15.0
5	1.5	.5	1.0	1.5	1.0	1.5	5.5	5.0	5.0	14.0	13.0	13.5
6	1.5	.5	1.0	1.5	1.0	1.5	5.5	5.0	5.5	14.5	13.0	14.0
7	2.5	1.0	1.5	1.5	.0	1.0	6.5	5.0	5.5	14.5	13.0	13.5
8	3.0	1.5	2.5	2.5	.5	1.5	6.0	5.0	5.5	15.0	13.0	14.0
9	3.0	2.5	3.0	2.5	1.0	1.5	6.0	4.5	5.5	16.5	15.0	15.5
10	3.5	2.5	3.0	3.0	2.0	2.5	6.5	5.5	6.0	16.5	16.0	16.5
11	2.5	2.0	2.5	5.5	3.0	4.0	7.0	6.0	6.5	16.0	12.0	14.0
12	2.5	2.0	2.5	7.0	5.5	6.0	6.0	5.5	6.0	12.0	10.5	11.0
13	2.5	1.5	2.0	8.5	5.5	7.0	6.0	4.5	5.5	11.0	10.0	10.5
14	3.0	2.5	2.5	9.5	7.5	8.5	6.5	5.0	5.5	13.0	11.0	12.0
15	3.0	2.5	2.5	10.5	8.5	9.5	7.0	6.0	6.5	14.5	12.5	13.5
16	2.5	2.0	2.5	11.5	9.5	10.5	9.0	6.5	8.0	14.0	13.5	14.0
17	2.5	2.0	2.5	11.5	10.5	11.0	8.5	7.5	8.0	13.5	13.0	13.5
18	2.0	1.0	1.5	11.0	9.0	10.0	7.5	6.5	7.0	14.0	13.0	13.5
19	2.5	1.0	2.0	8.5	6.5	7.5	8.5	6.0	7.5	13.0	12.0	12.5
20	2.0	1.0	1.5	6.5	4.5	5.5	9.5	7.5	8.5	13.0	11.5	12.5
21	2.0	.5	1.0	5.0	3.5	4.5	10.0	9.0	9.5	13.0	11.5	12.5
22	2.5	1.5	2.0	6.0	4.0	5.0	12.0	9.0	10.5	12.5	11.0	12.0
23	4.0	3.0	3.5	7.0	6.0	6.5	13.5	10.5	12.0	13.0	11.5	12.5
24	4.0	3.5	4.0	5.5	4.5	5.0	14.5	12.0	13.5	14.0	12.0	13.0
25	3.0	.5	2.0	5.0	3.5	4.5	15.0	13.0	14.5	15.5	13.0	14.0
26	.0	.0	.0	5.0	4.0	4.5	18.0	14.5	16.0	15.5	14.5	15.0
27	.0	.0	.0	4.5	3.5	4.0	19.0	15.5	17.5	16.0	14.5	15.0
28	1.0	.0	.5	4.5	2.5	3.5	20.0	17.0	18.5	17.0	15.0	16.0
29	---	---	---	5.0	3.5	4.5	19.5	17.5	19.0	17.0	15.0	16.5
30	---	---	---	5.0	4.0	4.5	17.5	16.0	16.5	15.5	13.5	14.5
31	---	---	---	4.5	4.0	4.5	---	---	---	16.5	13.5	15.0
MONTH	4.0	0.0	2.0	11.5	0.0	4.5	20.0	4.5	9.0	18.0	10.0	14.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	14.5	16.5	24.0	23.0	23.5	25.0	21.0	23.0	23.5	21.0	22.5
2	19.5	16.5	18.0	23.0	22.0	22.5	25.0	21.0	23.0	24.5	21.5	23.0
3	21.5	19.5	20.5	24.0	20.5	22.5	26.5	22.0	24.0	24.0	22.0	23.0
4	21.0	18.0	20.0	25.5	21.5	23.5	27.0	23.0	25.0	24.0	21.5	22.5
5	19.0	16.0	17.5	28.5	24.5	26.0	25.0	23.0	24.5	22.0	21.0	21.5
6	19.0	17.0	18.0	26.0	23.5	24.0	23.0	21.0	22.5	24.0	21.0	22.0
7	20.5	18.0	19.0	24.5	20.0	22.5	21.0	19.5	20.5	24.0	22.0	22.5
8	19.5	18.0	18.5	23.5	21.5	22.5	22.5	20.0	21.0	23.5	20.5	21.5
9	19.0	17.0	18.0	24.0	22.0	23.0	22.5	21.5	22.0	20.5	19.0	19.5
10	20.5	18.5	19.5	26.0	22.0	23.5	22.0	21.5	21.5	22.0	18.5	20.0
11	19.0	18.0	19.0	24.0	21.5	22.5	22.0	21.0	21.5	23.5	20.0	21.5
12	20.0	15.5	17.5	21.5	19.0	19.5	23.0	20.5	22.0	23.5	21.0	22.0
13	20.0	17.5	19.0	18.5	17.5	18.0	24.0	22.0	23.0	24.0	21.0	22.5
14	19.0	18.0	19.0	19.0	18.0	18.5	24.0	22.0	23.0	23.5	22.0	22.5
15	20.0	18.0	19.0	21.5	19.0	20.0	24.0	21.5	23.0	23.5	21.5	22.0
16	22.0	18.5	20.0	23.0	21.0	22.0	24.5	22.0	23.5	22.0	20.5	21.0
17	25.0	21.0	23.0	24.0	21.0	22.5	26.0	23.5	24.5	20.0	17.0	19.0
18	24.5	23.0	23.5	25.0	22.0	23.5	26.0	24.0	25.0	18.0	15.0	16.5
19	23.5	21.0	22.5	26.0	22.5	24.5	25.0	22.5	24.0	16.0	14.5	15.5
20	23.0	21.5	22.0	25.5	23.0	24.5	22.0	20.5	21.0	16.5	14.5	15.0
21	23.0	20.0	21.5	25.0	23.5	24.0	20.0	19.0	19.5	17.5	14.0	15.5
22	24.0	21.0	22.5	25.5	22.5	24.0	19.5	18.5	19.0	16.0	15.5	15.5
23	23.5	21.5	22.5	25.5	23.5	24.5	19.5	19.0	19.5	15.5	14.5	15.0
24	22.5	22.0	22.5	25.0	22.5	24.0	19.5	19.0	19.5	16.0	14.0	14.5
25	23.0	21.0	21.5	25.5	22.5	24.0	21.5	19.5	20.5	16.5	13.0	14.5
26	23.0	19.5	21.5	26.0	22.5	24.5	23.5	21.0	22.0	15.5	14.5	15.0
27	23.5	20.5	22.0	26.5	22.5	24.5	24.0	22.5	23.5	17.0	14.5	15.5
28	24.5	21.5	23.0	27.0	23.5	25.0	25.0	22.0	23.5	18.5	15.5	16.5
29	23.5	21.5	22.5	29.0	25.0	26.5	25.0	22.5	23.5	18.0	16.5	17.0
30	24.0	21.5	22.5	28.5	25.5	26.5	24.0	22.0	23.0	18.5	17.0	17.5
31	---	---	---	26.5	24.0	24.5	23.5	21.0	22.5	---	---	---
MONTH	25.0	14.5	20.5	29.0	17.5	23.5	27.0	18.5	22.5	24.5	13.0	19.0

## DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY

LOCATION.--Lat 41 22°14", long 74°41'52", Pike County, Pa., Hydrologic Unit 02040104, on right bank 250 ft downstream from bridge (on U.S. Highways 6 and 209) between Port Jervis, N.Y. and Matamoras, Pa., 1.2 mi upstream from Neversink River, and 6.5 mi downstream from Mongaup River. Water-quality sampling site at discharge station.

DRAINAGE AREA.--3,070 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--OCTOBER 1904 TO CURRENT YEAR.

REVISED RECORDS.--WSP 1031: 1905-36. WDR NY-71-1: 1970. WDR NY-82-1: Drainage area. WDR NY-86-1: 1979-80.

GAGE.--Water-stage recorder. Datum of gage is 415.35 ft above National Geodetic Vertical Datum of 1929. October 1904 to August 13, 1928, nonrecording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Bureau prior to June 20, 1914.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs (see Reservoirs in Delaware River Basin) and smaller reservoirs. Large diurnal fluctuations at medium and low flows caused by powerplants on tributary streams. Subsequent to September 1954, entire flow from 371 mi<sup>2</sup> of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Telephone gage-height telemeter and satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 233,000 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 23.91 ft. from floodmarks in gage house, from rating curve extended above 89,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 26.6 ft, Feb. 12, 1981 (ice jam), from floodmarks; minimum observed discharge, 175 ft<sup>3</sup>/s, Sept. 23, 1908, gage height, 0.6 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--The U.S. Weather Bureau reported a discharge of 205,000 ft<sup>3</sup>/s, Oct. 10, 1903, gage height, 23.1 ft, from rating curve extended above 70,000 ft<sup>3</sup>/s, by velocity-area studies; maximum gage height, 25.5 ft, Mar. 8, 1904 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41,100 ft<sup>3</sup>/s, Oct. 20, gage height, 10.11 ft; minimum, 977 ft<sup>3</sup>/s, Oct. 11, gage height, 1.90 ft; minimum daily, 1,120 ft<sup>3</sup>/s, Oct. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	4140	2920	e1700	11900	6730	5730	2480	6230	2500	1920	2530
2	1530	4870	2070	e1700	10800	6360	5490	2390	4570	2710	2010	1850
3	2240	4590	1780	e2000	14100	6320	7630	2190	3380	2470	1800	1810
4	2280	4480	3300	e2200	13700	6100	13300	2430	3560	1910	1660	2020
5	2030	4630	2420	e2100	14600	5420	11600	3340	4020	1890	1610	2430
6	1760	4190	2280	e2000	11800	5120	9940	3750	2910	1980	3390	2430
7	1470	4180	3110	e1900	10800	4820	8810	3430	3420	1690	6240	2430
8	1120	3770	2640	e1900	9770	4500	7830	2900	3200	1140	4910	2000
9	1320	4370	2750	2670	9320	4510	6940	2870	2530	1650	3310	1240
10	1460	5990	1850	2300	11800	3680	6220	3040	2140	1990	2700	1590
11	1480	5680	2390	2010	15400	3580	8600	10600	2360	1680	4920	2360
12	1790	4300	2520	2080	13300	4520	12800	12800	2970	2030	4650	2130
13	1500	4370	2280	2070	11500	5940	11300	11500	2260	6180	3930	2160
14	1480	4400	1710	1810	10300	7110	9630	18600	2150	4830	3980	2160
15	1570	3930	1960	2080	9650	6960	8620	17900	1870	3370	3550	1310
16	1690	3650	1510	2130	10200	6740	8150	14400	1790	3950	2890	1680
17	1930	10800	1370	1990	14500	5840	7320	16600	1590	4660	2530	1880
18	2580	8500	e1400	2440	13900	7870	6630	17200	1960	3680	2520	1540
19	3630	6400	e1800	4710	12000	8460	6010	15000	2420	3460	2020	1580
20	16800	5430	e1700	5290	10500	9310	5520	13000	2110	3600	1690	1500
21	35700	5190	e1600	4370	8800	12800	4710	12500	2110	2960	2090	1650
22	18800	4880	e2000	4590	8020	12200	4720	13000	2110	2510	2420	1560
23	11600	4060	e2200	4230	8850	11200	4710	12000	2100	2770	2140	1560
24	8380	3860	e1400	3880	12400	11100	4350	10400	1500	2780	2370	1380
25	6540	3470	e1550	4120	11100	10200	3760	8570	1860	2540	3550	1350
26	5280	3430	e1650	11400	8750	9330	3770	7210	1920	2460	3680	1510
27	5080	3400	e2050	15900	7930	8220	3870	6260	2100	2300	3480	1650
28	4540	3310	e2050	10500	6280	7160	2960	5040	2070	1840	3430	1790
29	3790	3420	e1850	8470	---	6360	2370	5040	2140	1450	3710	1620
30	3680	3690	e1800	14400	---	5760	2370	9480	2320	1590	3980	1710
31	3920	---	e1800	15100	---	5500	---	8370	---	1960	3280	---
TOTAL	158290	141380	63710	144040	311970	219720	205660	274290	77670	82530	96360	54410
MEAN	5106	4713	2055	4646	11140	7088	6855	8848	2589	2662	3108	1814
MAX	35700	10800	3300	15900	15400	12800	13300	18600	6230	6180	6240	2530
MIN	1120	3310	1370	1700	6280	3580	2370	2190	1500	1140	1610	1240

CAL YR 1989 TOTAL 1551770 MEAN 4251 MAX 38200 MIN 1050  
WTR YR 1990 TOTAL 1830030 MEAN 5014 MAX 35700 MIN 1120

e Estimated.

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

## WATER-QUALITY RECORDS

CHEMICAL DATA: 1958-59 (a), 1964-65 (c), 1966 (a), 1967-68 (c), 1969-76 (d), 1987 (b), 1988-89 (c), 1990 (b).  
MINOR ELEMENTS DATA: 1970 (a), 1972-73 (a), 1974-76 (c), 1987 (b), 1988-89 (c), 1990 (b).

PESTICIDE DATA: 1974 (a).

ORGANIC DATA: OC--1974 (b), 1975 (d).

NUTRIENT DATA: 1968 (a), 1969-76 (d).

**BIOLOGICAL DATA:**

Bacteria--1973-76 (d).

Phytoplankton--1974 (b), 1975-76 (c).

Periphyton--1976 (a).

SEDIMENT DATA: 1959 (c), 1976 (c), 1988 (b), 1989 (c), 1990 (b).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1973 to September 1973.

WATER TEMPERATURES: February 1957 to September 1960, January 1973 to September 1973, June 1974 to current year.

**SUSPENDED-SEDIMENT DISCHARGE:** February 1957 to September 1960. March 1970 to June 1976.

INSTRUMENTATION.--Water-temperature digital recorder since January 1973, provides one-hour-interval punches.

REMARKS.--Interruption of record was due to malfunction of recording instrument. Water-quality samples were collected by personnel of the New York State Department of Environmental Conservation, and were analyzed by USGS laboratories.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum (water years 1957-59, 1973-81, 1983-84, 1988-90), 30.0°C, July 13, 1981; minimum (water years 1958-60, 1973, 1975-90), 0.0°C, on many days during winter periods, except 1984.

EXTREMES FOR CURRENT YEAR. --

WATER TEMPERATURES: Maximum recorded, 28.0°C, July 30, but may have been higher during period of instrument malfunction; minimum, 0.0°C, on many days during winter period.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)
OCT 17...	1000	1640	88	--	15.5	748	8.4	86	23
APR 17...	1000	7130	76	7.3	8.5	746	10.0	87	--
MAY 10...	1000	2620	76	6.9	16.0	742	9.1	95	--
JUN 26...	1200	1500	93	8.3	21.5	752	9.5	109	--
AUG 30...	1000	3500	77	7.8	23.0	751	8.7	103	--

[illegible]

## DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

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

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 17...	<1	6	110	3	30	<0.10	<1	<10
APR 17...	<1	6	120	1	40	<0.10	3	<10
MAY 10...	<1	13	140	2	50	<0.10	2	<10
JUN 26...	<1	3	60	<1	20	<0.10	1	<10
AUG 30...	<1	4	230	2	60	<0.10	1	<10

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST- CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 17...	1000	1640	2	8.9
APR 17...	1000	7130	5	96
MAY 10...	1000	2620	4	28
JUN 26...	1200	1500	2	8.1
AUG 30...	1000	3500	4	38

## TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	14.5	15.0	12.5	11.5	12.5	2.0	.5	1.0	.0	.0	.0
2	16.0	15.5	15.5	11.5	11.0	11.0	.5	.0	.0	.0	.0	.0
3	16.5	15.5	16.0	11.0	9.5	10.5	.0	.0	.0	.0	.0	.0
4	15.5	13.5	14.5	9.5	8.5	9.0	.0	.0	.0	.0	.0	.0
5	13.5	12.5	13.0	8.5	8.0	8.5	.0	.0	.0	.0	.0	.0
6	15.0	12.5	14.0	9.5	8.5	9.0	.5	.0	.5	.0	.0	.0
7	14.5	13.5	14.0	10.0	9.0	9.5	.5	.0	.0	.0	.0	.0
8	13.5	12.0	13.0	11.0	9.5	10.5	.0	.0	.0	.0	.0	.0
9	12.0	10.0	11.0	11.0	10.5	11.0	.0	.0	.0	.0	.0	.0
10	11.0	9.5	10.0	10.5	9.0	10.0	.0	.0	.0	.0	.0	.0
11	11.5	10.5	11.0	9.0	8.0	8.5	.0	.0	.0	.0	.0	.0
12	13.5	11.0	12.0	8.0	7.0	8.0	.5	.0	.5	.0	.0	.0
13	13.5	12.0	13.0	7.5	6.5	7.0	.5	.0	.0	.0	.0	.0
14	14.0	12.5	13.5	8.5	6.5	7.5	.0	.0	.0	.0	.0	.0
15	15.0	13.5	14.0	10.0	7.5	9.0	.0	.0	.0	.0	.0	.0
16	15.5	14.5	15.0	11.5	9.5	10.5	.0	.0	.0	.5	.0	.0
17	15.5	15.0	15.5	9.5	8.0	9.0	.0	.0	.0	.5	.0	.5
18	15.0	13.5	14.0	8.0	5.5	6.5	.0	.0	.0	.5	.0	.5
19	13.5	11.0	12.0	5.5	4.5	4.5	.0	.0	.0	.0	.0	.0
20	11.0	10.5	10.5	5.0	4.0	4.5	.0	.0	.0	.0	.0	.0
21	10.5	9.5	10.0	4.5	2.5	3.5	.0	.0	.0	.0	.0	.0
22	9.5	9.0	9.0	2.0	1.5	2.0	.0	.0	.0	.5	.0	.0
23	9.0	8.5	9.0	1.5	1.0	1.5	.0	.0	.0	.5	.0	.5
24	9.5	8.5	9.0	1.0	.5	1.0	.0	.0	.0	1.0	.0	.5
25	10.0	9.0	9.5	1.5	.5	1.0	.0	.0	.0	1.0	.0	.5
26	11.0	9.5	10.0	2.5	1.0	2.0	.0	.0	.0	1.0	.0	.5
27	11.5	10.5	11.0	2.5	2.0	2.5	.0	.0	.0	.5	.0	.5
28	12.5	11.0	12.0	4.5	2.5	3.5	.0	.0	.0	1.0	.5	1.0
29	12.5	11.5	12.0	4.0	2.0	3.0	.0	.0	.0	1.0	1.0	1.0
30	13.0	11.5	12.5	2.0	1.5	2.0	.0	.0	.0	1.0	1.0	1.0
31	13.0	12.0	12.5	---	---	---	.0	.0	.0	1.0	.5	1.0
MONTH	16.5	8.5	12.5	12.5	0.5	6.5	2.0	0.0	0.0	1.0	0.0	0.0

## DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.0	1.0	1.5	1.0	.0	.5	5.0	4.5	5.0	18.0	15.5	17.0
2	2.5	2.0	2.0	2.0	.5	1.5	6.5	5.0	5.5	17.5	16.0	16.5
3	2.5	2.0	2.0	2.5	2.0	2.0	6.5	6.5	6.5	16.5	14.0	15.5
4	2.0	1.5	2.0	2.5	1.5	2.0	6.5	5.5	6.0	16.0	13.5	15.0
5	1.5	1.0	1.0	2.0	1.5	1.5	5.5	5.0	5.5	13.5	12.5	13.0
6	1.5	.5	1.0	2.0	1.0	1.5	5.5	5.5	5.5	15.0	12.5	14.0
7	2.0	1.5	1.5	2.0	.5	1.0	6.5	5.0	6.0	14.5	13.0	14.0
8	2.5	2.0	2.5	2.5	.5	1.5	6.5	5.5	6.0	15.5	13.0	14.0
9	3.5	2.5	3.0	2.5	1.5	2.0	6.5	5.0	5.5	17.5	14.0	15.5
10	3.5	3.0	3.5	3.5	1.5	2.5	6.5	6.0	6.0	16.5	15.0	16.0
11	3.0	2.0	2.5	5.0	3.0	4.0	7.5	6.5	6.5	15.0	12.5	14.0
12	2.5	2.0	2.5	7.0	5.0	6.0	6.5	5.5	6.0	12.5	11.0	11.5
13	2.5	2.0	2.5	8.5	6.5	7.5	6.0	4.5	5.5	11.0	10.5	10.5
14	3.0	2.5	2.5	9.5	7.5	8.5	6.0	5.0	5.5	13.0	10.5	12.0
15	3.0	2.5	2.5	10.5	8.5	9.5	7.0	6.0	6.5	14.5	12.5	13.5
16	3.0	2.5	2.5	11.0	9.0	10.0	9.0	6.5	8.0	14.0	14.0	14.0
17	3.0	2.0	2.5	11.5	10.5	11.0	8.5	7.5	8.0	14.0	13.5	13.5
18	2.0	1.5	1.5	11.0	9.0	10.5	8.0	6.5	7.0	14.0	13.0	13.5
19	2.0	1.5	2.0	9.0	7.0	8.0	9.0	6.0	7.5	13.5	12.5	13.0
20	2.0	1.5	1.5	7.0	4.5	6.0	9.5	8.0	8.5	13.0	12.0	12.5
21	1.5	1.0	1.5	5.0	4.0	4.5	10.0	9.0	9.5	13.0	12.0	12.5
22	2.5	1.5	2.0	6.0	4.5	5.0	11.5	9.5	10.5	12.5	11.5	12.0
23	4.0	2.5	3.5	7.0	6.0	6.5	13.0	10.5	12.0	12.5	12.0	12.5
24	4.0	3.5	4.0	6.0	5.0	5.5	14.0	11.5	13.0	13.5	12.0	13.0
25	3.5	.5	2.0	5.0	4.0	4.5	14.5	13.0	13.5	15.5	12.5	14.0
26	.5	.0	.0	5.0	4.0	4.5	17.5	13.5	15.5	15.5	14.5	15.0
27	.0	.0	.0	4.5	3.5	4.0	18.5	16.5	17.5	16.0	14.0	15.0
28	1.5	.0	.5	4.5	3.0	4.0	19.5	17.0	18.5	17.5	15.0	16.0
29	---	---	---	5.5	3.5	4.5	19.0	17.5	18.5	16.5	15.5	16.0
30	---	---	---	5.0	4.5	4.5	17.5	16.0	16.5	15.5	14.0	15.0
31	---	---	---	5.0	4.0	4.5	---	---	---	16.0	13.5	15.0
MONTH	4.0	0.0	2.0	11.5	0.0	5.0	19.5	4.5	9.0	18.0	10.5	14.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.5	15.0	16.5	24.5	22.5	23.5	24.5	22.5	23.5	23.5	21.5	22.5
2	18.5	17.0	18.0	24.0	22.0	23.0	25.0	22.0	23.5	24.0	21.5	23.0
3	21.0	18.0	19.5	24.0	21.5	22.5	25.5	22.5	24.0	23.5	22.5	23.0
4	20.5	18.0	19.5	25.5	22.5	24.0	26.5	23.0	25.0	23.5	21.5	22.5
5	18.5	16.5	17.5	26.5	23.0	25.0	24.5	23.5	24.0	22.5	21.0	22.0
6	19.5	16.5	18.0	25.5	22.0	24.5	23.5	22.0	23.0	23.0	21.0	22.0
7	20.5	18.0	19.0	24.0	22.0	23.0	22.0	20.5	21.0	23.5	22.0	23.0
8	19.0	18.0	18.5	23.0	21.5	22.5	22.5	21.0	21.5	22.5	21.0	21.5
9	19.0	17.5	18.5	24.5	22.5	23.0	23.0	22.0	22.5	21.0	19.5	20.0
10	21.0	18.5	20.0	25.0	22.0	23.5	22.5	21.5	22.0	21.5	19.0	20.0
11	20.0	18.0	19.0	23.0	21.5	22.5	22.5	21.5	22.0	22.5	20.0	21.5
12	20.0	17.0	18.5	21.5	18.0	20.0	23.5	21.5	22.5	23.0	21.0	22.0
13	20.5	18.0	19.5	19.0	18.0	18.5	---	23.0	---	23.0	22.0	22.5
14	19.5	18.5	19.0	19.0	18.0	18.5	---	---	---	23.0	21.5	22.5
15	21.0	18.5	19.5	21.0	19.0	19.5	---	---	---	22.5	21.0	22.0
16	22.5	19.5	21.0	23.5	20.5	21.5	---	---	---	21.5	20.5	21.0
17	24.5	20.0	22.5	23.0	21.0	22.0	---	---	---	20.5	17.5	19.0
18	24.5	22.0	23.5	25.0	22.0	23.5	---	---	---	17.5	16.0	17.0
19	23.5	21.5	23.0	25.5	23.0	24.5	---	---	---	16.5	15.5	16.0
20	23.5	21.5	22.5	25.5	23.5	24.5	---	---	---	16.5	15.5	16.0
21	22.5	21.5	22.0	25.0	24.0	24.5	---	---	---	17.0	15.0	16.0
22	24.0	21.5	22.5	25.0	23.5	24.5	---	---	---	17.0	15.5	16.0
23	24.5	22.0	23.0	25.5	23.5	24.5	---	---	---	15.5	15.0	15.5
24	23.0	21.5	22.5	25.0	23.0	24.0	---	---	---	15.0	14.0	14.5
25	23.0	21.0	22.0	26.0	23.0	24.5	---	---	---	15.5	13.5	14.5
26	23.0	20.5	22.0	25.5	23.5	24.5	---	---	---	15.5	14.5	15.0
27	24.0	21.5	23.0	26.0	23.5	24.5	24.0	---	---	17.0	14.5	15.5
28	25.0	22.5	23.5	26.5	24.0	25.5	24.0	22.5	23.5	18.0	15.5	16.5
29	24.0	22.0	23.0	27.5	24.5	26.0	24.5	23.5	24.0	18.0	16.5	17.5
30	24.5	21.5	23.0	28.0	25.5	27.0	24.0	22.5	23.5	18.5	17.0	18.0
31	---	---	---	26.0	23.0	25.5	23.5	22.0	23.0	---	---	---
MONTH	25.0	15.0	20.5	28.0	18.0	23.5	---	---	---	24.0	13.5	19.5



## DELAWARE RIVER BASIN

## 01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'44", Pike County, PA, Hydrologic Unit 02040104, on right bank 1,500 ft upstream from toll bridge (on U.S. Route 206) between Montague, NJ and Milford, PA, 0.8 mi downstream from Sawkill Creek, and at river mile 246.3.

DRAINAGE AREA.--3,480 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1936 to September 1939 (gage heights only, published as "at Milford, PA"). October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR-NJ-81-2: 1980.

GAGE.--Water-stage recorder. Datum of gage is 369.93 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940, nonrecording gage on upstream side of left span of subsequently dismantled bridge at present site at datum 70 ft lower.

REMARKS.--Records excellent except for periods of ice effect, Dec. 4 to Jan. 26, and periods of shifting control, Oct. 1 to 20, and July 18 to Sept. 30, which are good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 10, 1903, reached a stage of 35.5 ft, from floodmark, present datum.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1940	5290	3470	e1900	13400	7500	6690	3000	7470	3100	2320	3130
2	1990	5910	2580	e1900	12200	7290	6500	2860	5740	3090	2230	2290
3	2850	5550	2180	e2300	15800	7190	8340	2640	4300	2980	2060	2160
4	2930	5330	3270	e2500	15200	6940	14400	2740	4230	2460	1910	2160
5	2570	5380	e3100	e2400	16400	6220	12800	4010	4790	2060	1860	2780
6	2350	5060	e2550	e2300	13100	5840	11000	4570	3670	2480	3210	2780
7	2050	4880	e3350	e2100	12000	5490	9920	4150	4010	2190	6820	2720
8	1540	4360	e2900	e2100	11000	5150	8990	3570	3950	1500	5730	2570
9	1490	4960	e3300	e2800	10500	5190	8050	3460	3320	1720	3770	1440
10	1960	6830	e2150	e2400	12600	4430	7250	3650	2720	2340	3070	1570
11	1770	6570	e2500	e2400	17000	4180	8890	10900	2730	2150	4960	2600
12	2050	5230	e2900	e2300	14500	5000	13300	14300	3510	2240	5350	2500
13	1920	4820	e2600	e2400	12500	6630	11900	12400	2760	6660	4150	2390
14	1850	4960	e2000	e2000	11200	7820	10400	19600	2640	5920	4910	2490
15	1810	4700	e2000	e2200	10600	7750	9550	20600	2450	4000	4190	1720
16	1820	4230	e2000	e2300	11000	7520	9220	15900	2260	4200	3380	1940
17	2360	10600	e1650	e2200	15300	6740	8320	18000	2050	5210	2910	2060
18	2830	9450	e1600	e2700	15100	9200	7560	19500	2100	4200	2680	1830
19	4080	7280	e2000	e5000	12700	9720	6880	17100	2960	3830	2570	1760
20	16400	6210	e1900	e6200	11300	10200	6380	14500	2630	3970	1940	1770
21	41700	5910	e1800	e5100	9800	14100	5540	13600	2600	3450	2360	1850
22	22900	5650	e2300	e5100	9980	13200	5530	14100	2450	2970	2650	1810
23	13600	4800	e2500	e4900	9670	12200	5390	12900	2730	2910	2490	1800
24	10200	4490	e1600	e4600	13100	11900	5040	11300	1860	3180	2640	1620
25	8240	4150	e1750	e4700	12000	11100	4390	9630	2090	2840	4270	1490
26	6700	3990	e1850	e11000	9590	10300	4300	8310	2370	2740	4440	1650
27	6240	4010	e2300	19100	8670	9210	4490	7230	2430	2620	3960	1760
28	5610	3900	e2300	12300	7320	8130	3770	6030	2370	2280	4030	2070
29	4890	3980	e2100	10200	---	7250	2850	5750	2400	1710	4410	1980
30	4460	4230	e2000	16300	---	6610	2740	10800	2770	1680	4850	2000
31	4710	---	e2000	17700	---	6390	---	9830	---	2150	3940	---
MEAN	6058	5424	2339	5271	12230	7948	7679	9901	3145	3059	3550	2090
MAX	41700	10600	3470	19100	17000	14100	14400	20600	7470	6660	6820	3130
MIN	1490	3900	1600	1900	7320	4180	2740	2640	1860	1500	1860	1440

## STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)													
MEAN	3386	5056	6069	5664	6091	10140	11920	7661	4496	3067	2615	2713	
MAX	15690	11760	14050	15050	15120	24480	31560	16090	15200	11220	14230	9167	
(WY)	1956	1952	1974	1949	1976	1945	1940	1943	1972	1945	1955	1960	
MIN	806	995	1968	1318	1748	3191	3322	2215	1214	864	715	892	
(WY)	1942	1965	1965	1981	1980	1981	1985	1965	1965	1954	1954	1941	

## SUMMARY STATISTICS

	FOR 1990 WATER YEAR	FOR PERIOD OF RECORD
AVERAGE FLOW	5684	5733
HIGHEST ANNUAL MEAN		Unadjusted
LOWEST ANNUAL MEAN		8621
HIGHEST DAILY MEAN	41700	187000
LOWEST DAILY MEAN	1440	412
INSTANTANEOUS PEAK FLOW	47200	250000a
INSTANTANEOUS PEAK STAGE	15.46	35.15
INSTANTANEOUS LOW FLOW	1270	382
10 PERCENTILE	12400	12400
50 PERCENTILE	4100	3450
95 PERCENTILE	1770	1260

a From rating curve extended above 90,000 ft<sup>3</sup>/s on basis of flood-routing study.

e Estimated.

## BUSH KILL BASIN

01439500 BUSH KILL AT SHOEMAKERS, PA

LOCATION.--Lat 41°05'17", long 75°02'17", Monroe County, Hydrologic Unit 02040104, on right bank 30 ft downstream from highway bridge, 0.1 mi downstream from Saw Creek, 0.7 mi northwest of Shoemakers, and 2 mi southwest of Bushkill.

DRAINAGE AREA.--117 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1908 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1928, published as Bushkill Creek near Shoemakers; October 1928 to September 1952, published as Bushkill Creek at Shoemakers.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1921, 1932(M), 1933, 1935-36, 1938(M), 1939-40, 1942, 1945, 1946(M), 1948(M). WSP 1302: 1909-15, 1920(M), 1922-29. WDR PA-89-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 421.13 ft above National Geodetic Vertical Datum of 1929. Sept. 19, 1908, to Aug. 12, 1938, nonrecording gage, and Aug. 13, 1938, to June 20, 1956, water-stage recorder at site 50 ft upstream at same datum.

REMARKS.--Records good except for periods of estimated discharge, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--82 years, 235 ft<sup>3</sup>/s, 27.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 13.95 ft, from flood-marks, from rating curve extended above 2,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 2.6 ft<sup>3</sup>/s, Sept. 25, 26, 27, 1964, gage height, 0.72 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	2200	*3260	*5.38	Jan. 30	0830	1530	3.73

Minimum daily discharge, 60 ft<sup>3</sup>/s, Dec. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	354	187	157	875	247	298	156	392	e151	e106	127
2	287	310	177	184	775	240	293	138	331	137	e90	120
3	347	293	165	169	749	241	430	111	290	e120	e79	113
4	276	285	e163	154	732	228	493	103	259	e110	e75	104
5	234	260	e162	146	705	208	439	348	231	e98	e80	99
6	213	245	e161	144	595	201	390	308	210	e88	e200	98
7	190	229	159	130	540	179	365	251	220	e84	336	93
8	170	213	e152	120	491	172	344	215	195	e78	242	88
9	162	311	e148	118	454	172	307	190	235	e76	155	80
10	159	412	e140	127	486	170	283	373	227	e77	132	80
11	157	353	e130	162	486	180	356	836	190	e76	215	75
12	157	318	e110	158	427	186	342	663	158	e200	201	71
13	156	283	e98	118	380	185	299	586	138	468	173	69
14	153	260	e88	86	356	174	270	617	128	363	474	64
15	149	249	e87	91	345	160	302	552	151	310	346	254
16	143	326	e86	82	378	121	315	578	159	359	254	196
17	198	425	e85	83	394	255	282	911	126	329	201	147
18	260	364	e82	134	342	489	259	788	e130	279	159	120
19	517	332	e80	227	317	411	237	634	219	238	145	108
20	1990	311	e79	197	289	459	221	536	312	203	137	121
21	2410	320	e78	247	256	483	241	498	261	201	147	120
22	1510	280	e77	300	263	432	247	454	216	196	174	110
23	1100	265	e74	252	356	389	224	392	204	171	163	110
24	840	249	e72	235	426	349	203	348	190	e150	248	105
25	681	238	e70	334	371	321	191	311	163	e140	257	94
26	572	231	e68	870	286	294	193	284	150	e130	194	88
27	483	231	e66	776	e270	268	179	280	e140	e120	178	88
28	431	237	e64	646	e260	248	162	246	e128	e100	179	84
29	390	232	e62	590	---	230	149	287	e127	e93	243	78
30	354	206	e60	1380	---	241	157	610	e130	e90	193	74
31	337	---	e80	1070	---	267	---	478	---	e94	147	---
TOTAL	15246	8622	3310	9487	12604	8200	8471	13082	6010	5329	5923	3178
MEAN	492	287	107	306	450	265	282	422	200	172	191	106
MAX	2410	425	187	1380	875	489	493	911	392	468	474	254
MIN	143	206	60	82	256	121	149	103	126	76	75	64
CFSM	4.20	2.46	.91	2.62	3.85	2.26	2.41	3.61	1.71	1.47	1.63	.91
IN.	4.85	2.74	1.05	3.02	4.01	2.61	2.69	4.16	1.91	1.69	1.88	1.01

CAL YR 1989 TOTAL 92054 MEAN 252 MAX 2410 MIN 27 CFSM 2.16 IN. 29.27  
WTR YR 1990 TOTAL 99462 MEAN 272 MAX 2410 MIN 60 CFSM 2.33 IN. 31.62

e Estimated.

## DELAWARE RIVER BASIN

01440200 DELAWARE RIVER BELOW TOCKS ISLAND DAMSITE, NEAR DELAWARE WATER GAP, PA

LOCATION.--Lat 41°00'42", long 75°05'09", Warren County, NJ, Hydrologic Unit 02040105, on left bank 40 ft streamward from River Road, 1.0 mi downstream from Tocks Island, 3.7 mi northeast of Delaware Water Gap, PA, 4.0 mi upstream from bridge on Interstate Route 80, and at mile 216.1.

DRAINAGE AREA.--3,850 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 293.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Gage height satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 37.4 ft, present datum (discharge about 260,000 cfs). Information on stage supplied by Harlan Fish, retired caretaker of Worthington State Forest.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	6440	4580	e2590	17300	7940	7070	3270	9980	3140	2700	4170
2	3050	7010	3820	e2720	14600	7810	7190	3200	8180	3330	2470	3030
3	4130	6960	3020	e2780	17400	7740	7660	3050	6310	3470	2480	2690
4	4230	6550	2800	e2980	17700	7720	14400	2810	5700	2970	2200	2550
5	3880	6490	4090	e3060	19100	7160	14900	4280	6430	2170	2000	3110
6	3420	6400	3400	e2980	15900	6580	12500	5320	5570	2630	2590	3130
7	3090	5990	3640	e2700	13800	6250	11100	5050	5180	2410	7250	3170
8	2480	5510	4220	e2620	12700	5820	10000	4470	e5260	1830	7450	3120
9	2260	5930	3720	e2950	11900	5790	8770	4090	e4650	1560	5400	2110
10	2640	7440	3020	e3140	12500	5450	7950	4160	e4030	2470	4010	1820
11	2540	8280	2810	e3160	18600	4500	8110	10100	e3760	2330	4220	2580
12	2640	7020	3360	e3020	16800	5040	13300	17900	e4260	2320	7070	3000
13	2790	5890	3430	e2950	14300	6600	12900	14600	3810	5300	5380	2710
14	2520	6040	e2660	e2560	12500	7870	11300	19800	3190	7970	6550	2790
15	2280	6010	e2220	e2570	11700	8240	10100	25200	3160	5250	5890	3010
16	2450	5280	e2220	e2730	11700	7930	9780	19100	2760	4770	4800	2410
17	3220	9120	e1930	e2840	14900	7610	8860	21400	2430	5830	3870	2560
18	3710	12300	e1890	e3270	17400	9200	8000	23700	2530	5440	3450	2610
19	5260	8950	e1970	e5070	14200	11000	7360	21200	3570	4440	3350	2220
20	16000	7620	e2270	e6630	12600	10400	6800	17500	3840	4390	2550	2360
21	58400	7090	e2120	e6650	11100	14900	6280	15300	3520	4200	2780	2200
22	37500	6870	e2190	e6490	9750	15000	5920	16200	3250	3490	3060	2380
23	20000	6240	e2640	e6480	10000	13500	5790	15200	3500	3330	3360	2280
24	13900	5610	e2330	e6120	13400	12900	5550	13300	2460	4020	3210	2180
25	11200	5370	e2000	e6750	14100	12200	4780	11600	2400	3270	4620	1980
26	9010	4880	e2130	11900	11100	11100	4610	9730	2700	3050	5490	1970
27	8040	4970	e2350	24300	9460	10000	4980	8490	2600	3030	5030	2140
28	7440	4800	e2590	15800	8380	8860	4410	7600	2560	2720	4990	2230
29	6590	4950	e2570	12300	---	7880	3240	6740	2570	2050	4940	2360
30	5830	5060	e2480	18400	---	7240	3070	11400	2830	1850	5550	2130
31	5930	---	e2430	23900	---	7210	---	12700	---	2350	5020	---
MEAN	8375	6569	2803	6529	13750	8627	8223	11560	4100	3464	4314	2567
MAX	58400	12300	4580	24300	19100	15000	14900	25200	9980	7970	7450	4170
MIN	2260	4800	1890	2560	8380	4500	3070	2810	2400	1560	2000	1820

## STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	4082	5148	6558	5945	7399	10400	11980	8767	5469	3536	2824	3157
MAX	13030	12870	16730	17960	17320	21490	24100	17970	18150	9455	6242	10310
(WY)	1978	1973	1974	1979	1976	1977	1983	1989	1972	1973	1969	1987
MIN	1193	992	1914	1437	1936	3873	3796	2746	1397	950	1101	1283
(WY)	1965	1965	1965	1981	1980	1981	1985	1965	1965	1965	1965	1965

## SUMMARY STATISTICS

## FOR 1990 WATER YEAR

## FOR PERIOD OF RECORD

AVERAGE FLOW	6697	6287	Unadjusted
HIGHEST ANNUAL MEAN		9418	1973
LOWEST ANNUAL MEAN		2572	1965
HIGHEST DAILY MEAN	58400	96000	Mar 16 1986
LOWEST DAILY MEAN	1560	580	Jul 7 1965
INSTANTANEOUS PEAK FLOW	64500	110000	Mar 16 1986
INSTANTANEOUS PEAK STAGE	16.35	24.00	Mar 16 1986
INSTANTANEOUS LOW FLOW	1340	580a	Jul 7 1965
10 PERCENTILE	14100	13400	
50 PERCENTILE	5000	3830	
95 PERCENTILE	2150	1610	

a Minimum daily.

e Estimated.

## BRODHEAD CREEK BASIN

01440400 BRODHEAD CREEK NEAR ANALOMINK, PA

LOCATION.--Lat 41°05'05", long 75°12'54", Monroe County, Hydrologic Unit 02040104, on left bank 1.5 mi upstream from Paradise Creek, 1.6 mi southeast of Henryville, and 2.3 mi north of Analomink.

DRAINAGE AREA.--65.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 586.50 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated discharge, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 136 ft<sup>3</sup>/s, 28.01 in./yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft<sup>3</sup>/s, July 28, 1969, gage height, 11.82 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 5.4 ft<sup>3</sup>/s, Sept. 11, 12, 13, 14, 1980, gage height, 1.14 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges, greater than base discharge of 1,100 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1630	*2530	*6.18	May 10	2230	1110	4.52
Jan. 30	0400	1420	4.95				

Minimum daily discharge, 36 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	149	105	e115	444	135	166	98	209	76	53	75
2	143	132	96	e96	412	131	166	89	178	75	44	70
3	152	131	e93	e78	403	132	375	81	161	64	39	71
4	118	127	e90	65	431	123	333	83	148	56	36	63
5	101	114	e89	64	387	113	276	242	133	50	42	60
6	92	110	85	60	319	111	238	178	121	45	114	60
7	85	105	e82	57	288	105	218	148	132	43	178	55
8	78	101	e78	56	260	101	194	133	105	40	106	52
9	75	195	e76	57	239	99	174	123	136	40	75	48
10	72	214	e73	63	279	103	167	478	128	39	82	48
11	76	169	e70	69	260	105	233	765	108	39	132	45
12	71	148	e69	64	224	104	194	460	94	143	96	43
13	67	133	e68	60	198	101	169	387	83	304	117	42
14	63	126	e67	e54	185	96	155	400	79	171	255	40
15	59	122	e66	57	182	91	178	308	115	137	148	122
16	57	307	e65	57	223	89	169	356	98	297	113	82
17	107	339	e64	65	221	237	154	609	83	211	95	79
18	116	261	e60	106	182	342	143	439	92	153	89	62
19	415	225	e59	122	171	245	130	342	165	117	83	55
20	1360	202	e58	107	155	266	123	282	219	97	85	68
21	1140	203	e57	152	140	243	137	274	147	104	106	55
22	703	e175	e56	150	145	209	131	241	117	96	113	56
23	429	159	e54	134	206	190	126	204	101	84	100	58
24	333	144	e52	138	230	172	112	179	91	75	149	50
25	271	136	e51	201	189	160	109	159	83	66	137	46
26	231	137	e50	641	164	149	108	151	76	59	109	45
27	202	132	e49	446	e154	137	99	144	70	53	93	47
28	181	134	e48	335	144	127	94	126	63	49	87	43
29	164	125	e46	316	---	120	89	198	62	46	145	41
30	150	112	e45	1030	---	141	105	446	67	44	101	40
31	143	---	e68	589	---	155	---	270	---	46	84	---
TOTAL	7334	4867	2089	5604	6835	4632	5065	8393	3464	2919	3206	1721
MEAN	237	162	67.4	181	244	149	169	271	115	94.2	103	57.4
MAX	1360	339	105	1030	444	342	375	765	219	304	255	122
MIN	57	101	45	54	140	89	89	81	62	39	36	40
CFSM	3.59	2.46	1.02	2.74	3.70	2.27	2.56	4.11	1.75	1.43	1.57	.87
IN.	4.14	2.75	1.18	3.16	3.86	2.61	2.86	4.74	1.96	1.65	1.81	.97

CAL YR 1989 TOTAL 49375 MEAN 135 MAX 1890 MIN 17 CFSM 2.05 IN. 27.87  
WTR YR 1990 TOTAL 56129 MEAN 154 MAX 1360 MIN 36 CFSM 2.33 IN. 31.68

e Estimated.

## BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA

LOCATION.--Lat 40°59'55", long 75°08'35", Monroe County, Hydrologic Unit 02040104, on left bank at Minisink Hills, 500 ft upstream from Marshall Creek, 1,500 ft downstream from Coates Paper Box Co., 0.8 mi upstream from mouth, and 3 mi southeast of East Stroudsburg.

DRAINAGE AREA.--259 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1950 to current year.

REVISED RECORDS.--WSP 1232: 1951(P).

GAGE.--Water-stage recorder. Datum of gage is 301.84 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1955, water-stage recorder, and Aug. 23 to Nov. 24, 1955, nonrecording gage at site about 1,300 ft upstream at datum 2.19 ft higher. Nov. 25, 1955, to July 24, 1956, nonrecording gage at site 40 ft upstream at present datum.

REMARKS.--Records good, except periods of estimated daily discharges which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 560 ft<sup>3</sup>/s, 29.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,800 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 29.9 ft, site and datum then in use, 27.0 ft, present site and datum, from floodmarks, from rating curve extended above 4,600 ft<sup>3</sup>/s, on basis of computation of flow over dam at gage height 14.43 ft and slope-area measurement of peak flow, site and datum then in use; minimum, 29 ft<sup>3</sup>/s, Sept. 27, 1964; minimum gage height, 1.10 ft Sept. 10, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above greater than of 4,300 ft<sup>3</sup>/s, and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 19	1715	4420	6.27	Jan. 30	0415	5500	6.80
Oct. 20	1730	*8600	*8.06				

Minimum daily discharge, 190 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	644	407	426	1880	e570	592	402	996	510	274	343
2	656	561	e390	326	1620	e556	581	373	847	440	219	322
3	667	550	e380	279	1550	e540	1320	350	764	344	201	311
4	486	537	e370	260	1600	e506	1390	342	687	303	190	287
5	422	489	344	283	e1490	e480	1140	1030	618	275	219	279
6	392	475	341	278	e1240	e455	969	680	561	252	549	279
7	357	449	342	261	e1050	e440	899	564	678	240	729	263
8	330	439	303	246	e980	428	812	516	548	229	453	246
9	317	829	e279	256	885	427	722	480	624	235	347	229
10	303	871	e265	292	1050	446	672	1630	591	221	363	240
11	314	686	e257	349	985	452	932	2910	503	214	515	225
12	296	615	e249	311	827	442	762	1800	448	582	411	220
13	279	562	e235	281	748	423	662	1510	405	1320	364	216
14	266	541	e233	253	705	401	619	1800	388	698	1000	205
15	260	538	e232	271	697	385	755	1300	513	558	554	785
16	250	1030	e231	270	806	380	702	e1600	452	769	434	430
17	530	1070	e230	300	781	753	616	e2700	389	608	373	398
18	530	831	e229	412	e670	1190	581	e2000	517	490	344	316
19	2200	748	e228	465	e620	819	536	e1550	817	416	314	280
20	5130	707	e227	404	e540	892	510	e1300	788	373	317	334
21	4420	716	e226	615	e530	841	587	e1280	602	401	371	282
22	2650	e650	e225	634	e605	733	559	e1100	509	433	415	299
23	1820	574	e224	549	894	682	506	e950	455	370	392	316
24	1410	553	e222	539	1060	624	463	874	418	330	955	272
25	1140	517	e220	716	831	594	448	769	380	297	672	251
26	968	524	e218	2420	691	556	457	715	355	272	514	236
27	852	509	e215	1690	663	516	421	697	333	249	436	244
28	764	511	e210	1320	653	486	397	606	311	235	402	232
29	690	464	e208	1200	---	464	376	947	297	227	602	218
30	638	430	e205	4050	---	531	419	2320	322	224	449	212
31	616	---	249	2480	---	588	---	1280	---	261	380	---
TOTAL	30331	18620	8194	22436	26651	17600	20405	36375	16116	12376	13758	8770
MEAN	978	621	264	724	952	568	680	1173	537	399	444	292
MAX	5130	1070	407	4050	1880	1190	1390	2910	996	1320	1000	785
MIN	250	430	205	246	530	380	376	342	297	214	190	205
CFSM	3.78	2.40	1.02	2.79	3.67	2.19	2.63	4.53	2.07	1.54	1.71	1.13
IN.	4.36	2.67	1.18	3.22	3.83	2.53	2.93	5.22	2.31	1.78	1.98	1.26

CAL YR 1989 TOTAL 206301 MEAN 565 MAX 5810 MIN 105 CFSM 2.18 IN. 29.63  
WTR YR 1990 TOTAL 231632 MEAN 635 MAX 5130 MIN 190 CFSM 2.45 IN. 33.27

e Estimated.



## DELAWARE RIVER BASIN

01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'36", long 75°05'02", Warren County, Hydrologic Unit 02040105, on left bank at Belvidere, 800 ft downstream from Pequest River, and at river mile 197.7.

DRAINAGE AREA.--4,535 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 781: 1933(M). WSP 951: 1940-41, Drainage area. WSP 1432: 1923, 1924(M).

GAGE.--Water-stage recorder. Datum of gage 226.43 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good except estimated daily discharges, which are fair. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversions from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Satellite telemeter and National Weather Service gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark, discharge, 220,000 ft<sup>3</sup>/s, from rating curve extended above 170,000 ft<sup>3</sup>/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4970	8160	5820	3280	22900	10300	9320	4620	12900	4460	3370	5090
2	4920	8660	4990	3540	19200	10100	9480	4520	10400	4760	3100	4030
3	6070	8740	3920	3270	20600	9950	10600	4280	8110	4630	3040	3440
4	5880	8180	2910	3460	21700	9810	16900	3990	7000	4010	2770	3260
5	5330	7850	4340	3720	22700	9100	18700	6200	7300	3280	2690	3490
6	4730	7750	4020	3670	19800	8390	16000	7370	6810	3240	e3780	3760
7	4270	7250	4260	3300	17200	7990	14300	6870	6100	3190	e8150	3730
8	3740	6860	4360	3140	15900	7450	13100	6120	6570	2840	e8600	3660
9	3260	7430	3520	3110	14900	7340	11600	5490	5980	2330	e6390	3090
10	3310	9260	3570	3880	15400	7170	10500	6500	5340	2850	e5250	2400
11	3480	10300	3280	3920	20900	6190	10700	14000	4790	3040	e6660	2680
12	3430	8840	3850	3740	20000	6470	15400	21300	5010	3540	e7310	3400
13	3590	7240	4040	3500	17300	7760	15800	17900	5040	7730	e6820	3170
14	3270	7520	3360	3120	15400	9240	14100	21100	4310	10800	e7360	3180
15	3100	7350	2670	2950	14500	9880	12900	27600	4500	7480	e7540	4400
16	3120	7030	2610	3160	14300	9540	12500	22900	4130	6560	e6080	3680
17	4070	9550	2410	3490	16700	9560	11600	30800	3730	7180	5070	3470
18	5660	14900	2360	3830	19900	11900	10600	30300	3760	6790	4480	3330
19	8130	11100	2150	5150	16900	13700	9690	26600	5320	5630	4290	2860
20	21200	9410	2770	7060	15300	13300	8930	21800	5840	5280	3600	3000
21	60200	8690	2610	8010	13500	17400	8520	19000	4940	5340	3480	2870
22	44800	8320	2280	8080	12000	17900	8090	19200	4480	4700	4070	2990
23	25900	7670	2640	8070	12600	16400	7820	18200	4370	4940	4300	2950
24	18500	6830	3130	7640	16200	15600	7480	16000	3960	5640	5420	2830
25	15000	6540	2450	7960	17600	14900	6800	14200	3360	4720	6130	2600
26	12400	6060	2580	15000	14300	13600	6430	12100	3650	4170	6750	2460
27	10900	6130	2570	28000	12100	12500	6520	10700	3540	3940	6190	2600
28	9860	6080	2890	20400	11000	11200	6110	9600	3580	3610	5950	2700
29	8770	6070	3090	16300	---	10100	4870	8730	3490	3090	6200	2820
30	7840	6030	2960	25200	---	9480	4560	15200	3740	2840	6500	2630
31	7590	---	2870	30600	---	9580	---	16200	---	2880	6040	---
MEAN	10560	8060	3267	8050	16810	10770	10660	14500	5402	4687	5399	3219
MAX	60200	14900	5820	30600	22900	17900	18700	30800	12900	10800	8600	5090
MIN	3100	6030	2150	2950	11000	6190	4560	3990	3360	2330	2690	2400

## STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	4663	7124	8240	7825	8438	14080	15780	10090	6015	4370	3694	3856
MAX	19570	21140	20590	20890	19930	42520	40720	21470	22280	16840	19260	13940	
(WY)	1956	1928	1974	1949	1976	1936	1940	1989	1972	1928	1955	1938	
MIN	1055	1226	1481	1683	2452	5243	4512	3261	1590	1017	881	1199	
(WY)	1942	1965	1923	1981	1980	1981	1985	1965	1965	1965	1954	1941	

## SUMMARY STATISTICS

## FOR 1990 WATER YEAR

## FOR PERIOD OF RECORD

AVERAGE FLOW	8398	7839
HIGHEST ANNUAL MEAN		14130
LOWEST ANNUAL MEAN		2990
HIGHEST DAILY MEAN	60200	184000
LOWEST DAILY MEAN	2150	610
INSTANTANEOUS PEAK FLOW	68400	273000a
INSTANTANEOUS PEAK STAGE	14.72	30.21b
INSTANTANEOUS LOW FLOW	1650	609
10 PERCENTILE	17000	16700
50 PERCENTILE	6390	5050
95 PERCENTILE	2730	1490

a From rating curve extended above 170,000 ft<sup>3</sup>/s on basis of flood-routing study.

b From high-water mark in gage house.

c Estimated.



## LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA

LOCATION.--Lat 41°07'49", long 75°37'33", Monroe County, Hydrologic Unit 02040106, on left bank 75 ft upstream from bridge on State Highway 115, at Stoddartsville, 1.9 mi upstream from Tobyhanna Creek, and 4 mi southwest of Thornhurst.

DRAINAGE AREA.--91.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WSP 1382: 1947, 1951.

GAGE.--Water-stage recorder. Datum of gage is 1,463.81 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at site 350 ft downstream at datum 2.14 ft lower.

REMARKS.--Records good except for period of estimated record, which are poor.

AVERAGE DISCHARGE.--47 years, 188 ft<sup>3</sup>/s, 27.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 16.37 ft, from floodmarks, from rating curve extended above 1,700 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum observed, 7.0 ft<sup>3</sup>/s, Sept. 26, 27, 1964; minimum gage height, 0.19 ft Sept. 27, Oct. 2, 9, 10, Nov. 17, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 22, 1942, reached a stage of 12.03 ft, from floodmark, present site and datum, discharge, 15,700 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	2030	*1040	*3.08				

Minimum daily discharge, 39 ft<sup>3</sup>/s, Oct. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	162	131	e250	469	205	189	137	328	255	62	104
2	64	147	125	e145	455	192	193	127	268	217	58	118
3	75	142	e122	e100	498	195	357	116	234	160	56	190
4	62	151	e120	e98	533	192	475	117	206	128	53	145
5	53	145	e118	e97	507	175	408	273	185	109	82	125
6	48	137	e115	e99	401	169	345	237	166	95	175	116
7	47	128	111	e99	361	159	304	194	171	87	162	105
8	43	121	e109	e90	336	156	271	169	157	78	125	97
9	44	150	e105	e89	320	150	242	155	202	78	100	85
10	43	169	e100	e88	442	161	234	369	220	78	130	90
11	42	147	e99	e88	436	181	397	786	187	80	184	86
12	45	131	e98	e81	363	188	338	502	167	272	136	77
13	45	117	e94	e80	318	182	284	431	144	644	117	71
14	42	111	e90	e88	295	172	250	511	129	389	220	68
15	40	114	e89	e89	291	161	252	399	123	294	158	190
16	39	345	e88	89	352	156	245	434	116	283	121	155
17	60	421	e87	94	367	201	224	706	106	220	101	135
18	87	300	e85	141	301	290	223	521	147	173	91	115
19	336	249	e82	148	271	235	199	405	256	146	109	104
20	684	220	e81	128	240	283	182	339	241	129	96	134
21	772	222	e80	177	216	263	204	326	184	169	121	126
22	476	181	e79	202	212	251	206	304	156	155	152	122
23	333	183	e78	170	298	228	183	264	137	128	142	123
24	260	164	e76	162	337	208	167	236	124	114	152	109
25	218	159	e75	217	292	192	161	212	111	100	144	100
26	189	157	e74	681	246	178	180	196	102	88	118	98
27	170	159	e73	527	240	164	163	191	93	82	114	103
28	157	163	e72	394	217	152	149	176	86	72	140	95
29	144	160	e70	348	---	146	140	251	84	68	191	86
30	134	142	e69	824	---	155	140	730	98	66	157	81
31	134	---	e145	611	---	167	---	448	---	63	124	---
TOTAL	4942	5297	2940	6494	9614	5907	7305	10262	4928	5020	3891	3353
MEAN	159	177	94.8	209	343	191	243	331	164	162	126	112
MAX	772	421	145	824	533	290	475	786	328	644	220	190
MIN	39	111	69	80	212	146	140	116	84	63	53	68
CFSM	1.74	1.93	1.03	2.28	3.74	2.08	2.66	3.61	1.79	1.77	1.37	1.22
IN.	2.00	2.15	1.19	2.63	3.90	2.40	2.96	4.16	2.00	2.04	1.58	1.36

CAL YR 1989 TOTAL 63868 MEAN 175 MAX 2200 MIN 27 CFSM 1.91 IN. 25.91  
WTR YR 1990 TOTAL 69953 MEAN 192 MAX 824 MIN 39 CFSM 2.09 IN. 28.38

e Estimated.

## LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1980 to current year.

INSTRUMENTATION.--Temperature recorder since October 1980.

REMARKS.--Interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.5°C, August 5, 1989; minimum, 0.0°C on many days during winter periods.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	12.5	9.5	11.0	1.5	.0	.5	.0	.0	.0
2	14.5	12.5	13.5	9.5	7.5	8.5	2.0	.0	1.0	.0	.0	.0
3	16.0	11.0	13.5	8.0	6.0	7.5	1.0	.0	.5	.5	.0	.0
4	13.0	9.0	10.5	6.5	4.5	5.5	1.5	.0	.5	.5	.0	.5
5	13.5	7.0	9.5	7.0	4.5	5.5	.0	.0	.0	.5	.0	.5
6	14.0	9.0	11.0	8.5	6.5	7.5	1.5	.0	.5	.5	.0	.0
7	12.5	10.0	11.0	9.0	6.0	7.5	1.5	.5	1.0	.5	.0	.0
8	10.0	8.0	9.0	10.5	8.0	9.0	1.5	.0	.5	.5	.0	.5
9	8.5	5.0	7.0	10.5	8.0	9.5	.0	.0	.0	.5	.0	.5
10	9.5	4.0	6.5	8.0	6.0	7.0	.0	.0	.0	.5	.5	.5
11	11.0	6.0	8.0	6.5	5.0	5.5	1.5	.0	.5	.5	.5	.5
12	12.5	5.0	8.0	7.0	5.0	6.0	1.5	1.5	1.5	1.5	.5	1.0
13	14.0	7.0	9.5	6.5	4.0	5.0	2.0	1.5	1.5	1.5	1.0	1.0
14	12.5	7.5	9.5	8.5	4.5	6.5	1.5	.0	.5	1.5	.5	1.0
15	16.5	9.0	12.0	11.0	8.0	9.5	.5	.0	.0	1.5	1.0	1.0
16	17.5	11.0	13.5	12.5	8.0	11.0	.0	.0	.0	2.0	1.0	1.5
17	14.5	13.0	13.5	8.0	4.5	6.0	.0	.0	.0	4.0	1.0	2.5
18	12.5	10.0	11.5	4.5	3.5	4.0	.0	.0	.0	3.5	1.5	2.5
19	10.0	8.0	9.0	3.5	2.5	3.0	.0	.0	.0	2.0	.5	1.5
20	9.0	8.5	8.5	5.0	3.0	4.0	.0	.0	.0	1.0	.0	.5
21	8.5	7.0	7.5	4.5	1.0	2.5	.0	.0	.0	2.0	1.0	1.5
22	8.0	6.5	7.0	2.5	.0	1.0	.0	.0	.0	2.0	1.5	1.5
23	8.5	6.0	7.0	2.0	.5	1.0	.0	.0	.0	2.5	1.0	1.5
24	8.5	6.0	7.0	1.5	.0	.5	---	---	---	3.5	1.5	2.5
25	10.0	7.0	8.5	1.5	.0	.5	.0	.0	.0	3.0	2.5	2.5
26	11.0	8.0	9.0	3.5	1.5	2.5	.0	.0	.0	3.0	1.0	1.5
27	11.0	8.0	9.5	3.0	2.0	2.5	.0	.0	.0	2.0	.5	1.0
28	12.0	9.0	10.0	5.5	3.0	4.0	.0	.0	.0	2.0	1.0	1.5
29	12.0	9.0	10.5	4.0	.0	2.0	.0	.0	.0	2.0	.5	1.0
30	12.5	9.5	11.0	1.0	.0	.5	.0	.0	.0	1.5	1.0	1.5
31	13.0	11.0	12.0	---	---	---	.5	.0	.0	1.5	.0	1.0
MONTH	17.5	4.0	9.8	12.5	.0	5.2	2.0	.0	.3	4.0	.0	1.0

## LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.5	.5	1.5	2.0	.0	.5	5.0	4.5	5.0	17.0	12.0	14.0
2	2.5	2.5	2.5	3.0	.0	1.0	8.5	5.0	6.5	15.0	11.5	13.0
3	2.5	2.0	2.5	4.5	1.0	2.5	7.5	5.5	6.5	15.5	9.0	12.0
4	2.0	1.0	2.0	3.0	.5	1.5	5.5	4.0	4.5	12.0	10.5	11.5
5	1.5	.5	1.0	2.5	.5	1.5	5.5	3.5	4.5	13.0	10.0	11.0
6	2.5	.0	1.5	3.5	.5	1.5	5.5	4.5	5.0	14.5	10.0	12.0
7	3.0	1.5	2.5	2.5	.0	1.0	6.0	4.0	5.0	13.0	10.5	11.5
8	3.5	1.5	2.5	3.0	.0	1.0	5.5	3.5	4.5	16.5	10.5	13.0
9	4.0	2.5	3.0	2.5	.5	1.5	7.5	3.0	5.0	16.5	13.0	14.5
10	4.0	2.5	4.0	6.0	2.5	4.0	7.0	6.0	6.5	14.5	13.0	14.0
11	3.0	1.0	2.0	7.0	4.0	5.5	7.5	5.5	7.0	12.5	10.5	11.5
12	3.0	2.0	2.5	10.0	5.5	7.5	6.5	4.0	5.5	12.0	9.0	10.5
13	3.0	1.0	2.0	12.0	7.5	9.5	8.0	3.5	5.5	11.5	10.5	11.0
14	3.5	3.0	3.5	12.5	8.5	10.5	7.0	4.5	6.0	15.0	10.5	12.5
15	3.0	2.5	2.5	13.5	9.0	11.0	9.5	7.0	8.0	15.0	12.5	14.0
16	5.5	2.5	3.5	13.5	10.5	12.0	11.0	6.5	8.5	14.5	13.5	14.0
17	5.5	1.5	3.5	13.0	11.5	12.5	9.5	6.5	8.0	15.5	13.0	14.0
18	2.0	.0	1.0	11.5	8.5	10.0	9.0	5.0	6.5	14.5	12.5	13.5
19	3.5	1.5	2.0	8.5	7.0	7.5	10.5	5.0	7.5	13.5	11.0	12.5
20	2.5	.5	1.5	7.0	4.0	5.5	10.0	7.5	8.5	15.5	12.0	13.5
21	2.5	.0	1.0	6.5	3.0	4.5	10.0	9.0	9.5	14.0	11.0	12.0
22	4.5	1.0	2.5	8.0	4.0	6.0	13.5	7.5	10.5	14.0	10.5	12.0
23	6.0	4.5	5.5	8.5	5.5	7.0	15.0	9.0	12.0	12.5	10.5	11.5
24	4.5	2.0	3.5	5.5	4.0	4.5	15.5	10.0	12.5	13.0	10.5	12.0
25	2.0	.0	.5	7.0	3.0	5.0	16.0	11.5	13.5	16.0	10.0	12.5
26	.5	.0	.0	6.0	3.0	4.5	19.0	13.0	15.5	13.5	12.0	12.5
27	.5	.0	.0	6.0	1.5	3.5	20.5	14.5	17.0	16.5	11.5	13.5
28	1.5	.0	.5	6.5	1.0	3.5	20.5	15.0	17.5	16.5	12.5	14.5
29	---	---	---	6.5	2.5	4.5	17.5	14.5	16.0	15.0	12.0	13.5
30	---	---	---	4.5	3.5	4.0	14.5	12.5	13.5	14.5	11.5	13.0
31	---	---	---	5.0	3.5	4.0	---	---	---	15.5	11.0	13.5
MONTH	6.0	.0	2.2	13.5	.0	5.1	20.5	3.0	8.7	17.0	9.0	12.7
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	16.5	12.0	14.5	20.0	18.5	19.5	23.0	16.0	19.0	21.0	15.5	18.0
2	17.5	14.0	16.0	20.0	17.5	18.5	23.0	15.0	19.0	22.0	16.5	18.5
3	19.5	16.0	17.5	22.0	16.5	19.0	24.0	16.0	19.5	21.0	16.5	18.5
4	17.5	14.0	16.0	24.5	17.0	20.0	24.0	17.0	20.0	20.5	15.0	17.0
5	17.5	12.0	14.5	25.5	19.5	22.0	20.0	17.5	18.5	19.0	15.5	17.0
6	17.5	12.5	15.0	21.5	17.0	19.0	18.5	17.5	18.0	21.5	17.0	18.5
7	19.5	15.5	17.0	22.5	14.0	17.5	21.0	18.0	19.0	20.0	18.0	19.0
8	17.0	14.5	15.0	19.5	14.5	17.0	22.0	17.0	19.5	21.0	15.5	17.5
9	16.0	14.5	15.0	21.5	16.5	18.5	19.0	17.5	18.5	15.0	13.0	14.0
10	17.5	15.0	16.0	23.5	17.0	20.0	18.5	17.5	18.0	20.0	14.0	16.0
11	16.0	13.5	15.0	18.5	16.0	17.0	21.5	17.5	19.0	20.5	14.5	17.0
12	18.5	12.0	15.0	16.0	15.0	15.5	23.0	18.0	20.0	19.5	16.0	17.5
13	17.5	13.5	15.5	17.0	15.0	15.5	23.5	17.5	20.0	20.0	16.0	18.0
14	17.5	13.5	15.0	17.5	16.0	17.0	21.5	19.0	20.0	20.0	15.0	17.5
15	18.0	14.5	16.0	20.0	17.0	18.5	22.0	17.5	19.5	19.0	16.0	17.5
16	20.0	14.5	17.5	20.5	18.5	19.5	23.0	17.0	19.5	18.0	14.5	16.0
17	21.5	15.5	18.5	22.0	17.5	19.5	24.0	17.5	20.5	15.5	11.0	13.5
18	19.5	16.0	17.5	22.5	18.0	20.5	24.5	20.5	22.5	15.0	8.5	11.0
19	20.5	17.0	18.5	24.0	18.5	21.0	24.0	19.0	21.0	12.0	9.0	10.5
20	19.0	16.5	18.0	24.0	19.0	21.0	19.0	15.5	17.0	14.5	11.0	12.0
21	20.0	17.0	18.0	20.5	19.5	20.0	16.0	15.0	15.5	14.5	8.5	11.5
22	21.0	16.0	18.5	22.5	18.5	20.5	16.5	15.5	16.0	13.0	11.5	12.0
23	21.5	17.0	18.5	23.0	19.5	21.0	17.0	15.5	16.5	13.0	10.0	11.5
24	17.5	15.0	16.5	23.0	18.5	20.0	19.0	16.0	17.5	14.0	10.0	11.0
25	18.0	14.0	16.0	23.5	16.0	19.5	21.5	17.5	19.0	15.0	8.5	11.0
26	19.0	13.0	16.0	24.0	15.5	19.5	23.0	17.5	20.0	13.0	9.5	11.0
27	21.0	14.0	17.0	25.0	16.0	20.0	21.5	18.0	20.0	15.0	10.5	12.0
28	22.0	15.5	18.5	25.0	18.0	21.0	23.0	17.5	20.0	16.5	11.0	13.0
29	22.0	16.5	19.0	24.5	18.0	20.5	21.5	19.0	20.0	16.5	11.5	13.5
30	22.5	17.0	19.5	24.5	18.0	21.0	21.0	16.5	18.5	16.0	12.0	13.5
31	---	---	---	21.0	18.0	19.5	21.0	15.0	18.0	---	---	---
MONTH	22.5	12.0	16.7	25.5	14.0	19.3	24.5	15.0	19.0	22.0	8.5	14.8

## LEHIGH RIVER BASIN

01447680 TUNKHANNOCK CREEK NEAR LONG POND, PA

LOCATION.--Lat 41°03'55", long 75°31'14", Monroe County, Hydrologic Unit 02040106, on left bank 0.6 mi downstream from unnamed tributary, 0.9 mi downstream from bridge on Legislative Route 45040, 3 mi west of Long Pond, and 5 mi upstream from mouth.

DRAINAGE AREA.--18.0 mi<sup>2</sup>. At site used prior to July 7, 1966, 16.8 mi<sup>2</sup>.

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

REVISED RECORD.--WDR PA-90-1: 1989 (monthly runoff).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,804.83 ft above National Geodetic Vertical Datum of 1929. Prior to July 7, 1966, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Records good except for periods of estimated daily discharges, which are fair. Diversion above station, since October 1969, to Wild Creek Basin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 46.7 ft<sup>3</sup>/s, 35.22 in/yr, adjusted for diversion since October 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 679 ft<sup>3</sup>/s, Apr. 6, 1984, gage height, 4.76 ft, minimum discharge 3.0 ft<sup>3</sup>/s, Mar. 11, 1969, gage height, 1.84 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft<sup>3</sup>/s revised and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 11	0430	239	3.23	May 18	0400	*325	*3.51

Minimum daily discharge, 6.0 ft<sup>3</sup>/s, Dec. 27.

REVISIONS.--The monthly and annual means for water year 1989 were not adjusted for diversion. The correct summaries are as follows:

	TOTAL	432.2	1291	852	667	524	655	837	3461	1744	964	591	575.2	
MEAN	13.9	43.0	27.5	21.5	18.7	21.1	27.9	112	58.1	31.1	19.1	19.2		
MAX	38	120	43	52	58	52	45	320	92	46	26	49		
MIN	8.6	10	19	15	10	12	19	21	41	18	12	9.0		
MEAN#	13.9	43.0	27.5	21.5	19.1	24.9	34.8	135	58.1	31.1	19.1	19.2		
CFSM#	.77	2.39	1.53	1.20	1.06	1.38	1.93	7.50	3.23	1.73	1.06	1.07		
IN#	.89	2.67	1.76	1.38	1.11	1.60	2.16	8.63	3.60	1.99	1.22	1.19		
†	0	0	0	0	0.39	3.82	6.93	23.4	0	0	0	0		
CAL YR 1988	TOTAL	12897.3	MEAN	35.2	MAX	228	MIN	8.3	MEAN#	36.1	CFSM#	2.01	IN#	27.24
WTR YR 1989	TOTAL	12593.4	MEAN	34.5	MAX	320	MIN	8.6	MEAN#	37.4	CFSM#	2.08	IN#	28.22

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	42	e26	21	150	31	50	38	135	76	24	50
2	20	46	e26	28	120	28	56	33	84	99	25	44
3	25	40	e25	28	90	29	88	32	68	82	25	42
4	31	39	e24	22	80	e28	114	32	59	53	24	40
5	28	37	e23	25	80	27	96	80	57	37	26	37
6	23	33	e24	26	72	24	72	84	53	31	36	36
7	18	31	e23	33	65	e24	58	54	78	28	61	33
8	16	30	e20	20	59	24	53	41	89	26	74	32
9	15	38	e19	19	55	24	50	36	76	25	68	32
10	15	60	e18	20	52	24	47	106	79	25	61	31
11	14	63	e17	21	58	28	70	234	70	25	58	30
12	14	49	e16	20	53	30	75	216	60	46	56	30
13	14	41	e15	19	48	30	58	153	50	94	70	29
14	14	34	e14	e17	46	30	50	113	45	100	142	29
15	13	32	e13	16	44	27	50	92	43	89	131	48
16	13	43	e12	17	44	26	55	98	42	79	122	68
17	15	61	e11	22	45	54	48	290	40	80	93	84
18	22	62	e10	34	43	115	46	313	46	72	69	77
19	52	49	e10	61	32	80	44	243	79	55	57	66
20	98	41	e9.5	87	28	71	40	169	76	44	52	55
21	132	33	e8.7	30	e28	67	47	125	59	43	54	49
22	119	e32	e8.0	34	30	63	55	112	46	46	62	47
23	99	e30	e7.4	27	45	50	45	97	40	45	67	44
24	73	e30	e7.0	25	56	48	41	85	37	40	74	42
25	53	e29	e6.9	35	47	43	37	76	35	36	75	40
26	42	e28	e6.7	50	e40	40	39	72	33	33	72	38
27	37	e28	e6.6	110	e38	39	37	71	31	30	65	36
28	35	e28	e6.4	94	e34	38	35	65	30	28	57	35
29	33	e28	e6.2	76	---	37	33	76	29	27	58	34
30	32	e27	e6.0	90	---	38	38	168	34	26	57	33
31	34	---	13	200	---	40	---	175	---	25	56	---
TOTAL	1167	1164	438.4	1327	1582	1257	1627	3579	1703	1545	1971	1291
MEAN	37.6	38.8	14.1	42.8	56.5	40.5	54.2	115	56.8	49.8	63.6	43.0
MAX	132	63	26	200	150	115	114	313	135	100	142	84
MIN	13	27	6.0	16	28	24	33	32	29	25	24	29
MEAN#	37.9	39.2	14.6	47.9	77.3	49.1	54.7	115	57.2	50.2	63.9	43.3
CFSM#	2.11	2.18	.81	2.66	4.29	2.73	3.04	6.39	3.18	2.79	3.55	2.41
IN#	2.43	2.43	.93	3.07	4.47	3.14	3.39	7.37	3.55	3.21	4.09	2.69
†	0.33	0.37	0.45	5.11	20.8	8.58	0.51	0.47	0.41	0.38	0.33	0.32

CAL YR 1989 TOTAL 12787.6 MEAN 35.0 MAX 320 MIN 6.0 MEAN# 38.0 CFSM# 2.11 IN# 28.67.

WTR YR 1990 TOTAL 18651.4 MEAN 51.1 MAX 313 MIN 6.0 MEAN# 54.1 CFSM# 3.01 IN# 40.82

† Diversion above station to Wild Creek Basin, equivalent in cubic feet per second, furnished by the city of Bethlehem.

\* Adjusted for diversion.

e Estimated.

## LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA

LOCATION.--Lat 41°05'05", long 75°36'21", Carbon County, Hydrologic Unit 02040106, on left bank 50 ft downstream from bridge on State Highway 940, 500 ft downstream from Shingle Mill Run, and 1.5 mi southwest of Blakeslee.

DRAINAGE AREA.--118 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,511.23 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 16, 1962, nonrecording gage at site 50 ft upstream at same datum.

REMARKS.--Records good except periods of estimated daily discharges which are poor. Power generation by Pocono Lake about 5.0 mi upstream since 1985 and minor diversion from Tunkhannock Creek basin into Wild Creek basin.

AVERAGE DISCHARGE.--29 years, 263 ft<sup>3</sup>/s, 30.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,190 ft<sup>3</sup>/s, Sept. 27, 1985, gage height, 12.33 ft; minimum, 22 ft<sup>3</sup>/s, Sept. 24, 25, 1964, gage height, 1.51 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 19.41 ft, from floodmark, discharge, 35,300 ft<sup>3</sup>/s, by slope-area measurement.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 17	0300	*1970	*6.37	No other peaks above base discharge			

Minimum daily discharge, 69 ft<sup>3</sup>/s, Oct. 10, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	233	188	310	518	214	277	185	579	472	98	180
2	156	212	184	172	485	236	300	168	435	435	97	182
3	188	211	175	142	525	239	449	156	359	286	88	191
4	130	197	170	136	548	232	593	180	298	188	86	157
5	116	191	e155	142	531	211	538	414	262	156	104	143
6	86	181	132	140	440	203	446	385	231	133	211	145
7	91	152	137	130	375	189	375	321	367	117	299	138
8	107	170	e130	121	363	184	336	191	359	112	252	128
9	137	204	e125	117	354	174	284	255	373	112	206	112
10	69	271	e120	125	454	212	275	637	419	106	264	112
11	70	279	117	136	492	242	407	1190	363	107	308	109
12	69	221	112	124	422	244	422	844	285	328	242	107
13	74	190	e109	118	362	243	353	640	228	731	326	108
14	78	176	e106	110	331	227	301	602	198	588	764	106
15	79	173	e105	114	336	206	303	500	194	448	545	384
16	83	305	e103	107	395	211	310	597	184	414	395	359
17	116	428	e102	132	440	364	287	1770	171	370	264	316
18	168	355	e100	198	374	597	267	1200	232	285	214	235
19	418	273	e99	221	328	495	234	819	482	216	170	196
20	920	229	e97	177	273	457	216	611	407	190	169	209
21	1050	248	e96	218	228	416	267	520	325	198	215	173
22	713	174	e95	222	254	366	284	474	230	207	254	174
23	528	220	e94	186	364	322	238	418	195	183	246	164
24	398	226	e92	183	458	277	215	373	174	161	299	153
25	309	233	e91	287	406	251	201	328	160	162	311	139
26	238	216	e91	717	313	227	210	260	146	129	277	145
27	153	223	e90	587	273	215	210	279	135	113	254	149
28	169	236	e89	438	259	203	168	275	133	111	213	135
29	178	233	e89	390	---	198	198	398	128	102	317	124
30	227	207	e88	788	---	215	189	1060	167	100	295	125
31	191	---	e185	663	---	220	---	803	---	99	214	---
TOTAL	7393	6867	3666	7651	10901	8290	9153	16853	8219	7359	7997	5098
MEAN	238	229	118	247	389	267	305	544	274	237	258	170
MAX	1050	428	188	788	548	597	593	1770	579	731	764	384
MIN	69	152	88	107	228	174	168	156	128	99	86	106
CFSM	2.02	1.94	1.00	2.09	3.30	2.27	2.59	4.61	2.32	2.01	2.19	1.44
IN.	2.33	2.16	1.16	2.41	3.44	2.61	2.89	5.31	2.59	2.32	2.52	1.61

CAL YR 1989 TOTAL 84128 MEAN 230 MAX 2950 MIN 46 CFSM 1.95 IN. 26.52  
WTR YR 1990 TOTAL 99447 MEAN 272 MAX 1770 MIN 69 CFSM 2.31 IN. 31.35

e Estimated.

## LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1980 to current year.

INSTRUMENTATION.--Temperature recorder since June 1980.

REMARKS.--Interruptions in daily record due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.0°C, Aug. 13, 1988; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--Maximum, 25.0°C, July 28; minimum, 0.0°C, Dec. 23.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	10.5	12.5	12.0	9.0	10.0	1.5	.5	1.0	1.0	1.0	1.0
2	16.0	14.0	15.0	9.5	8.0	9.0	1.5	.5	1.0	1.5	1.0	1.0
3	16.0	12.5	15.0	9.0	7.5	9.0	1.0	.5	1.0	2.0	1.0	1.5
4	13.0	10.5	11.5	7.5	6.5	7.0	.5	.5	.5	2.5	1.0	2.0
5	13.5	10.0	11.5	8.5	6.5	7.5	.5	.5	.5	2.5	1.5	2.0
6	14.0	11.0	12.5	9.0	8.0	8.5	2.0	.5	1.0	2.5	1.5	2.0
7	13.0	11.5	12.5	9.0	7.0	8.0	2.0	.5	1.0	2.0	1.0	1.5
8	11.5	10.0	10.5	10.5	9.0	9.5	.5	.5	.5	2.5	1.0	2.0
9	11.0	8.5	10.5	10.5	8.5	10.0	.5	.5	.5	2.5	1.5	2.0
10	9.5	6.5	8.5	8.0	7.5	7.5	1.0	.5	.5	3.0	2.5	2.5
11	10.5	8.5	9.5	7.5	6.5	7.0	1.5	1.0	1.5	3.0	2.0	2.5
12	12.0	7.5	9.5	7.5	6.0	7.0	2.0	1.0	1.5	2.0	1.0	1.5
13	13.0	9.5	11.5	7.0	5.5	6.0	1.5	.5	1.0	.5	.5	.5
14	12.5	9.5	11.0	9.0	6.5	7.0	.5	.5	.5	1.5	.5	1.0
15	15.0	11.5	13.0	10.5	---	---	.5	.5	.5	2.5	1.0	2.0
16	16.0	12.5	14.0	12.0	7.5	10.0	.5	.5	.5	3.5	1.5	2.5
17	14.5	13.5	14.0	7.5	6.0	6.5	.5	.5	.5	4.5	2.5	3.5
18	13.5	11.0	12.0	6.0	5.0	5.5	.5	.5	.5	5.0	3.0	4.0
19	11.0	9.5	10.0	5.0	4.0	4.5	.5	.5	.5	3.0	1.5	2.0
20	10.0	9.5	10.0	6.0	4.0	5.0	.5	.5	.5	---	1.0	---
21	9.5	8.5	9.0	4.5	2.0	3.0	.5	.5	.5	3.0	2.5	2.5
22	8.5	8.0	8.0	2.5	1.5	2.0	.5	.5	.5	3.0	2.5	2.5
23	9.0	7.0	8.0	2.0	1.5	1.5	.5	.0	.5	3.0	2.0	2.5
24	9.0	7.0	8.0	2.0	1.0	1.5	---	---	---	4.0	2.5	3.0
25	10.0	7.5	8.5	3.0	1.0	2.0	.5	.5	.5	3.5	3.0	3.0
26	10.5	8.0	9.0	3.5	2.5	3.0	.5	.5	.5	3.5	2.0	2.5
27	10.5	7.5	9.0	3.5	2.0	3.0	.5	.5	.5	3.0	2.0	2.0
28	11.5	8.5	10.0	4.5	3.0	4.0	.5	.5	.5	3.0	2.0	2.5
29	---	9.0	---	3.5	1.0	2.0	.5	.5	.5	2.5	1.5	2.0
30	12.0	10.0	10.5	2.0	1.0	1.5	1.5	.5	.5	2.5	1.5	2.0
31	12.5	11.0	12.0	---	---	---	1.0	.5	1.0	2.5	1.5	2.0
MONTH	16.0	6.5	10.9	12.0	1.0	5.8	2.0	.0	.7	5.0	.5	2.1



## LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.0	1.5	2.5	3.5	1.5	2.0	5.5	5.0	5.5	17.5	13.0	15.0
2	3.0	2.5	2.5	5.0	2.0	3.0	8.0	5.5	6.0	15.0	12.5	14.0
3	2.5	2.0	2.5	5.5	2.5	3.5	6.5	5.0	6.0	16.5	11.0	13.5
4	2.5	1.5	2.0	3.5	1.5	2.5	5.0	4.5	5.0	13.0	12.0	12.5
5	2.5	1.5	2.0	4.0	2.0	2.5	6.0	4.0	5.0	14.0	11.5	12.5
6	3.5	2.0	2.5	4.0	1.5	3.0	6.0	5.0	5.5	14.5	11.5	12.5
7	4.0	2.5	3.0	4.0	1.0	2.0	6.0	4.5	5.0	14.5	10.5	12.5
8	4.0	2.0	3.0	5.0	1.0	2.5	6.0	4.0	5.0	17.5	11.5	14.0
9	4.0	3.0	3.5	4.0	2.0	3.0	8.0	3.5	5.5	16.5	13.0	14.5
10	4.0	2.5	3.5	6.5	3.5	4.5	7.0	6.0	6.5	15.0	13.0	14.0
11	3.5	2.0	2.5	7.5	4.5	5.5	7.5	5.5	6.5	13.0	12.0	12.5
12	3.5	2.5	3.0	9.0	5.0	6.5	7.0	5.0	5.5	13.5	10.5	12.0
13	4.0	2.5	3.0	10.0	5.5	7.5	8.0	4.5	6.0	12.5	12.0	12.0
14	4.0	3.5	3.5	10.0	6.0	8.0	8.0	5.0	6.5	15.5	11.5	13.5
15	3.5	3.0	3.0	11.5	7.0	9.0	9.0	7.0	7.5	---	---	---
16	5.0	3.0	4.0	11.0	8.5	9.5	10.5	6.0	8.0	---	---	---
17	4.5	2.0	3.0	10.5	9.0	10.0	8.5	6.5	8.0	---	---	---
18	3.5	1.5	2.5	8.5	7.5	8.0	9.0	5.5	7.0	---	---	---
19	4.5	2.5	3.0	8.0	7.0	7.5	11.0	5.5	8.0	---	---	---
20	3.5	1.5	2.0	7.5	5.5	6.5	10.0	7.5	8.5	---	---	---
21	4.0	1.5	2.5	7.5	5.0	6.0	10.0	9.0	9.5	---	---	---
22	5.0	2.5	4.0	8.5	5.5	7.0	13.0	7.5	10.0	---	---	---
23	6.0	4.5	5.5	8.5	6.0	7.5	14.5	9.0	11.0	---	---	---
24	4.5	3.0	4.0	6.5	5.0	5.5	15.0	9.5	12.0	---	---	---
25	3.0	1.0	2.0	7.5	4.5	6.0	15.5	11.5	13.0	---	---	---
26	2.5	1.0	1.5	7.5	4.5	5.5	18.0	12.0	14.5	---	---	---
27	2.0	1.5	2.0	6.5	3.5	4.5	19.5	13.5	16.0	---	---	---
28	4.0	1.5	2.5	7.0	3.0	4.5	20.5	14.0	17.0	---	---	---
29	---	---	---	7.5	3.5	5.5	17.0	15.0	16.0	---	---	---
30	---	---	---	5.5	4.5	5.0	15.0	13.5	14.5	---	---	---
31	---	---	---	5.5	4.5	5.0	---	---	---	15.5	13.0	15.0
MONTH	6.0	1.0	2.9	11.5	1.0	5.4	20.5	3.5	8.7	17.5	10.5	13.3
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.0	13.5	15.0	21.0	19.0	19.5	22.5	17.5	20.0	21.5	17.5	19.5
2	17.5	15.0	16.5	21.0	18.5	19.5	22.5	16.5	19.5	22.5	18.5	20.0
3	19.0	16.5	17.5	22.0	18.0	20.0	23.0	17.5	20.5	22.0	19.0	20.0
4	17.0	14.5	16.0	24.5	18.0	21.0	22.5	18.5	20.5	21.5	17.0	19.0
5	18.0	13.5	15.5	24.5	21.0	22.5	21.0	18.5	19.5	20.0	18.0	19.0
6	19.0	13.5	16.0	22.0	18.5	20.5	21.0	19.0	20.0	22.0	19.0	20.0
7	19.0	15.5	17.0	22.5	17.0	19.5	22.0	20.0	20.5	21.0	18.5	19.5
8	17.0	15.5	16.5	20.5	17.5	19.0	22.0	19.0	20.5	20.5	17.0	18.5
9	17.5	16.0	17.0	23.0	19.0	21.0	20.5	19.0	19.5	17.0	15.0	16.0
10	18.0	17.0	17.5	23.0	19.5	21.0	20.0	18.5	19.5	20.5	16.0	18.0
11	17.0	15.5	16.0	20.5	18.0	18.5	22.0	19.5	20.5	20.0	16.0	18.5
12	19.5	14.0	16.5	18.5	16.5	17.5	23.0	19.0	20.5	20.0	17.5	19.0
13	18.5	15.0	17.0	19.0	17.0	18.0	23.0	18.5	20.5	19.5	18.0	19.0
14	19.0	16.0	17.0	19.0	18.0	18.5	21.5	19.0	20.0	20.0	17.0	18.5
15	19.5	16.5	18.0	20.5	18.5	19.5	22.0	19.5	20.5	19.0	17.0	18.0
16	21.5	17.5	19.0	20.5	18.5	19.5	22.5	19.0	20.5	18.5	17.0	18.0
17	22.5	18.0	20.0	22.0	18.5	20.0	23.0	19.0	21.0	17.0	14.0	16.0
18	20.5	18.0	19.0	23.0	19.0	21.0	24.0	20.5	22.5	15.5	13.0	14.0
19	20.0	18.0	19.0	24.0	19.5	21.5	21.5	19.5	21.0	14.0	12.0	13.0
20	20.0	18.0	19.0	24.0	19.5	21.5	19.5	17.5	18.0	15.5	13.5	14.5
21	21.0	18.5	19.5	21.0	20.0	20.5	---	---	---	15.0	12.0	13.5
22	21.5	17.0	19.0	23.5	20.0	21.5	---	---	---	14.5	13.5	14.0
23	21.5	19.0	20.0	23.5	20.5	22.0	---	---	---	14.0	12.0	13.0
24	18.5	17.5	18.0	23.0	19.0	21.0	19.5	17.5	18.5	13.5	11.5	12.0
25	19.0	16.5	17.5	24.0	18.5	21.0	21.5	19.0	20.0	14.5	10.0	12.0
26	20.5	15.5	17.5	24.0	18.5	21.0	22.5	19.0	20.5	13.5	12.0	12.5
27	22.0	17.0	19.5	24.5	19.0	21.5	---	---	---	15.5	12.0	13.5
28	22.5	17.5	19.5	25.0	20.0	22.5	---	---	---	15.5	12.0	13.5
29	23.0	18.5	20.5	23.5	20.0	22.0	---	---	---	16.0	12.5	14.5
30	23.5	19.5	21.0	24.5	20.0	22.0	22.0	18.5	20.0	16.5	14.0	15.0
31	---	---	---	22.0	19.5	21.0	21.5	17.5	19.5	---	---	---
MONTH	23.5	13.5	17.9	25.0	16.5	20.5	24.0	16.5	20.1	22.5	10.0	16.4

## LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER LAKE NEAR WHITE HAVEN, PA

LOCATION.--Lat 41°06'17", long 75°43'57", Luzerne County, Hydrologic Unit 02040106, on right bank 0.7 mi downstream from Francis E. Walter Lake, 2.0 mi upstream from Fawn Run, and 4 mi northeast of White Haven.

DRAINAGE AREA.--290 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1962 published as "below Bear Creek Reservoir," October 1962 to September 1971 published as "below Francis E. Walter Reservoir."

GAGE.--Water-stage recorder. Datum of gage is 1,212.95 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good, except for estimated daily discharges, which are poor. Flow regulated by Francis E. Walter Lake (station 01447780) 0.7 mi upstream since February 1961. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 623 ft<sup>3</sup>/s, 29.17 in/yr, adjusted for storage since February 1961.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft<sup>3</sup>/s, Dec. 21, 1957, gage height, 9.85 ft, from rating curve extended above 6,100 ft<sup>3</sup>/s; minimum, 1.3 ft<sup>3</sup>/s, Nov. 14, 1961, result of shutoff at lake; minimum gage height, 1.86 ft, Sept. 16, 1964; minimum daily discharge, 22 ft<sup>3</sup>/s, July 20-23, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 1955 reached a discharge of 54,200 ft<sup>3</sup>/s, based on slope-area measurement at site 4.9 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,900 ft<sup>3</sup>/s, Oct. 23, gage height, 6.35 ft; minimum daily discharge, 70 ft<sup>3</sup>/s, Oct. 14, 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	373	389	204	1910	492	502	378	1240	515	208	438
2	186	824	346	402	1440	480	657	341	768	1250	209	439
3	255	555	346	510	1390	524	1040	341	776	809	209	463
4	250	454	317	349	1430	529	1680	341	850	766	209	630
5	199	450	252	233	1890	532	1560	453	665	356	209	595
6	369	515	311	199	1450	531	1130	899	535	221	544	457
7	431	450	336	206	1070	484	909	873	576	322	637	332
8	103	346	238	268	991	410	914	623	707	322	535	313
9	102	378	169	312	968	468	835	462	846	237	437	313
10	102	361	172	308	937	456	610	633	793	204	431	313
11	84	451	250	308	1000	462	1110	2200	654	232	506	313
12	72	529	294	291	1730	620	1240	2650	564	571	518	262
13	72	522	291	263	1170	616	1010	1980	474	1420	549	220
14	70	474	255	261	934	534	851	2110	397	1150	977	406
15	70	372	177	260	918	526	733	1590	346	1170	1510	817
16	119	1330	148	256	839	463	621	1350	346	1980	1000	881
17	180	2150	152	284	808	470	730	354	346	1730	526	727
18	311	1360	181	402	857	1140	619	3800	351	982	427	324
19	667	1290	209	564	859	1230	565	3020	828	729	427	401
20	1020	664	203	459	926	1050	550	1970	952	433	371	465
21	1150	620	e203	457	683	937	520	1710	616	520	341	367
22	1190	599	e203	675	729	897	521	1240	595	739	632	333
23	2720	423	e203	579	788	751	645	883	683	601	688	336
24	2240	476	e203	450	771	674	523	806	574	394	545	340
25	1290	538	e203	614	768	675	464	672	421	354	546	341
26	966	528	e202	1160	895	566	517	600	338	303	558	341
27	612	576	e202	1520	755	577	461	600	245	272	565	341
28	480	595	e202	1530	655	507	444	600	316	272	711	326
29	480	585	e202	1990	---	456	444	601	287	272	682	294
30	403	506	202	2410	---	515	444	1960	249	231	771	294
31	90	---	202	2390	---	505	---	2240	---	206	592	---
TOTAL	16471	19294	7263	20114	29561	19077	22849	38280	17338	19563	17070	12422
MEAN	531	643	234	649	1056	615	762	1235	578	631	551	414
MAX	2720	2150	389	2410	1910	1230	1680	3800	1240	1980	1510	881
MIN	70	346	148	199	655	410	444	341	245	204	208	220
MEAN#	530	630	239	654	1045	615	762	1248	567	630	549	426
CFSM#	1.83	2.17	.82	2.26	3.60	2.12	2.63	4.30	1.96	2.17	1.89	1.47
IN.#	2.11	2.42	.95	2.60	3.75	2.45	2.93	4.96	2.18	2.51	2.18	1.64

CAL YR 1989 TOTAL 207382 MEAN 568 MAX 7440 MIN 70 MEAN# 568 CFSM# 1.96 IN.# 26.60  
WTR YR 1990 TOTAL 239302 MEAN 656 MAX 3800 MIN 70 MEAN# 656 CFSM# 2.26 IN.# 30.70

# Adjusted for change in contents in Francis E. Walter Lake.

e Estimated.

## LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER LAKE NEAR WHITE HAVEN, PA

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1987 to current year.

INSTRUMENTATION.--Temperature probe attached to Synergetics Data Collection Platform.

REMARKS.--Interruptions in the daily record were due to DCP on downlink problems.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.5°C, July 21, 1988; minimum, 0.0°C on many days during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C, August 6, minimum ; 0.0°C, on many days during winter periods.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.0	13.0	13.0	11.5	9.5	10.5	1.5	1.5	1.5	---	---	---
2	15.5	13.0	14.0	11.5	10.0	10.5	1.5	1.0	1.5	.5	.0	.0
3	14.5	14.0	14.5	10.5	9.5	10.0	1.0	.5	1.0	.5	.0	.0
4	14.5	13.0	14.0	9.5	7.5	8.5	1.0	.5	.5	.5	.0	.5
5	13.5	12.0	12.5	8.0	7.0	7.5	1.0	.5	.5	.5	.0	.5
6	13.5	12.0	12.5	8.0	7.0	7.5	---	---	---	.5	.0	.5
7	14.0	12.5	13.5	8.5	7.5	8.0	.5	.5	.5	.5	.0	.0
8	13.0	11.5	12.5	8.5	8.0	8.0	---	---	---	.5	.0	.5
9	11.5	10.0	11.0	9.5	8.5	9.0	1.0	.0	.5	.5	.0	.5
10	11.0	9.0	10.0	9.0	8.0	8.5	.5	.0	.5	.5	.5	.5
11	10.5	9.0	9.5	8.0	7.0	7.5	.5	.5	.5	.5	.0	.5
12	11.5	9.0	10.0	8.0	7.5	7.5	.5	.5	.5	.5	.0	.0
13	11.0	9.0	10.0	7.0	6.5	7.0	.5	.0	.5	.5	.0	.0
14	11.0	9.5	10.0	---	---	---	.5	.0	.5	.5	.0	.0
15	12.0	10.0	10.5	7.5	6.5	7.0	.5	.0	.5	.5	.5	.5
16	11.5	10.0	11.0	10.0	7.0	8.5	.5	.0	.0	1.0	.0	.5
17	12.5	10.5	11.5	9.5	7.0	8.0	.5	.0	.0	1.0	.5	.5
18	12.5	11.5	12.0	7.0	5.5	6.0	.5	.0	.0	1.0	.5	.5
19	13.0	11.5	12.5	5.5	4.0	5.0	---	---	---	.5	.5	.5
20	11.5	10.0	11.0	4.0	3.5	4.0	---	---	---	.5	.5	.5
21	10.0	9.0	9.5	4.0	3.0	3.5	---	---	---	.5	.5	.5
22	9.0	8.5	9.0	3.0	2.0	2.5	---	---	---	1.0	1.0	1.0
23	9.0	8.0	8.5	2.0	1.5	2.0	---	---	---	1.5	1.0	1.5
24	8.5	7.5	8.0	1.5	1.0	1.5	---	---	---	2.0	1.0	1.5
25	9.0	8.0	8.5	1.5	1.0	1.0	---	---	---	3.0	1.5	2.5
26	9.0	8.5	9.0	2.0	1.0	1.5	---	---	---	3.0	2.0	3.0
27	9.5	9.0	9.0	2.0	1.5	2.0	---	---	---	2.0	1.5	2.0
28	10.0	9.0	9.5	3.5	2.5	3.0	---	---	---	2.0	1.5	1.5
29	10.0	9.5	10.0	3.0	2.5	2.5	---	---	---	2.0	1.5	2.0
30	10.5	9.5	10.0	3.0	1.5	2.0	---	---	---	2.0	1.5	1.5
31	11.0	9.5	10.0	---	---	---	---	---	---	2.0	1.0	1.5
MONTH	15.5	7.5	10.9	11.5	1.0	5.9	1.5	.0	.6	3.0	.0	.8

## LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER LAKE NEAR WHITE HAVEN, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.0	1.0	1.5	1.0	.5	1.0	5.0	4.5	4.5	15.5	14.5	15.0
2	2.5	2.0	2.5	1.0	.5	1.0	6.0	5.0	5.0	15.5	14.5	15.0
3	2.5	---	---	2.0	1.0	1.5	6.5	5.5	6.5	14.5	13.5	14.0
4	2.5	2.0	2.5	3.0	2.0	2.5	6.5	5.0	5.5	14.0	13.5	14.0
5	2.0	1.0	1.5	2.5	1.5	2.0	5.0	4.5	4.5	13.5	12.0	13.0
6	2.0	1.0	1.5	2.0	1.5	2.0	5.5	4.5	5.0	13.0	12.0	13.0
7	2.0	2.0	2.0	2.5	1.5	---	5.5	5.0	5.5	13.0	12.5	12.5
8	3.0	1.5	2.5	2.0	1.5	1.5	5.5	4.5	5.0	13.0	12.5	12.5
9	3.0	2.5	3.0	2.0	1.5	1.5	5.0	4.5	4.5	13.5	12.5	13.0
10	4.0	3.5	4.0	---	---	---	6.0	4.5	5.5	15.0	13.5	14.0
11	4.0	3.5	3.5	---	---	---	7.0	6.0	6.5	13.0	12.5	13.0
12	3.0	2.5	2.5	6.0	3.5	4.5	6.5	6.0	6.5	12.5	11.0	11.5
13	2.5	2.0	2.5	7.5	5.5	6.0	6.0	4.5	5.5	13.0	11.5	12.0
14	3.0	2.5	3.0	8.0	6.0	7.0	6.5	5.5	6.0	13.0	12.0	12.5
15	---	---	---	9.5	8.0	9.0	7.5	6.0	6.5	14.0	13.0	13.0
16	4.5	3.0	3.5	11.0	9.5	10.0	8.5	7.5	8.0	14.5	14.0	14.0
17	4.5	3.5	4.0	12.0	10.5	11.5	9.0	8.0	8.5	16.5	13.0	14.0
18	4.0	2.5	3.0	12.0	10.5	11.0	8.5	7.0	8.0	14.0	13.5	14.0
19	2.5	2.0	2.0	10.5	8.0	9.0	7.5	6.0	7.0	13.5	13.0	13.5
20	2.5	1.5	2.0	8.5	---	8.0	8.5	7.0	8.0	14.0	13.5	13.5
21	2.0	1.5	1.5	6.5	5.0	5.5	9.5	8.5	9.0	14.0	13.0	13.5
22	3.0	1.5	2.0	5.5	5.0	5.5	10.0	9.0	9.5	13.0	12.5	13.0
23	4.5	3.0	4.0	7.5	5.5	6.5	11.0	9.5	10.5	13.0	12.5	13.0
24	5.0	4.0	4.5	7.0	5.5	6.0	11.5	11.0	11.0	13.0	12.5	13.0
25	4.0	1.5	3.0	6.0	5.0	5.5	12.5	11.0	11.5	13.0	12.0	12.5
26	2.0	1.0	1.5	---	---	---	13.5	12.0	13.0	13.0	12.5	13.0
27	1.0	1.0	1.0	5.5	5.0	5.0	15.0	13.5	14.5	13.5	13.0	13.5
28	1.0	.5	.5	4.5	4.0	4.5	16.0	15.0	15.5	14.5	13.5	14.0
29	---	---	---	5.0	4.0	4.5	17.0	16.0	16.5	15.0	14.5	15.0
30	---	---	---	5.0	4.5	4.5	17.0	15.5	16.0	14.5	13.5	14.0
31	---	---	---	5.0	4.5	4.5	---	---	---	14.5	13.0	13.5
MONTH	5.0	.5	2.5	12.0	.5	5.2	17.0	4.5	8.3	16.5	11.0	13.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	14.5	13.5	14.0	21.5	20.0	20.5	22.0	20.5	21.5	19.5	19.0	19.5
2	15.0	13.5	14.5	21.5	20.0	20.5	22.0	20.5	21.0	20.5	19.0	19.5
3	16.5	14.5	15.5	20.5	19.5	20.0	22.0	20.5	21.0	19.5	18.5	19.0
4	17.5	16.0	16.5	21.0	20.0	20.5	22.0	20.5	21.5	18.5	18.5	18.5
5	17.0	15.5	16.0	21.5	20.0	21.0	21.5	21.0	21.5	18.5	18.0	18.5
6	16.0	15.5	16.0	21.5	20.0	21.0	23.5	21.0	22.0	18.5	18.5	18.5
7	17.0	15.5	16.5	21.0	20.0	20.5	21.5	20.5	21.0	19.0	18.5	18.5
8	17.0	16.5	17.0	20.5	20.0	20.5	21.0	20.0	20.5	19.5	18.5	18.5
9	18.5	17.0	17.5	21.0	20.0	20.5	20.5	20.0	20.5	18.5	17.5	18.0
10	17.5	17.0	17.0	21.0	20.0	20.5	22.5	20.0	21.0	18.0	17.0	17.5
11	17.5	16.5	17.0	21.0	20.0	20.5	22.0	19.5	20.5	18.0	17.0	17.5
12	16.5	15.5	16.0	20.0	18.5	19.5	20.0	19.5	19.5	18.5	17.5	18.0
13	16.0	15.5	16.0	18.5	16.5	17.5	20.5	19.5	20.0	19.0	18.0	18.0
14	16.5	16.0	16.5	17.5	16.5	17.0	20.5	20.0	20.5	19.0	18.0	18.5
15	17.5	16.0	16.5	19.5	17.5	18.0	21.0	20.0	20.5	19.5	19.0	19.0
16	17.5	16.5	17.0	19.5	17.5	18.5	21.0	20.0	20.5	19.0	18.0	18.5
17	18.0	17.0	17.5	19.5	19.0	19.5	20.5	20.0	20.0	18.5	16.5	17.5
18	18.5	17.5	18.0	20.0	19.5	20.0	21.0	---	---	16.5	13.5	15.0
19	19.5	18.5	19.0	20.5	20.0	20.5	21.5	20.5	21.0	14.5	13.5	14.0
20	20.0	19.0	19.5	21.0	20.5	21.0	21.5	19.0	20.0	14.5	13.5	14.0
21	19.5	19.0	19.0	21.5	21.0	21.0	19.0	18.5	19.0	14.0	13.0	13.5
22	19.5	19.0	19.0	22.0	21.0	21.5	20.0	18.5	19.0	14.0	13.0	13.5
23	20.0	19.0	19.5	22.0	21.5	21.5	20.0	18.5	19.0	14.0	13.0	13.5
24	20.0	19.0	19.5	21.5	21.0	21.5	20.5	19.0	19.0	13.5	12.5	13.0
25	19.0	18.5	18.5	21.5	21.0	21.0	20.0	18.5	19.0	13.0	12.5	12.5
26	18.5	18.0	18.0	21.5	21.0	21.0	19.5	18.5	19.0	13.0	12.5	12.5
27	19.0	18.0	18.5	22.0	21.0	21.0	20.5	19.5	20.0	14.0	12.5	13.0
28	19.5	18.0	18.5	22.0	21.0	21.5	21.0	20.5	20.5	13.5	12.5	13.0
29	20.0	19.0	19.5	22.5	21.5	22.0	21.5	20.5	21.0	13.5	12.5	13.0
30	20.5	19.5	20.0	23.0	21.5	22.0	21.0	20.0	20.5	14.0	13.0	13.5
31	---	---	---	22.5	22.0	22.0	20.5	19.0	19.5	---	---	---
MONTH	20.5	13.5	17.4	23.0	16.5	20.4	23.5	18.5	20.3	20.5	12.5	16.2

## LEHIGH RIVER BASIN

01448500 DILLDOWN CREEK NEAR LONG POND, PA

LOCATION.--Lat 41°02'08", long 75°32'37", Monroe County, Hydrologic Unit 0240106, on left bank 60 ft upstream from bridge on Shucks Mill Road, 2.8 mi upstream from Mud Run, 4 mi northeast of Albrightsville, and 4.4 mi west of Long Pond.

DRAINAGE AREA.--2.39 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1392: 1949(M), 1950-53.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,665.07 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except periods of estimated daily discharges which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 4.84 ft<sup>3</sup>/s, 27.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft<sup>3</sup>/s, June 14, 1969, gage height, 3.995 ft, from rating curve extended above 300 ft<sup>3</sup>/s, on basis of culvert and flow-over-dam computations of peak flow; minimum, 0.10 ft<sup>3</sup>/s, Dec. 10, 1964, gage height, 0.55 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 50 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 10	1830	110	2.46	Aug. 13	2100	141	2.63
May 17	0145	*288	*3.20				

Minimum daily discharge, 0.75 ft<sup>3</sup>/s, Oct. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	3.2	2.4	e1.8	e16	e4.0	5.7	3.3	8.6	16	2.3	3.0
2	2.0	2.4	2.4	e1.9	e12	e3.8	5.2	3.1	7.9	7.8	2.0	3.0
3	1.1	2.7	2.4	e1.9	e9.0	e3.9	13	2.9	7.7	4.1	1.9	3.0
4	.88	2.4	2.3	e1.7	e8.0	e4.0	9.5	3.6	7.3	3.4	1.9	2.7
5	.84	2.2	2.3	e1.8	e8.0	e3.6	7.2	15	5.8	3.0	4.2	2.8
6	.80	2.2	2.3	e1.9	e7.3	e3.1	6.0	5.6	6.7	2.8	7.1	2.6
7	.80	2.1	2.3	e2.0	e6.6	e3.1	5.8	4.4	15	2.7	7.1	2.5
8	.80	2.2	e2.1	e1.6	e6.0	e3.0	5.5	4.1	7.0	2.6	3.0	2.4
9	.83	6.3	e2.0	e1.4	e5.4	e3.0	5.0	3.8	7.3	2.6	2.5	2.4
10	.78	3.8	e1.9	e1.5	e5.2	e3.2	5.4	51	6.6	2.4	5.9	2.4
11	.97	2.8	e1.9	e1.5	e5.3	e3.5	11	27	5.4	2.8	5.5	2.1
12	.80	2.6	e1.8	e1.5	e5.7	e3.9	6.2	13	4.7	12	3.0	2.1
13	.79	2.4	e1.8	e1.4	e4.9	e4.0	5.2	13	4.2	13	24	2.1
14	.76	2.5	e1.8	e1.4	e4.5	e4.0	5.0	14	4.1	5.7	27	2.1
15	.76	2.5	e1.7	e1.4	e4.5	e3.8	6.3	9.7	4.0	5.9	8.0	16
16	.76	8.3	e1.7	e1.4	e4.5	e3.5	5.3	31	3.7	7.2	6.2	4.2
17	1.7	4.9	e1.7	e1.8	e4.5	e6.2	5.0	133	3.5	4.5	5.7	4.1
18	1.3	3.5	e1.6	e2.5	e4.5	e16	4.5	33	5.8	3.8	5.5	2.7
19	9.8	3.2	e1.6	e4.0	e3.5	e12	4.2	19	6.6	3.4	5.7	3.2
20	13	3.3	e1.7	e6.5	e2.9	e8.8	4.2	14	4.0	3.5	5.2	4.3
21	7.1	3.2	e1.6	e2.5	e2.8	e6.8	7.3	15	3.6	4.8	6.4	2.7
22	4.1	2.8	e1.5	e2.7	e3.0	e5.6	5.4	12	3.2	4.1	6.6	3.5
23	3.4	2.8	e1.4	e2.3	e4.3	5.4	4.5	10	3.3	3.5	5.5	3.1
24	3.0	2.7	e1.3	e2.1	e5.8	4.9	4.3	9.0	3.0	3.0	6.7	2.5
25	2.7	2.7	e1.3	e3.5	e5.0	4.7	4.3	8.3	2.8	2.7	4.6	2.4
26	2.6	3.1	e1.3	e7.0	e4.3	4.5	4.0	8.3	2.7	2.6	3.7	3.3
27	2.5	2.9	e1.3	e16	e4.0	4.2	3.6	7.5	2.5	2.5	3.6	2.8
28	2.4	3.8	e1.2	e14	e4.0	4.0	3.4	6.4	2.4	2.4	3.5	2.3
29	2.3	2.9	e1.1	e12	---	3.9	3.4	15	2.6	2.4	5.4	2.2
30	2.3	2.6	e1.0	e16	---	4.2	3.6	24	3.5	2.3	3.7	2.2
31	3.1	---	e1.7	e20	---	5.2	---	10	---	2.4	3.2	---
TOTAL	75.72	95.0	54.4	139.0	161.5	153.8	169.0	529.0	155.5	141.9	186.6	96.7
MEAN	2.44	3.17	1.75	4.48	5.77	4.96	5.63	17.1	5.18	4.58	6.02	3.22
MAX	13	8.3	2.4	20	16	16	13	133	15	16	27	16
MIN	.75	2.1	1.0	1.4	2.8	3.0	3.4	2.9	2.4	2.3	1.9	2.1
CFSM	1.02	1.32	.73	1.88	2.41	2.08	2.36	7.14	2.17	1.92	2.52	1.35
IN.	1.18	1.48	.85	2.16	2.51	2.39	2.63	8.23	2.42	2.21	2.90	1.51

CAL YR 1989 TOTAL 1316.12 MEAN 3.61 MAX 102 MIN .63 CFSM 1.51 IN. 20.49  
WTR YR 1990 TOTAL 1958.12 MEAN 5.36 MAX 133 MIN .75 CFSM 2.24 IN. 30.48

e Estimated.

## LEHIGH RIVER BASIN

01449000 LEHIGH RIVER AT LEHIGHTON, PA.

LOCATION.--Lat 40°49'45", long 75°42'20", Carbon County, Hydrologic Unit 02040106, on left bank 190 ft downstream of highway bridge at East Weissport, 0.3 mi upstream from Mahoning Creek.

DRAINAGE AREA.--591 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1982 to current year. Daily gage height records, previously referred to as continuous records for water years 1946-1948. Miscellaneous measurements 1977-1978, 1980-1981, and annual maximum 1982.

GAGE.--Water-stage recorder. Datum of gage is 444.26 ft above National Geodetic Vertical Datum of 1929. Prior to December 1982, nonrecording gage at highway bridge 190 ft upstream at same datum.

REMARKS.--Records good, except for periods of estimated daily discharges which are poor. Flow regulated by Francis E. Walter Lake (station 01447780) since February 1961. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 1,315 ft<sup>3</sup>/s, 30.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft<sup>3</sup>/s, Sept. 27, 1985, gage height, 18.22 ft, from rating curve extended above 16,000 ft<sup>3</sup>/s; minimum, 147 ft<sup>3</sup>/s, Sept. 15, 1983, and Oct. 8, 9, 1984, gage height, 1.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,100 ft<sup>3</sup>/s, May 17, gage height, 9.26 ft; minimum daily discharge, 184 ft<sup>3</sup>/s, Oct. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	517	e730	e580	4100	1320	1090	884	2900	563	430	801
2	356	1100	e650	697	3390	1070	1160	767	1960	1700	399	800
3	373	1010	e610	886	3120	1180	1910	741	1870	1270	386	959
4	445	809	e640	952	3190	1150	2970	740	1830	1040	380	885
5	350	762	e600	631	3460	1100	2960	1400	1590	944	434	1000
6	320	790	596	525	3110	1080	2440	1590	1350	447	699	829
7	689	805	690	470	2480	1020	1950	1630	1590	534	1090	670
8	328	705	635	473	2200	899	1900	1460	1490	569	832	606
9	219	714	457	606	2120	909	1770	1070	1830	569	722	565
10	221	858	462	588	2200	971	1570	2480	1760	438	707	563
11	236	756	504	615	2180	955	1870	5260	1450	452	1010	559
12	211	901	594	582	2490	1010	2330	5560	1250	686	865	545
13	191	877	583	520	2510	1200	1950	4020	1100	2460	953	481
14	185	866	533	501	1750	953	1690	4220	984	1810	3110	448
15	184	716	480	509	1890	999	1720	3410	875	1710	2410	1930
16	185	2640	392	502	1880	882	1380	3730	848	2090	2120	1590
17	288	4870	376	535	1800	1090	1460	8920	817	2750	1290	1470
18	445	2900	e410	685	1670	1850	1390	7130	814	1400	983	989
19	1380	2530	e450	929	1650	2160	1200	6390	1060	1230	930	652
20	2770	2100	e480	835	1650	2060	1170	4230	1570	872	902	1000
21	2930	1340	e478	930	1570	1930	1230	3870	1180	708	870	841
22	2300	e1350	e476	1210	1320	1820	1230	3170	952	1200	1050	789
23	2830	e1000	e475	1240	1750	1700	1170	2470	1050	1060	1380	811
24	3840	e890	e472	1030	1870	1450	1220	2110	1050	776	1110	753
25	1950	e890	e468	1120	1730	1420	965	1900	807	628	1350	709
26	1610	e900	e460	2910	1630	1340	1050	1630	741	600	1150	727
27	1230	e880	e452	3220	1680	1160	1020	1580	607	508	1060	794
28	879	e900	e445	2950	1430	1180	915	1480	532	490	1150	719
29	842	e895	e440	3160	---	1020	905	1690	632	482	1190	652
30	859	e815	e430	5970	---	1070	914	3790	541	478	1210	630
31	576	---	e500	5170	---	1120	---	4190	---	437	1100	---
TOTAL	29535	37086	15968	41531	61820	39068	46499	93512	37030	30901	33272	24768
MEAN	953	1236	515	1340	2208	1260	1550	3017	1234	997	1073	826
MAX	3840	4870	730	5970	4100	2160	2970	8920	2900	2750	3110	1930
MIN	184	517	376	470	1320	882	905	740	532	437	380	448

CAL YR 1989 TOTAL 409425 MEAN 1122 MAX 10800 MIN 155  
WTR YR 1990 TOTAL 490990 MEAN 1345 MAX 8920 MIN 184

e Estimated.



## LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA

LOCATION.--Lat 40°53'51", long 75°30'10", Monroe County, Hydrologic Unit 02040106, on right bank 20 ft downstream from bridge on U.S. Highway 209 at Kresgeville, 0.2 mi downstream from Middle Creek, and 13 mi northeast of Lehighton.

DRAINAGE AREA.--49.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 659.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except periods of estimated daily discharge which are poor.

AVERAGE DISCHARGE.--24 years, 104 ft<sup>3</sup>/s, 28.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft<sup>3</sup>/s, July 29, 1969, gage height, 9.21 ft, from rating curve extended above 800 ft<sup>3</sup>/s; minimum, 9.2 ft<sup>3</sup>/s, Sept. 7, 1985, gage height, 2.70 ft.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1500	581	5.73	May 17	1000	*1300	*7.48
Jan. 30	1100	661	5.91				

Minimum daily discharge, 20 ft<sup>3</sup>/s, Dec. 28, 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	103	62	83	325	137	98	85	199	68	52	87
2	78	87	60	58	271	132	100	80	179	69	42	83
3	69	86	59	50	232	129	218	76	165	58	39	79
4	53	82	e55	44	239	119	199	78	152	53	38	73
5	50	76	e55	47	217	111	190	154	139	51	57	72
6	48	74	55	50	188	108	172	101	129	49	103	70
7	46	71	55	47	177	100	161	94	133	49	100	67
8	44	70	50	44	163	97	149	91	119	47	71	64
9	43	136	e44	44	154	97	136	89	144	47	63	61
10	41	137	e42	53	176	100	131	230	121	46	91	62
11	41	117	e38	64	154	97	177	359	108	45	147	57
12	41	111	e36	57	142	92	137	281	99	104	113	56
13	39	103	e34	51	133	87	128	248	93	139	122	55
14	38	99	e32	46	128	84	125	257	90	83	169	54
15	37	97	e29	46	128	81	152	213	97	78	127	152
16	37	111	e28	48	134	80	131	362	92	83	113	87
17	79	102	e27	58	126	156	121	1210	85	68	103	84
18	76	90	e26	75	113	178	114	725	89	63	94	68
19	215	86	e25	76	112	146	108	476	98	60	96	67
20	418	84	e24	70	108	157	106	362	87	58	94	75
21	431	84	e23	111	103	141	129	314	79	64	100	64
22	286	78	e22	105	113	129	112	266	75	75	104	79
23	210	78	e22	95	172	123	103	224	72	61	97	75
24	169	75	e21	94	212	117	99	198	69	57	213	66
25	144	72	e21	133	186	113	98	179	66	53	173	63
26	128	73	e21	313	165	108	97	173	64	51	137	62
27	115	71	e21	271	154	103	92	161	62	48	138	62
28	106	73	e20	218	147	100	89	143	59	46	133	60
29	97	68	e20	221	---	97	86	212	57	44	116	57
30	92	64	e30	586	---	107	88	335	59	44	101	57
31	98	---	e52	430	---	105	---	229	---	50	92	---
TOTAL	3412	2658	1109	3688	4672	3531	3846	8005	3080	1911	3238	2118
MEAN	110	88.6	35.8	119	167	114	128	258	103	61.6	104	70.6
MAX	431	137	62	586	325	178	218	1210	199	139	213	152
MIN	37	64	20	44	103	80	86	76	57	44	38	54
CFSM	2.21	1.78	.72	2.38	3.34	2.28	2.57	5.17	2.06	1.24	2.09	1.41
IN.	2.54	1.98	.83	2.75	3.48	2.63	2.87	5.97	2.30	1.42	2.41	1.58

CAL YR 1989 TOTAL 32354 MEAN 88.6 MAX 919 MIN 20 CFSM 1.78 IN. 24.12  
WTR YR 1990 TOTAL 41268 MEAN 113 MAX 1210 MIN 20 CFSM 2.27 IN. 30.76

e Estimated.

## LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1968 to September 1970, May 1971 to current year.

INSTRUMENTATION.--Temperature recorder October 1970, May 1971 to current year. Probe attached to Synergetics Data Collection Platform.

REMARKS.--Interruptions in the daily record were due to malfunction of the instrument.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.5°C July 25, 1970; minimum, freezing point on several days during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 22.0°C, July 5; minimum, 0.0°C, many days during winter period.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	13.0	11.0	12.0	13.5	10.5	12.0	3.0	1.5	2.5	2.0	.5	1.0
2	15.5	13.0	14.0	10.5	8.5	9.5	1.5	1.0	1.0	1.0	.5	1.0
3	15.5	13.5	14.5	10.0	8.0	9.5	2.0	.5	1.5	1.5	.5	1.0
4	13.5	11.0	12.0	8.0	6.0	7.0	1.5	.5	.5	2.0	1.0	1.5
5	12.0	10.0	11.0	8.5	6.0	7.0	1.0	.5	.5	2.0	1.5	1.5
6	13.5	11.5	12.5	10.5	8.5	9.5	3.0	1.0	2.0	2.0	1.5	1.5
7	13.5	12.0	13.0	10.0	8.0	9.0	3.5	1.0	2.5	2.0	1.0	1.5
8	12.0	10.5	11.0	11.5	10.5	11.0	1.0	.5	.5	2.0	1.0	1.5
9	10.5	8.5	9.5	12.5	10.0	11.5	1.0	.5	.5	2.5	1.0	1.5
10	9.5	7.0	8.5	10.0	8.0	8.5	.5	.5	.5	3.5	2.5	3.0
11	11.0	9.5	10.5	8.5	6.5	7.5	1.5	.5	1.0	3.5	2.5	3.0
12	11.5	8.5	10.0	9.0	7.5	8.5	2.5	1.0	2.0	3.0	2.0	3.0
13	13.0	10.5	11.5	7.5	6.0	7.0	2.5	1.0	2.0	2.0	1.0	1.5
14	13.0	11.0	12.0	10.0	6.5	8.0	1.0	.5	.5	2.0	.5	1.0
15	14.5	12.0	13.0	12.5	10.0	11.0	1.0	.5	.5	2.5	1.0	2.0
16	15.5	14.0	14.5	13.5	9.0	12.0	.5	.5	.5	4.0	1.5	2.5
17	15.5	14.5	15.0	9.0	6.0	7.0	1.5	.5	.5	5.0	3.5	4.0
18	15.0	11.5	13.0	6.0	4.5	5.0	.5	.5	.5	6.0	4.5	5.0
19	13.5	10.0	10.5	5.0	3.5	4.5	1.5	.5	.5	5.0	3.0	4.0
20	11.5	10.0	10.5	7.0	4.5	5.5	.5	.5	.5	3.0	2.0	2.5
21	10.0	9.0	9.5	7.0	2.5	4.5	.5	.5	.5	3.5	2.5	3.0
22	11.0	9.5	10.0	3.0	1.5	2.5	.5	.5	.5	4.5	3.0	3.5
23	10.5	9.0	10.0	3.5	2.0	2.5	.5	.5	.5	4.5	3.0	4.0
24	10.5	8.0	9.5	2.5	1.0	2.0	---	---	---	5.5	4.0	5.0
25	11.5	8.5	10.0	4.0	1.0	2.5	.5	.5	.5	5.5	4.5	5.0
26	12.0	9.5	11.0	6.0	4.0	5.0	.5	.5	.5	5.5	4.0	4.5
27	12.5	10.0	11.5	6.0	4.0	5.0	.5	.5	.5	4.5	3.5	4.0
28	13.0	11.0	12.0	8.0	6.0	7.0	.5	.5	.5	5.0	4.0	4.5
29	13.0	11.0	12.0	7.0	2.5	4.5	.5	.5	.5	5.0	3.0	4.0
30	13.0	11.0	12.0	3.0	2.0	2.5	.5	.5	.5	5.0	3.0	4.0
31	14.0	13.0	13.5	---	---	---	3.0	.5	1.0	5.5	3.5	4.5
MONTH	15.5	7.0	11.6	13.5	1.0	6.9	3.5	.5	.9	6.0	.5	2.9

## LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	6.0	4.0	5.0	3.5	.5	2.0	6.5	6.0	6.5	15.5	11.5	13.5
2	6.5	6.0	6.5	4.5	1.5	3.0	8.0	6.5	7.0	14.5	11.5	13.0
3	6.5	5.0	6.0	6.0	3.0	4.5	7.5	6.5	7.0	12.5	10.0	11.5
4	5.5	4.5	4.5	5.0	2.0	3.0	6.5	6.0	6.0	12.0	10.5	11.0
5	4.5	3.0	4.0	3.5	1.5	2.5	8.0	5.0	6.5	12.0	10.0	10.5
6	5.5	3.0	4.5	4.0	2.0	3.0	7.5	6.5	7.0	13.0	10.0	11.5
7	6.5	4.5	5.5	2.5	.0	1.5	7.0	5.5	6.0	12.0	9.5	11.0
8	7.0	4.5	5.5	4.0	.0	2.0	7.0	4.5	5.5	14.5	10.5	12.5
9	7.0	5.0	6.0	4.5	1.5	3.0	9.0	3.5	6.5	14.5	12.0	13.5
10	7.0	5.5	6.5	7.0	4.5	5.5	8.5	7.0	8.0	14.0	12.5	13.5
11	5.5	3.5	5.0	9.5	6.0	7.5	9.0	6.5	8.5	12.5	10.5	11.0
12	6.0	4.5	5.0	12.0	8.0	10.0	8.0	5.0	6.5	11.5	8.5	10.0
13	6.5	3.5	4.5	13.5	9.5	11.5	8.5	4.0	6.5	11.5	10.0	10.5
14	6.5	6.0	6.0	13.5	10.0	12.0	8.5	4.5	6.5	14.0	10.5	12.0
15	6.0	4.5	5.0	13.0	10.0	11.5	10.5	7.0	8.5	13.5	11.0	12.5
16	6.0	4.5	5.0	13.0	11.0	12.5	12.0	7.0	9.5	13.5	12.0	12.5
17	6.0	3.0	5.0	13.0	11.0	12.5	10.5	7.5	8.5	14.0	12.5	13.0
18	3.0	.5	2.0	11.5	8.5	10.0	9.5	5.0	7.5	13.0	11.0	12.0
19	4.5	2.0	3.5	8.5	6.5	7.5	10.5	5.0	8.0	12.5	10.0	11.0
20	3.5	1.5	2.0	8.0	5.5	7.0	10.5	7.5	9.0	13.0	11.0	12.0
21	3.0	.0	1.5	8.0	4.5	6.5	11.0	8.5	10.0	12.0	10.0	11.0
22	5.5	2.0	3.5	9.5	5.0	7.5	13.5	8.5	11.0	12.0	9.5	11.0
23	8.0	5.5	6.5	9.5	7.0	8.5	14.0	9.5	11.5	11.5	10.0	10.5
24	6.5	4.0	5.0	7.0	5.0	5.5	14.0	9.5	12.0	---	---	---
25	4.0	1.0	2.5	7.5	4.5	6.0	13.5	10.5	12.0	---	---	---
26	1.5	.0	.5	6.5	4.0	5.5	17.5	11.5	14.5	---	---	---
27	2.0	.0	1.0	6.5	3.0	5.0	18.5	13.5	16.0	---	---	---
28	4.0	2.0	2.5	6.5	2.5	4.5	18.5	14.0	16.0	---	---	---
29	---	---	---	7.0	4.0	6.0	17.0	13.0	14.5	---	---	---
30	---	---	---	7.0	4.5	5.0	13.0	12.0	12.5	---	---	---
31	---	---	---	6.5	5.0	5.5	---	---	---	13.5	10.0	11.5
MONTH	8.0	.0	4.3	13.5	.0	6.4	18.5	3.5	9.2	15.5	8.5	11.7
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	14.0	11.0	12.5	19.0	17.5	18.5	20.0	17.0	18.5	---	---	---
2	15.0	12.0	13.5	18.0	16.0	17.0	19.5	16.0	17.5	---	---	---
3	15.5	13.5	14.5	19.5	16.0	17.5	19.5	16.5	18.0	---	---	---
4	15.0	12.5	14.0	21.0	17.0	19.0	19.5	17.0	18.0	---	---	---
5	13.5	10.5	12.5	22.0	20.5	21.0	18.5	17.0	17.5	---	---	---
6	14.5	10.5	12.5	20.0	18.0	19.0	18.0	17.5	17.5	18.0	16.0	17.0
7	16.0	13.0	14.5	19.5	16.5	18.0	19.0	17.5	18.0	18.5	17.0	17.5
8	15.0	12.5	13.5	17.5	16.5	17.0	18.5	17.0	18.0	17.5	15.5	16.5
9	---	---	---	19.5	17.0	18.5	17.5	16.5	17.0	15.0	13.5	14.0
10	---	---	---	20.5	18.5	19.5	19.5	16.5	17.0	17.0	14.0	15.5
11	---	---	---	19.0	16.5	17.5	18.5	17.5	18.0	17.5	15.5	16.5
12	---	---	---	17.0	16.0	16.5	18.5	17.0	18.0	18.0	16.5	17.0
13	---	---	---	16.0	15.5	16.0	19.0	17.0	18.0	18.5	17.0	17.5
14	---	---	---	16.0	15.5	16.0	18.5	17.5	18.0	18.0	16.5	17.0
15	14.5	13.5	14.0	20.0	16.0	17.0	17.5	16.0	17.0	18.0	17.0	17.5
16	16.5	13.5	15.0	19.0	17.5	18.5	17.5	16.0	17.0	17.0	15.0	16.0
17	17.5	15.0	16.0	20.0	17.0	18.5	18.5	16.5	17.5	15.0	12.5	14.0
18	17.5	15.5	16.5	20.5	18.0	19.0	---	---	---	13.0	10.5	12.0
19	17.5	15.5	16.5	21.0	18.5	20.0	19.0	17.5	18.0	13.5	11.0	11.5
20	17.0	15.0	16.0	---	---	---	17.0	15.5	16.0	14.0	12.0	13.0
21	17.0	15.0	16.0	20.0	18.5	19.5	15.5	15.0	15.0	13.0	11.5	12.5
22	18.0	15.0	16.5	20.5	18.5	19.5	15.5	15.0	15.0	14.0	13.0	13.0
23	18.5	16.5	17.5	21.0	19.5	20.0	16.0	15.5	15.5	13.0	12.0	12.5
24	17.0	15.5	16.0	20.0	18.5	19.5	17.5	16.0	17.0	12.0	11.0	11.5
25	15.5	14.5	15.0	21.0	18.0	19.5	---	---	---	12.5	10.0	11.5
26	17.5	14.0	15.5	21.0	18.0	19.5	---	---	---	12.0	11.0	11.5
27	18.5	15.5	17.0	21.0	18.0	19.5	---	---	---	13.5	11.5	12.5
28	18.0	16.0	17.0	21.5	18.5	20.0	---	---	---	14.5	12.5	13.5
29	19.5	17.0	18.0	20.5	19.0	19.5	---	---	---	15.0	13.0	14.0
30	20.5	18.0	19.0	21.0	19.0	20.0	---	---	---	15.0	14.0	14.5
31	---	---	---	19.5	18.0	19.0	---	---	---	---	---	---
MONTH	20.5	10.5	15.4	22.0	15.5	18.6	20.0	15.0	17.3	18.5	10.0	14.4

## LEHIGH RIVER BASIN

01449800 POHOPOCO CREEK BELOW BELTZVILLE DAM NEAR PARRYVILLE, PA

LOCATION.--Lat 40°50'44", long 75°38'46", Carbon County, Hydrologic Unit 02040106, on right bank 0.1 mi upstream from Sawmill Run, 0.45 mi downstream from Beltzville Dam, 1.3 mi upstream from Bull Run, and 2.3 mi northeast of Parryville.

DRAINAGE AREA.--96.4 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 492.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Wild Creek Reservoir (station 01449700) and Penn Forest Reservoir (station 01449400), 7.3 mi and 10.0 mi upstream, respectively, and Beltzville Lake (station 01449790), 0.45 mi upstream. Figures of daily discharge do not include diversion from Wild Creek Reservoir to city of Bethlehem. Diversion from Tunkhannock Creek to Wild Creek basin above station since October 1969.

AVERAGE DISCHARGE.--23 years, 191 ft<sup>3</sup>/s, 26.84 in/yr, adjusted for storage and diversion 1968-1981.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft<sup>3</sup>/s, May 8, 1973, gage height, 5.59 ft; minimum, 0.90 ft<sup>3</sup>/s, Oct. 11, 12, 1969, gage height, 2.12 ft, result of upstream shutoff.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft<sup>3</sup>/s, May 17, gage height, 5.24 ft; minimum daily, 38 ft<sup>3</sup>/s, Oct. 5, 6, 7, 8, 9, 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	163	84	57	725	228	140	147	230	91	66	76
2	140	133	91	123	474	196	191	120	200	75	74	76
3	107	81	91	103	474	184	325	102	200	66	56	76
4	49	66	74	60	304	184	363	102	333	66	48	187
5	38	66	66	60	222	136	336	102	350	66	48	138
6	38	138	66	64	290	131	300	102	265	55	141	85
7	38	136	79	64	281	140	246	176	289	46	272	85
8	38	120	82	64	232	140	246	209	230	46	154	85
9	38	124	80	64	232	140	246	178	205	46	73	85
10	38	147	80	90	232	140	246	239	204	46	74	60
11	70	147	68	102	232	140	295	1010	204	59	73	46
12	64	147	62	74	232	148	235	932	204	172	74	57
13	54	221	62	62	178	133	196	414	154	268	317	76
14	54	147	62	62	184	109	193	414	93	162	459	76
15	54	136	62	62	200	107	192	414	88	162	218	79
16	43	185	62	93	200	122	235	700	102	107	102	78
17	155	150	62	107	200	133	255	1000	102	53	101	275
18	121	120	62	82	200	133	172	1430	115	44	102	144
19	312	120	51	122	139	420	141	1410	215	42	102	76
20	474	127	46	147	80	562	165	1390	191	42	213	76
21	474	140	46	147	150	401	177	1380	96	43	255	76
22	474	131	51	147	169	225	177	959	84	43	187	76
23	474	120	54	147	214	161	177	436	76	132	135	76
24	329	111	54	147	355	177	177	315	76	132	168	149
25	202	102	54	144	472	177	177	288	76	83	192	110
26	224	102	45	291	260	205	158	255	76	73	192	73
27	153	102	41	312	186	209	114	255	76	56	192	73
28	133	102	49	380	229	173	99	251	76	48	202	73
29	133	102	54	448	---	150	99	360	85	48	191	73
30	133	79	54	817	---	140	131	806	91	48	140	73
31	133	---	55	1220	---	140	---	778	---	48	116	---
TOTAL	4829	3765	1949	5862	7346	5784	6204	16674	4786	2468	4737	2788
MEAN	156	125	62.9	189	262	187	207	538	160	79.6	153	92.9
MAX	474	221	91	1220	725	562	363	1430	350	268	459	275
MIN	38	66	41	57	80	107	99	102	76	42	48	46

CAL YR 1989 TOTAL 53296 MEAN 146 MAX 1400 MIN 16  
WTR YR 1990 TOTAL 67192 MEAN 184 MAX 1430 MIN 38

## LEHIGH RIVER BASIN

01449800 POHOPOCO CREEK BELOW BELTZVILLE DAM NEAR PARRYVILLE, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1968 to current year.

INSTRUMENTATION.--Temperature recorder October 1968 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.5°C, on several days during July, August 1970; minimum, freezing point December 9, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 18.0°C, Sept. 10, 11, 12; minimum, 2.0°C, Dec. 23, 26.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.5	15.5	16.0	12.5	11.5	12.0	7.0	6.5	7.0	3.0	2.5	3.0
2	16.5	16.0	16.0	12.5	12.5	12.5	6.5	6.5	6.5	3.0	2.5	3.0
3	16.5	15.0	15.5	12.5	11.5	12.0	6.5	6.0	6.5	3.0	3.0	3.0
4	15.5	14.5	15.0	12.0	11.5	12.0	6.0	5.5	6.0	3.0	3.0	3.0
5	16.0	15.0	15.5	12.0	11.5	12.0	6.0	5.5	6.0	3.0	3.0	3.0
6	15.5	14.5	15.5	12.0	11.5	11.5	6.0	5.5	5.5	3.0	3.0	3.0
7	15.5	14.5	15.0	12.0	11.5	12.0	5.5	5.0	5.5	3.0	3.0	3.0
8	15.5	15.0	15.0	12.0	11.5	12.0	5.0	5.0	5.0	3.0	2.5	3.0
9	15.0	14.5	15.0	12.0	11.0	11.5	5.0	5.0	5.0	3.0	3.0	3.0
10	15.5	14.5	15.0	11.5	11.0	11.5	5.0	4.5	5.0	3.0	3.0	3.0
11	15.0	14.5	14.5	11.5	11.0	11.0	5.0	4.5	5.0	3.0	3.0	3.0
12	15.0	14.0	14.5	11.0	11.0	11.0	5.0	4.5	5.0	3.0	3.0	3.0
13	15.0	14.5	14.5	11.0	11.0	11.0	4.5	4.5	4.5	3.0	3.0	3.0
14	15.0	14.5	14.5	11.0	10.5	11.0	4.5	4.0	4.5	3.5	3.0	3.0
15	15.0	14.5	14.5	11.0	11.0	11.0	4.5	4.0	4.0	3.5	3.0	3.0
16	15.0	14.5	14.5	11.0	10.5	10.5	4.0	3.5	4.0	3.5	3.0	3.0
17	14.5	14.5	14.5	10.5	10.0	10.0	4.0	3.5	3.5	3.5	3.5	3.5
18	15.0	14.5	14.5	10.0	10.0	10.0	3.5	3.0	3.5	4.0	3.5	3.5
19	15.0	14.5	14.5	10.0	9.5	10.0	3.5	3.0	3.5	3.5	3.5	3.5
20	14.5	13.5	14.0	10.0	9.5	9.5	3.5	3.0	3.0	3.5	3.5	3.5
21	13.5	12.5	13.0	9.5	9.0	9.5	3.5	3.0	3.0	3.5	3.5	3.5
22	13.0	12.5	12.5	9.0	9.0	9.0	3.0	3.0	3.0	3.5	3.5	3.5
23	12.5	12.5	12.5	8.5	8.5	8.5	2.5	2.0	2.5	3.5	3.5	3.5
24	12.5	12.0	12.5	8.5	8.0	8.5	---	---	---	3.5	3.5	3.5
25	12.5	12.0	12.5	8.0	8.0	8.0	3.0	2.5	2.5	3.5	3.5	3.5
26	12.5	12.0	12.0	8.0	7.5	8.0	3.0	2.0	2.5	3.5	3.5	3.5
27	12.5	12.0	12.0	8.0	7.5	8.0	3.0	2.5	2.5	3.5	3.5	3.5
28	12.5	12.0	12.0	8.0	7.0	7.5	3.0	2.5	2.5	3.5	3.5	3.5
29	12.5	12.0	12.0	7.5	7.0	7.5	3.0	2.5	2.5	3.5	3.5	3.5
30	12.5	12.0	12.0	7.0	7.0	7.0	3.0	2.5	2.5	3.5	3.5	3.5
31	12.5	12.0	12.0	---	---	---	3.0	2.5	3.0	3.5	3.5	3.5
MONTH	16.5	12.0	14.0	12.5	7.0	10.2	7.0	2.0	4.2	4.0	2.5	3.2

## LEHIGH RIVER BASIN

01449800 POHOPOCO CREEK BELOW BELTZVILLE DAM NEAR PARRYVILLE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.5	3.5	3.5	3.5	3.0	3.5	6.0	6.0	6.0	8.0	7.5	7.5
2	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0	8.5	7.5	8.0
3	3.5	3.5	3.5	3.5	3.5	3.5	6.5	6.0	6.0	8.5	7.5	8.0
4	3.5	3.5	3.5	3.5	3.0	3.5	6.0	6.0	6.0	8.0	7.5	8.0
5	3.5	3.5	3.5	3.5	3.0	3.0	6.5	6.0	6.0	8.5	7.5	8.0
6	4.0	3.5	3.5	3.5	3.0	3.0	6.0	6.0	6.0	9.0	7.5	8.5
7	4.0	3.5	3.5	3.5	3.0	3.0	6.5	6.0	6.0	8.5	7.5	8.0
8	4.0	3.5	3.5	3.5	3.0	3.0	6.5	6.0	6.0	9.0	8.0	8.5
9	4.0	3.5	3.5	3.5	3.0	3.5	6.5	6.0	6.0	9.5	8.0	8.5
10	4.0	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0	9.0	8.5	8.5
11	4.0	3.5	3.5	4.0	3.5	3.5	6.5	6.0	6.0	9.0	7.0	8.0
12	4.0	3.5	3.5	4.0	3.5	3.5	6.5	6.0	6.5	10.0	8.0	8.5
13	4.0	3.5	3.5	4.5	3.5	4.0	6.5	6.0	6.5	10.5	10.0	10.5
14	4.0	3.5	3.5	4.5	4.0	4.0	6.5	6.0	6.5	11.0	10.0	10.5
15	4.0	3.5	4.0	4.5	4.0	4.5	7.0	6.5	6.5	11.0	10.0	10.5
16	4.0	3.5	4.0	4.5	4.0	4.5	7.0	6.5	6.5	11.0	9.0	10.0
17	4.0	3.5	3.5	4.5	4.0	4.0	7.0	6.5	6.5	9.0	8.5	9.0
18	3.5	3.5	3.5	4.5	4.0	4.5	7.0	6.5	6.5	9.0	8.5	9.0
19	4.0	3.5	3.5	5.0	4.0	4.5	7.5	6.5	7.0	9.5	9.0	9.0
20	4.0	3.5	3.5	5.5	4.5	5.0	7.0	6.5	7.0	10.0	9.5	10.0
21	3.5	3.5	3.5	5.0	4.5	4.5	8.0	7.0	7.5	10.5	10.0	10.0
22	3.5	3.5	3.5	5.5	5.0	5.0	8.0	7.0	7.5	11.5	10.0	11.0
23	4.0	3.5	3.5	5.5	5.0	5.0	7.5	7.0	7.5	13.0	11.5	12.5
24	4.0	3.5	3.5	5.5	5.0	5.5	7.5	7.0	7.5	13.5	13.0	13.0
25	3.5	3.5	3.5	5.5	5.0	5.5	7.5	7.0	7.5	13.5	13.0	13.0
26	3.5	3.5	3.5	5.5	5.5	5.5	8.0	7.5	7.5	13.5	13.0	13.5
27	3.5	3.0	3.0	5.5	5.0	5.5	8.5	7.0	7.5	13.5	13.0	13.0
28	3.5	3.0	3.5	6.0	5.5	5.5	8.0	7.0	7.5	---	---	---
29	---	---	---	6.0	5.5	5.5	10.0	7.5	8.0	---	---	---
30	---	---	---	6.5	6.0	6.0	8.5	7.5	8.0	---	---	---
31	---	---	---	6.0	6.0	6.0	---	---	---	---	---	---
MONTH	4.0	3.0	3.5	6.5	3.0	4.3	10.0	6.0	6.7	13.5	7.0	9.7
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	15.0	14.0	14.5	---	---	---	17.5	16.5	17.0
2	---	---	---	15.5	14.0	14.5	---	---	---	17.5	16.5	17.0
3	---	---	---	15.5	14.0	15.0	---	---	---	17.5	16.5	17.0
4	---	---	---	---	---	---	---	---	---	17.0	16.5	17.0
5	---	---	---	---	---	---	---	---	---	17.5	17.0	17.0
6	---	---	---	16.0	14.0	15.0	---	---	---	17.5	17.0	17.0
7	14.5	13.5	14.0	16.5	14.5	15.0	---	---	---	17.5	17.0	17.0
8	14.0	13.5	14.0	15.0	14.5	14.5	---	---	---	17.5	16.5	17.0
9	14.0	13.5	14.0	15.0	13.0	14.5	---	---	---	17.0	17.0	17.0
10	14.0	13.5	14.0	14.5	13.0	13.5	---	---	---	18.0	17.0	17.5
11	14.5	13.5	14.0	13.5	13.0	13.0	---	---	---	18.0	16.5	17.0
12	14.5	13.5	14.0	13.5	13.0	13.5	---	---	---	18.0	17.0	17.0
13	14.5	14.0	14.0	13.5	13.0	13.5	---	---	---	17.5	17.0	17.0
14	15.0	14.0	14.0	13.5	13.5	13.5	---	---	---	17.5	17.0	17.0
15	14.5	13.5	14.0	14.0	13.5	13.5	---	---	---	18.0	17.0	17.0
16	15.0	14.0	14.0	14.0	13.5	14.0	---	---	---	17.5	17.0	17.0
17	15.0	14.0	14.0	15.0	13.5	14.0	---	---	---	17.5	17.0	17.0
18	14.5	14.0	14.5	---	---	---	---	---	---	17.5	17.0	17.5
19	15.0	14.0	14.5	---	---	---	---	---	---	17.5	17.0	17.0
20	15.0	14.0	14.5	---	---	---	---	---	---	17.5	17.0	17.0
21	15.0	14.0	14.5	---	---	---	16.0	14.5	15.5	17.5	17.0	17.0
22	15.5	14.0	14.5	---	---	---	16.0	15.5	16.0	17.0	17.0	17.0
23	15.0	14.0	14.5	---	---	---	16.5	16.0	16.0	17.0	16.5	16.5
24	14.5	14.0	14.5	---	---	---	16.5	15.5	16.0	17.0	16.5	17.0
25	15.0	14.0	14.5	---	---	---	16.5	16.0	16.0	17.0	16.5	17.0
26	15.0	14.0	14.5	15.0	13.5	14.0	16.5	16.0	16.5	17.0	17.0	17.0
27	15.0	14.5	14.5	15.5	13.5	14.5	16.5	16.5	16.5	17.0	16.5	17.0
28	15.0	14.5	14.5	---	---	---	17.5	16.5	16.5	17.0	16.5	16.5
29	15.0	14.0	14.5	---	---	---	17.0	16.5	16.5	17.0	16.5	16.5
30	15.0	14.5	15.0	---	---	---	17.0	16.5	16.5	17.0	16.5	16.5
31	---	---	---	---	---	---	17.0	16.5	17.0	---	---	---
MONTH	15.5	13.5	14.3	16.5	13.0	14.1	17.5	14.5	16.3	18.0	16.5	17.0



## LEHIGH RIVER BASIN

## 01450500 AQUASHICOLA CREEK AT PALMERTON, PA

LOCATION.--Lat 40°48'22", long 75°35'54", Carbon County, Hydrologic Unit 02040106, on right bank 1,200 ft upstream from Sixth Street Bridge in Palmerton, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--76.7 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1051: 1940-45 (monthly net diversion), drainage area. WSP 2102: 1967 (monthly net diversion).

GAGE.--Water-stage recorder. Datum of gage is 389.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except periods of estimated daily discharges which are poor. Occasional diversion from Pohopoco Creek into Aquashicola Creek above station.

AVERAGE DISCHARGE.--51 years, 152 ft<sup>3</sup>/s, 26.88 in/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft<sup>3</sup>/s July 10, 1945, gage height, 13.63 ft, from rating curve extended above 2,500 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 2.6 ft<sup>3</sup>/s Sept. 12, 1957, from rating curve extended below 16 ft<sup>3</sup>/s; minimum gage height, 2.44 ft Sept. 16, 1964; minimum daily discharge, 9.1 ft<sup>3</sup>/s Sept. 15, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	2345	1780	6.82	May 17	0745	*2520	*7.65
Jan. 30	1000	1440	6.38				

Minimum daily discharge, 40 ft<sup>3</sup>/s, Dec. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	185	89	95	531	187	114	99	346	66	57	123
2	225	160	86	79	421	175	114	93	287	63	50	120
3	204	154	85	68	344	167	237	88	251	59	48	114
4	173	145	80	66	333	150	331	87	224	56	47	101
5	163	137	80	78	281	131	329	152	197	56	70	96
6	156	134	80	77	242	121	273	114	178	55	109	92
7	149	129	79	69	242	109	244	106	167	53	125	87
8	141	125	72	66	221	104	212	103	152	50	91	82
9	134	196	67	65	204	104	187	98	186	59	77	77
10	125	234	e66	86	227	105	177	315	151	64	128	78
11	124	211	e64	108	205	101	209	756	136	54	278	71
12	116	193	e62	93	188	96	177	478	125	118	200	68
13	110	177	e60	83	175	92	164	370	116	250	185	66
14	106	168	e59	76	171	89	159	313	110	148	277	64
15	101	162	e58	77	168	85	192	255	117	121	220	117
16	97	184	e57	77	170	83	173	336	107	110	177	84
17	203	176	e56	86	162	136	165	2000	98	95	150	73
18	206	158	e55	104	147	200	158	999	104	88	133	65
19	746	150	e55	107	149	197	150	621	121	81	122	63
20	1420	151	e52	102	142	206	144	463	101	78	121	68
21	1350	148	e49	142	135	186	157	388	92	79	137	60
22	730	135	e48	152	144	166	145	322	85	81	153	83
23	497	134	e47	150	198	158	134	274	82	76	150	79
24	391	127	e47	148	297	148	126	240	79	73	378	67
25	326	123	e46	181	303	142	123	210	76	68	349	62
26	280	124	e45	611	252	135	119	198	72	63	261	61
27	247	113	e43	560	227	126	112	183	69	60	217	60
28	223	109	e42	391	210	119	108	162	65	58	191	56
29	201	100	e41	349	---	113	105	259	64	56	170	53
30	182	93	e40	1250	---	124	104	600	62	55	149	52
31	185	---	58	815	---	123	---	458	---	57	136	---
TOTAL	9492	4535	1868	6411	6489	4178	5142	11140	4020	2450	4956	2342
MEAN	306	151	60.3	207	232	135	171	359	134	79.0	160	78.1
MAX	1420	234	89	1250	531	206	331	2000	346	250	378	123
MIN	97	93	40	65	135	83	104	87	62	50	47	52
MEAN*	303	148	56.1	203	228	131	167	355	129	74.7	155	73.9
CFSM*	3.95	1.93	.73	2.65	2.97	1.71	2.18	4.63	1.68	.97	2.02	.96
IN.*	4.56	2.15	.84	3.05	3.09	1.97	2.43	5.34	1.88	1.12	2.33	1.08
†	2.7	3.1	4.2	4.4	4.2	4.1	4.2	4.4	5.2	4.3	4.8	4.2

CAL YR 1989 TOTAL 59968 MEAN 164 MAX 2390 MIN 28 MEAN\* 160 CFSM\* 2.09 IN.\* 28.32  
WTR YR 1990 TOTAL 63023 MEAN 173 MAX 2000 MIN 40 MEAN\* 169 CFSM\* 2.20 IN.\* 29.92

\* Adjusted for diversion.

† Figures of net diversion, equivalent in cubic ft per second, include water diversion from Pohopoco Creek to Aquashicola Creek, furnished by Palmer Water Company.

e Estimated.

## LEHIGH RIVER BASIN

01451000 LEHIGH RIVER AT WALNUTPORT, PA

LOCATION.--Lat 40°45'25", long 75°36'12", Northampton County, Hydrologic Unit 02040106, on left bank 0.3 mi upstream from highway bridge at Walnutport, and 0.4 mi upstream from Trout Creek.

DRAINAGE AREA.--889 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 350.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated record which are poor. Flow regulated by Wild Creek Reservoir (station 01449700) since January 1941, Penn Forest Reservoir (station 01449400) since October 1958, Francis E. Walter Lake (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 1,864 ft<sup>3</sup>/s, 28.48 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,800 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 17.68 ft; minimum, 57 ft<sup>3</sup>/s, July 27, 1965, gage height, 1.25 ft, result of upstream shutoff.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 20.6 ft May 23, 1942, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,500 ft<sup>3</sup>/s, May 17, gage height, 8.39 ft; minimum daily, 434 ft<sup>3</sup>/s, Oct. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	670	1180	1210	e950	6280	2120	1600	1300	3950	765	621	1150
2	877	1600	1070	1230	4910	1790	1660	1160	2780	1720	566	1110
3	919	1530	1050	1420	4370	1850	2940	1080	2570	1470	538	1360
4	801	1330	1080	1460	4350	1770	4300	1090	2550	1210	506	1260
5	696	1250	1040	1110	4350	1630	4270	1940	2390	1160	621	1430
6	642	1290	892	990	4050	1560	3530	1920	2010	641	1120	1140
7	945	1370	978	1000	3380	1500	2890	2010	2170	660	1810	961
8	715	1240	939	933	2930	1370	2720	1950	2050	716	1290	859
9	502	1400	865	980	2790	1350	2520	1560	2480	705	998	820
10	493	1630	972	1040	2980	1430	2330	3500	2250	610	1150	812
11	518	1460	920	1210	2880	1400	2720	8470	1940	598	1780	757
12	516	1530	831	1040	3000	1410	3060	8170	1720	1110	1410	741
13	458	1540	809	1130	3220	1580	2590	5480	1530	3160	1560	695
14	444	1510	847	1150	2310	1330	2360	5550	1340	2250	4210	661
15	439	1340	830	833	2520	1330	2460	4490	1240	2050	3080	2210
16	434	3090	721	828	2510	1240	2140	4940	1200	2220	2600	1870
17	851	5750	e650	923	2430	1790	2140	14700	1150	2910	1780	1890
18	1050	3460	e675	1100	2270	2670	2020	10900	1180	1600	1410	1400
19	2970	2980	e690	1340	2200	3090	1750	9580	1470	1440	1330	867
20	5640	2620	e710	1340	2070	3220	1730	6820	2040	1090	1390	1240
21	5790	1890	e695	1520	2090	2870	1850	6210	1480	891	1480	1070
22	3990	1990	e650	1770	1880	2500	1820	5000	1230	1330	1660	1120
23	3860	1620	e650	1820	2570	2300	1700	3540	1280	1310	1900	1120
24	4930	1510	e645	1610	3400	2040	1760	2900	1270	1100	1890	1060
25	2710	1510	e640	1750	3220	1980	1470	2620	1060	833	2110	1010
26	2380	1510	e625	4820	2680	1910	1530	2310	976	772	1830	939
27	1970	1490	e615	4990	2520	1730	1450	2220	819	677	1650	1020
28	1570	1530	e610	4330	2250	1720	1300	2070	732	640	1660	930
29	1500	1480	e605	4490	---	1520	1290	2770	832	624	1780	861
30	1480	1380	e600	10200	---	1580	1310	6200	762	619	1620	820
31	1280	---	e760	8490	---	1650	---	6050	---	596	1520	---
TOTAL	52040	55010	24874	67797	86410	57230	67210	138500	50451	37477	48870	33183
MEAN	1679	1834	802	2187	3086	1846	2240	4468	1682	1209	1576	1106
MAX	5790	5750	1210	10200	6280	3220	4300	14700	3950	3160	4210	2210
MIN	434	1180	600	828	1880	1240	1290	1080	732	596	506	661

CAL YR 1989 TOTAL 641159 MEAN 1757 MAX 18900 MIN 312  
WTR YR 1990 TOTAL 719052 MEAN 1970 MAX 14700 MIN 434

e Estimated.

## LEHIGH RIVER BASIN

01451420 LITTLE LEHIGH CREEK NEAR EAST TEXAS, PA

LOCATION.--Lat 40°31'59", long 75°32'9", Lehigh County, on right bank 300 ft. upstream from bridge on Mill Creek Road, on Seem Road, 0.8 mi southeast of East Texas.

DRAINAGE AREA.--51.2 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1986 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 360 ft. from topographic map.

REMARKS.--Records good except for periods of estimated record which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,330 ft<sup>3</sup>/s, Sept. 9, 1987, gage height, 6.97 ft; minimum daily discharge, 4.3 ft<sup>3</sup>/s, Sept. 30, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 582 ft<sup>3</sup>/s, May 30, gage height, 4.06 ft; minimum daily 14 ft<sup>3</sup>/s, Dec. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e21	24	23	47	56	37	27	24	54	26	20	23
2	e29	22	22	24	50	37	27	23	47	25	19	23
3	e27	23	22	21	45	37	55	23	45	24	18	e22
4	e22	23	22	21	50	35	51	23	44	23	18	e21
5	e21	23	22	23	49	34	40	64	42	47	26	e20
6	22	23	22	22	43	34	33	35	39	35	45	e20
7	20	23	22	21	42	33	34	29	38	25	46	e20
8	20	23	21	20	40	33	34	26	37	23	22	e20
9	20	38	21	20	40	33	31	25	121	23	21	e20
10	20	36	20	30	54	32	30	45	51	22	34	e20
11	21	27	21	36	48	31	35	71	43	23	178	20
12	20	25	21	26	43	31	30	36	42	26	38	19
13	20	25	21	22	41	30	28	34	39	88	31	19
14	20	25	20	20	40	28	28	35	37	35	50	19
15	20	25	e19	20	40	27	37	30	40	29	31	20
16	19	33	e17	20	43	27	32	34	35	27	27	e20
17	21	33	e17	22	40	30	30	37	33	25	25	e20
18	19	27	e17	25	37	38	29	30	49	23	25	e20
19	29	25	e17	23	38	30	27	28	95	23	32	18
20	28	25	e16	22	36	31	27	27	43	22	33	19
21	33	25	e16	33	35	29	30	27	36	22	33	18
22	21	24	e16	32	37	27	28	27	33	22	43	24
23	23	24	e16	25	45	26	26	26	32	22	40	20
24	21	24	e16	24	54	25	25	25	31	22	33	e20
25	21	24	e15	30	41	25	25	24	29	21	30	18
26	20	24	e15	76	37	25	25	27	28	21	28	19
27	21	25	e15	50	37	25	24	27	27	20	26	18
28	22	26	e15	38	37	24	24	24	27	20	26	18
29	23	24	e15	38	---	24	24	50	26	20	25	18
30	24	23	e14	179	---	26	25	336	30	20	24	18
31	25	---	18	78	---	28	---	84	---	19	23	---
MEAN	22.4	25.7	18.5	35.1	42.8	30.1	30.7	43.7	42.4	26.5	34.5	19.8
MAX	33	38	23	179	56	38	55	336	121	88	178	24
MIN	19	22	14	20	35	24	24	23	26	19	18	18
CFSM	.44	.50	.36	.69	.84	.59	.60	.85	.83	.52	.67	.39
IN.	.50	.56	.42	.79	.87	.68	.67	.99	.92	.60	.78	.43
CAL YR 1989	MEAN 33.4	MAX 427	MIN 5.3	CFSM .65	IN. 8.84							
WTR YR 1990	MEAN 30.9	MAX 336	MIN 14	CFSM .60	IN. 8.21							

e Estimated.

## LEHIGH RIVER BASIN

01451500 LITTLE LEHIGH CREEK NEAR ALLENTOWN, PA

LOCATION.--Lat 40°34'56", long 75°29'00", Lehigh County, Hydrologic Unit 02040106, on right bank at downstream side of bridge on Lehigh Parkway in Allentown, 0.8 mi upstream from Cedar Creek, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--80.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1946, published as "at Allentown."

REVISED RECORDS.--WDR PA-73-1: 1946(M), 1951(P), 1955(M), 1956(M), 1958(M), 1962(M), 1963(M), 1965(M), 1969(M), 1971(M). WDR PA-87-1: 1946 to 1986 (P).

GAGE.--Water-stage recorder and, since September 1958, masonry control. Datum of gage is 253.41 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional regulation at low flow by fish hatchery above station. Several observation of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 99.3 ft<sup>3</sup>/s, 16.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft<sup>3</sup>/s, June 22, 1972, gage height, 11.80 ft, from rating curve extended above 980 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 17 ft<sup>3</sup>/s, Feb. 4, 1965, result of upstream shutoff; minimum gage height, 1.39 ft June 17, 18, 22, 1949.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	2300	*2860	*5.94	No other peaks above base discharge.			
Minimum daily discharge, 55 ft <sup>3</sup> /s, Dec. 23, 24.							

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	82	68	138	155	101	90	77	137	75	75	71
2	101	78	67	90	138	101	93	77	119	73	75	71
3	99	79	66	75	127	101	197	73	112	71	75	71
4	80	81	62	72	144	100	166	75	108	68	74	69
5	77	79	66	73	140	96	127	264	99	111	97	69
6	74	79	66	74	122	95	112	118	94	99	132	69
7	73	79	66	70	117	92	111	97	92	72	246	69
8	71	75	61	71	113	90	112	87	90	70	89	69
9	69	89	62	70	109	92	98	83	223	68	77	68
10	69	107	62	80	163	92	95	256	129	67	99	67
11	70	85	62	114	144	92	108	253	100	67	216	67
12	71	78	62	92	124	92	98	127	96	78	119	67
13	69	77	63	77	118	92	91	117	90	256	115	67
14	69	75	62	72	115	88	89	118	86	123	145	67
15	69	77	62	73	112	86	113	104	94	101	95	67
16	68	94	61	72	120	86	104	107	86	95	83	66
17	80	92	60	75	113	97	93	121	83	89	80	66
18	92	69	60	85	105	125	90	101	124	86	77	66
19	187	66	60	82	105	98	85	95	188	83	137	64
20	277	67	59	79	103	98	83	88	116	83	120	64
21	204	69	59	112	98	96	91	86	98	82	105	63
22	121	68	57	116	105	88	89	86	93	80	127	90
23	105	68	55	93	131	86	83	83	89	79	120	77
24	97	68	55	83	160	83	81	81	86	79	101	68
25	93	67	56	112	120	83	80	79	81	79	93	65
26	87	68	56	262	102	81	81	86	81	77	86	64
27	81	71	56	152	102	81	79	87	79	75	82	64
28	80	73	56	116	105	79	77	80	75	75	79	64
29	81	69	56	162	---	79	76	631	75	75	76	62
30	77	68	56	490	---	84	78	811	85	75	74	62
31	80	---	64	228	---	96	---	212	---	75	72	---
TOTAL	2946	2297	1883	3560	3410	2850	2970	4760	3108	2686	3241	2033
MEAN	95.0	76.6	60.7	115	122	91.9	99.0	154	104	86.6	105	67.8
MAX	277	107	68	490	163	125	197	811	223	256	246	90
MIN	68	66	55	70	98	79	76	73	75	67	72	62
CFSM	1.18	.95	.75	1.42	1.51	1.14	1.23	1.90	1.28	1.07	1.29	.84
IN.	1.36	1.06	.87	1.64	1.57	1.31	1.37	2.19	1.43	1.24	1.49	.94

CAL YR 1989 TOTAL 35595 MEAN 97.5 MAX 635 MIN 50 CFSM 1.21 IN. 16.39  
WTR YR 1990 TOTAL 35744 MEAN 97.9 MAX 811 MIN 55 CFSM 1.21 IN. 16.46

## LEHIGH RIVER BASIN

01451650 LITTLE LEHIGH CREEK AT TENTH STREET BRIDGE, ALLENTOWN, PA.

LOCATION.--Lat 40°35'47", long 75°28'28", Lehigh County, Hydrologic Unit 02040106, on left bank at the Tenth Street Bridge, 0.9 mi upstream from confluence with Jordan Creek in Allentown, Pa.

DRAINAGE AREA.--98.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 245.63 ft. above National Geodetic Vertical Datum.

REMARKS.--Records good except for periods of estimated record which are poor. Diversion for municipal water supply by city of Allentown. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,370 ft<sup>3</sup>/s, Sept. 9, 1987, gage height, 9.47 ft; minimum daily discharge, 44 ft<sup>3</sup>/s, Oct. 19, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1240 ft<sup>3</sup>/s, May 30, gage height, 4.80 ft; minimum daily, 63 ft<sup>3</sup>/s, Dec. 22, Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	e90	81	165	181	e120	103	93	173	109	e80	90
2	119	e90	75	112	162	e120	112	88	149	100	e80	87
3	110	e91	77	84	148	e120	233	88	139	97	e80	89
4	86	e92	76	82	171	e120	180	93	133	99	e80	e87
5	84	91	81	84	161	e115	138	250	128	129	143	e87
6	83	85	79	86	136	e110	118	145	118	137	166	e87
7	80	88	72	81	131	e105	124	114	114	99	278	e87
8	76	89	76	79	126	e105	123	99	117	94	104	e87
9	75	111	74	76	122	e110	109	92	330	90	94	86
10	74	120	74	92	195	121	108	266	165	88	134	e83
11	77	82	75	126	163	109	123	271	129	86	245	e83
12	72	86	76	99	141	108	113	142	124	109	143	e83
13	69	87	74	82	135	107	104	133	121	272	142	e83
14	68	86	72	75	129	104	108	133	117	144	179	e83
15	66	85	71	80	130	103	134	118	123	116	109	83
16	65	119	70	77	138	101	120	127	113	109	100	74
17	84	109	e69	78	127	128	109	176	105	99	95	75
18	100	96	69	94	118	150	102	119	131	94	91	71
19	223	91	e68	92	118	107	99	116	216	89	155	74
20	305	90	e67	80	e120	115	98	108	147	86	143	74
21	229	88	66	127	e118	105	122	111	129	86	123	69
22	139	85	63	127	e125	98	105	106	122	83	156	134
23	110	88	64	100	e160	97	100	99	116	83	136	90
24	104	88	64	92	e180	96	98	99	114	84	116	74
25	99	87	e64	132	e150	103	98	98	108	e83	108	74
26	94	90	e65	298	e120	91	98	105	104	e82	100	66
27	91	91	65	176	e120	88	95	108	102	e80	96	66
28	90	94	e65	132	e125	88	92	104	102	e80	95	64
29	86	87	65	183	---	88	91	284	100	e80	96	72
30	85	83	66	528	---	98	100	667	114	e80	93	63
31	e89	---	88	248	---	107	---	239	---	e80	92	---
TOTAL	3216	2759	2211	3967	3950	3337	3457	4791	4003	3147	3852	2425
MEAN	104	92.0	71.3	128	141	108	115	155	133	102	124	80.8
MAX	305	120	88	528	195	150	233	667	330	272	278	134
MIN	65	82	63	75	118	88	91	88	100	80	80	63
MEAN#	126	116	93.0	148	161	128	135	175	154	124	145	100
CFSM#	1.28	1.18	.95	1.51	1.64	1.30	1.38	1.78	1.57	1.26	1.48	1.02
IN.#	1.48	1.32	1.09	1.74	1.71	1.50	1.53	2.06	1.75	1.46	1.70	1.14
†	22.2	23.7	21.7	20.5	19.9	19.6	20.2	19.7	20.7	21.9	21.0	19.3

CAL YR 1989 TOTAL 41778 MEAN 114 MAX 589 MIN 52 MEAN# 135 CFSM# 1.38 IN.# 18.67  
WTR YR 1990 TOTAL 41115 MEAN 113 MAX 667 MIN 63 MEAN# 134 CFSM# 1.36 IN.# 18.50

e Estimated.

## LEHIGH RIVER BASIN

01451800 JORDAN CREEK NEAR SCHNECKSVILLE, PA

LOCATION.--Lat 40°39'42", long 75°37'38", Lehigh County, Hydrologic Unit 02040106, on left bank 54 ft downstream from wooden covered bridge at Trexler-Lehigh County Game Preserve, 1.0 mi downstream from Mill Creek, and 1.1 mi southwest of Schnecksville.

DRAINAGE AREA.--53.0 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1966 to current year.

REVISED RECORDS.--WDR PA-90-1: 1989.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 2, 1973, nonrecording gage at bridge 54 ft upstream at same datum.

REMARKS.--Records good except for periods of estimated record, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 93.3 ft<sup>3</sup>/s, 23.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,100 ft<sup>3</sup>/s, June 22, 1972, gage height, 12.32 ft, from flood-mark, from rating curve extended above 680 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow; minimum observed, 0.4 ft<sup>3</sup>/s, July 26, 1966; minimum gage height observed, 1.74 ft, July 19, 26, 1966.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1630	1380	6.03	May 17	0415	1120	5.59
Jan. 30	0330	*1540	*6.27	May 30	0045	1070	5.51

Minimum daily discharge, 13 ft<sup>3</sup>/s, July 10.

REVISIONS.--Revised figures of discharge for the water year 1989 inadvertently omitted from the report for 1989 are given below.

EXTREMES FOR 1989 WATER YEAR.--Peak discharges greater than base discharge of 900 ft<sup>3</sup>/s (revised) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 20	2330	1230	5.78	May 16	2100	983	5.35
May 6	0915	*3100	*8.41				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	30	92	21	48	89	156	30	47	45	63	9.6
2	19	30	81	21	46	77	129	288	44	41	51	9.6
3	21	27	73	20	48	73	124	161	38	38	45	9.0
4	19	25	62	12	43	73	e120	122	38	47	41	8.5
5	19	29	54	e12	43	71	e120	187	34	79	48	8.4
6	17	62	49	e12	43	93	e120	2020	42	73	36	8.9
7	15	37	45	19	41	e70	120	1010	90	52	33	8.9
8	15	31	41	36	35	e60	115	519	89	46	30	8.7
9	14	28	36	58	26	62	118	320	81	39	27	8.3
10	14	27	36	36	e22	64	99	553	248	37	25	8.2
11	14	27	30	31	e22	67	87	775	142	33	26	7.8
12	13	25	20	49	e22	81	79	517	108	30	35	7.6
13	12	46	e19	106	32	87	73	339	117	64	31	7.5
14	12	53	e19	68	42	84	67	243	96	44	26	7.5
15	12	38	e19	181	48	96	68	213	116	32	25	7.4
16	12	36	e19	184	61	97	75	501	368	132	24	26
17	12	62	e19	125	49	85	58	846	483	214	21	60
18	11	53	e19	103	46	85	52	535	326	148	19	19
19	12	49	e19	94	47	86	53	353	225	117	20	31
20	11	508	e19	84	46	74	45	252	166	145	26	97
21	21	889	e19	65	243	104	43	189	139	107	20	340
22	190	410	e19	56	330	102	40	144	131	87	18	226
23	62	251	22	58	301	89	37	142	103	74	23	160
24	60	177	35	56	229	180	35	177	99	62	17	121
25	51	131	53	53	181	418	34	110	107	151	14	90
26	43	101	31	50	154	344	33	89	78	257	13	199
27	39	89	24	63	132	257	31	87	64	149	13	164
28	37	168	27	50	105	208	28	70	74	111	12	142
29	35	105	35	48	---	171	27	58	75	82	13	116
30	33	98	23	51	---	148	27	53	51	70	14	92
31	30	---	21	53	---	170	---	51	---	83	11	---
TOTAL	895	3642	1080	1875	2485	3765	2213	10954	3819	2689	820	2008.9
MEAN	28.9	121	34.8	60.5	88.7	121	73.8	353	127	86.7	26.5	67.0
MAX	190	889	92	184	330	418	156	2020	483	257	63	340
MIN	11	25	19	12	22	60	27	30	34	30	11	7.4
CFSM	.54	2.29	.66	1.14	1.67	2.29	1.39	6.67	2.40	1.64	.50	1.26
IN.	.63	2.56	.76	1.32	1.74	2.64	1.55	7.69	2.68	1.89	.58	1.41

CAL YR 1988 TOTAL 32681.9 MEAN 89.3 MAX 1240 MIN 5.6 CFSM 1.68 IN. 22.94  
WTR YR 1989 TOTAL 36245.9 MEAN 99.3 MAX 2020 MIN 7.4 CFSM 1.87 IN. 25.44

e Estimated.



## LEHIGH RIVER BASIN

01451800 JORDAN CREEK NEAR SCHNECKSVILLE, PA--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	65	36	238	370	102	53	e43	245	23	25	37
2	156	53	34	158	264	92	57	40	173	21	18	36
3	109	54	30	112	194	85	280	37	136	18	16	46
4	92	49	30	112	227	72	372	38	110	16	15	32
5	83	43	35	136	169	62	304	91	88	20	60	31
6	75	41	36	127	152	59	220	51	72	20	65	31
7	66	38	33	92	141	51	188	48	68	16	285	28
8	59	38	25	77	122	49	147	40	59	14	109	26
9	53	154	26	72	109	48	120	36	273	14	77	24
10	49	105	28	116	176	50	112	183	141	13	209	26
11	50	84	e25	205	136	48	130	185	110	15	393	24
12	42	75	e24	141	137	44	98	128	89	70	275	22
13	38	66	e24	93	125	41	84	124	73	299	214	21
14	35	64	e23	77	114	37	77	119	65	128	266	21
15	34	63	e23	74	107	36	133	87	62	107	157	47
16	32	108	e22	72	112	34	105	111	56	90	128	26
17	129	81	e22	95	94	94	102	548	47	67	104	24
18	118	65	e22	116	77	113	94	273	50	58	87	20
19	534	61	e22	90	77	72	85	191	78	50	77	20
20	968	62	e22	71	68	88	79	144	58	44	86	26
21	838	60	e21	120	63	75	94	131	46	43	80	20
22	438	54	e21	123	78	65	78	107	38	42	114	67
23	273	55	e21	105	121	63	69	89	35	38	96	42
24	192	51	e21	103	192	59	e64	76	32	33	79	28
25	147	49	e21	170	174	56	e60	68	29	29	68	24
26	118	51	e21	687	156	53	e57	71	27	26	62	22
27	99	47	e21	510	142	50	e52	65	24	24	56	22
28	85	51	e20	333	120	46	e47	54	23	23	51	20
29	73	43	e20	343	---	45	e44	250	22	21	51	19
30	65	37	e40	1190	---	58	e44	729	27	20	45	19
31	66	---	66	602	---	59	---	390	---	22	40	---
TOTAL	5190	1867	835	6560	4017	1906	3449	4547	2357	1424	3408	851
MEAN	167	62.2	26.9	212	143	61.5	115	147	78.6	45.9	110	28.4
MAX	968	154	66	1190	370	113	372	729	273	299	393	67
MIN	32	37	20	71	63	34	44	36	22	13	15	19
CFSM	3.16	1.17	.51	3.99	2.71	1.16	2.17	2.77	1.48	.87	2.07	.54
IN.	3.64	1.31	.59	4.60	2.82	1.34	2.42	3.19	1.65	1.00	2.39	.60

CAL YR 1989 TOTAL 38520.9 MEAN 106 MAX 2020 MIN 7.4 CFSM 1.99 IN. 27.04  
WTR YR 1990 TOTAL 36411 MEAN 99.8 MAX 1190 MIN 13 CFSM 1.88 IN. 25.56

e Estimated.

## LEHIGH RIVER BASIN

01452000 JORDAN CREEK AT ALLENTOWN, PA

LOCATION.--Lat 40°37'23", long 75°28'58", Lehigh County, Hydrologic Unit 02040106, on right bank 200 ft upstream from bridge on State Highway 145, 0.5 mi northwest of city limits of Allentown, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--75.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR PA-76-1: 1970(M), 1971.

GAGE.--Water-stage recorder and rubble masonry control, crest raised 1 ft in August 1958 and further modified by filling in square notches on sides and notching center of dam at 17:1 slope in August 1974. Datum of gage is 259.82 ft above Pennsylvania Department of Transportation datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 114 ft<sup>3</sup>/s, 20.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft<sup>3</sup>/s, June 23, 1972, gage height, 11.61 ft, floodmark, from rating curve extended above 6,100 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; no flow on many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1942, reached a stage of approximately 7.1 ft, from floodmarks 650 ft downstream.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	2130	1780	5.27	May 30	0500	1450	5.02
Jan. 30	0930	*2200	*5.56				

Minimum daily discharge, 16 ft<sup>3</sup>/s, July 18, 19, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e120	86	48	e260	549	136	65	48	355	33	22	42
2	e170	71	37	e210	373	122	66	44	246	29	21	38
3	e150	66	46	e140	265	112	260	40	192	25	18	48
4	115	66	46	e150	269	99	481	40	159	22	16	38
5	108	56	47	e160	234	83	408	92	129	22	41	32
6	99	51	48	e150	200	79	280	64	106	28	114	31
7	88	50	51	e120	187	66	228	52	100	23	264	30
8	75	50	27	e90	164	64	188	43	88	20	130	28
9	67	134	28	e100	146	67	148	38	374	20	90	24
10	63	166	31	e170	206	65	131	126	217	18	127	24
11	62	114	35	e240	184	64	153	267	163	18	503	24
12	57	102	35	e180	176	60	122	153	134	46	325	22
13	51	89	34	e140	164	55	102	134	109	343	226	29
14	47	84	26	e98	152	50	93	144	98	152	324	20
15	43	82	26	e90	140	47	139	104	94	121	192	40
16	40	108	24	e95	144	44	129	106	81	103	158	37
17	109	121	e21	e110	126	56	116	604	72	76	130	25
18	146	83	e24	e140	103	165	111	352	68	65	107	21
19	490	78	e24	128	103	88	99	238	100	57	91	20
20	1160	77	e24	93	94	95	93	175	99	49	99	23
21	1240	78	e23	117	81	93	105	151	66	44	95	23
22	627	67	e23	180	92	79	98	127	60	44	125	53
23	368	71	e23	144	153	74	81	105	53	42	121	69
24	251	60	e23	131	228	70	72	91	48	36	100	34
25	192	58	e23	160	223	68	68	78	42	30	84	26
26	156	69	e23	832	180	64	67	75	38	26	77	23
27	130	66	e22	737	165	61	60	80	34	23	68	22
28	111	65	e22	478	167	57	54	64	31	21	62	21
29	96	62	e23	360	---	55	49	177	31	21	60	19
30	85	51	e41	1690	---	61	49	1100	35	20	54	18
31	83	---	e140	921	---	73	---	599	---	19	47	---
TOTAL	6599	2381	1068	8614	5268	2372	4115	5511	3422	1596	3891	904
MEAN	213	79.4	34.5	278	188	76.5	137	178	114	51.5	126	30.1
MAX	1240	166	140	1690	549	165	481	1100	374	343	503	69
MIN	40	50	21	90	81	44	49	38	31	18	16	18
CFSM	2.81	1.05	.45	3.67	2.48	1.01	1.81	2.35	1.50	.68	1.66	.40
IN.	3.24	1.17	.52	4.23	2.59	1.16	2.02	2.70	1.68	.78	1.91	.44

CAL YR 1989 TOTAL 47050.8 MEAN 129 MAX 2570 MIN 7.8 CFSM 1.70 IN. 23.09  
WTR YR 1990 TOTAL 45741 MEAN 125 MAX 1690 MIN 16 CFSM 1.65 IN. 22.45

e Estimated.

LEHIGH RIVER BASIN

91

01452500 MONOCACY CREEK AT BETHLEHEM, PA

LOCATION.--Lat 40°38'28", long 75°22.47", Northampton County, Hydrologic Unit 02040106, on right bank 40 ft downstream from highway bridge at entrance to Monocacy Park at Bethlehem, and 2.1 mi upstream from mouth.

DRAINAGE AREA.--44.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder. Concrete control since July 17, 1969. Datum of gage is 247.24 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 15, 1962, nonrecording gage at site 40 ft upstream at same datum.

REMARKS.--Records fair except for periods of estimated daily discharges, which are poor. Some regulation at low flow by mill above station since April 1954. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 53.3 ft<sup>3</sup>/s, 16.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,490 ft<sup>3</sup>/s Jan. 25, 1979, gage height, 8.19 ft; minimum, 3.0 ft<sup>3</sup>/s Jan. 9, 1966, gage height, 1.67 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1945, reached a stage of 9.74 ft, from floodmarks, discharge, 5,200 ft<sup>3</sup>/s, by slope-area measurement.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Oct. 20	2115	301	3.43	May 17	0815	*610	*4.15
Jan. 30	Unknown	429	3.75	May 29	2215	446	3.79

Minimum daily discharge, 33 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	e58	e49	62	e120	73	45	49	109	47	41	e46
2	79	e60	e48	41	e98	74	44	43	102	51	36	e46
3	65	e61	e47	37	e98	85	68	e40	93	49	36	e46
4	57	e62	e44	36	e100	68	72	e42	93	46	33	e46
5	52	56	e45	40	e101	e62	72	e140	73	45	48	e46
6	51	55	e45	41	e88	e54	65	e65	67	46	66	e46
7	51	55	e46	36	e87	51	64	e53	62	47	106	e46
8	48	55	e43	36	e82	50	61	e47	62	45	62	e46
9	46	69	e43	34	e80	49	56	e45	118	42	57	e46
10	46	68	e43	55	e110	49	54	e130	78	54	e65	e45
11	50	66	e42	69	e100	49	59	e120	60	47	e120	e44
12	48	64	e41	54	e90	48	54	e69	59	65	e70	e45
13	45	61	e42	41	e86	47	50	e63	57	177	e55	e44
14	43	61	e41	38	e85	48	50	e64	56	109	66	e43
15	43	62	e42	39	e82	47	58	e56	61	95	53	e41
16	40	73	e42	39	e84	47	55	e58	59	68	56	e41
17	58	e63	e42	42	e73	52	51	e64	67	59	54	e40
18	62	55	e42	47	e69	61	51	e56	65	55	52	e40
19	106	54	e43	47	e73	54	58	e53	82	52	e70	e39
20	e180	55	e42	43	e69	56	51	e49	96	52	e65	e38
21	e130	54	e42	53	e67	54	47	e48	73	51	e57	e37
22	e100	52	e41	55	68	48	44	e47	83	50	e70	57
23	e83	52	e40	51	88	48	45	e46	74	52	e66	51
24	e73	50	e40	51	87	49	42	e44	68	50	e55	43
25	e65	50	e40	67	85	46	45	e44	58	45	e50	43
26	e63	52	e39	143	74	40	43	e47	57	40	e47	43
27	e58	e53	e39	119	75	40	42	e48	54	38	e45	e42
28	e58	e52	e38	99	73	40	39	e45	51	39	e43	e41
29	e58	e51	e38	e130	---	40	35	e320	54	36	e40	e40
30	e57	e50	e37	e300	---	41	43	e440	49	35	e40	40
31	e56	---	e34	e160	---	48	---	e140	---	37	e40	---
TOTAL	2034	1729	1300	2105	2392	1618	1563	2575	2140	1724	1764	1311
MEAN	65.6	57.6	41.9	67.9	85.4	52.2	52.1	83.1	71.3	55.6	56.9	43.7
MAX	180	73	49	300	120	85	72	440	118	177	120	57
MIN	40	50	34	34	67	40	35	40	49	35	33	37
CFSM	1.47	1.30	.94	1.53	1.92	1.17	1.17	1.87	1.60	1.25	1.28	.98
IN.	1.70	1.45	1.09	1.76	2.00	1.35	1.31	2.15	1.79	1.44	1.47	1.10

CAL YR 1989 TOTAL 19928 MEAN 54.6 MAX 225 MIN 20 CFSM 1.23 IN. 16.66  
WTR YR 1990 TOTAL 22255 MEAN 61.0 MAX 440 MIN 33 CFSM 1.37 IN. 18.60

e Estimated.

## LEHIGH RIVER BASIN

01453000 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'55", long 75°22'45", Lehigh County, Hydrologic Unit 02040106, on left bank 110 ft upstream from New Street Bridge at Bethlehem, and 1,800 ft upstream from Monocacy Creek. Records include flow of Monocacy Creek.

DRAINAGE AREA.--1,279 mi includes that of Monocacy Creek. At site used prior to Oct. 1, 1928, 1,229 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1902 to February 1905, April 1909 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at South Bethlehem" prior to October 1913.

REVISED RECORDS.--WSP 261: 1903-5, WSP 321: 1910-11. WSP 1051: Drainage area. WSP 1141: 1929-34(M). WSP 1302: 1914(M), 1916(M), 1918, 1921, 1927-28. WSP 1432: 1903, 1919(M), 1920-21, 1929, 1933.

GAGE.--Water-stage recorder. Datum of gage is 210.94 ft above National Geodetic Vertical Datum of 1929. Prior to October 1928, nonrecording gage at New Street Bridge 120 ft downstream at same datum. Oct. 1, 1928, to Sept. 30, 1962, water-stage recorder at site 4,250 ft downstream at datum 2.49 ft lower. Oct. 1, 1963, to Dec. 14, 1975, water-stage recorder at site 40 ft downstream at same datum.

REMARKS.--Records good except for periods of estimated record, which are fair. Flow regulated by Wild Creek Reservoir (station 01449700) since January 1941, Penn Forest Reservoir (station 01449400) since October 1958, Francis E. Walter Reservoir (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--83 years (water years 1902-04, 1909-90), 2,343 ft<sup>3</sup>/s, 24.88 in/yr, adjusted for diversion 1902-04, 1909-42 and, for recirculated water, October 1, 1959 to September 30, 1962.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,000 ft<sup>3</sup>/s May 23, 1942, gage height, about 25.9 ft, from floodmark, present site and datum, from rating curve extended above 48,000 ft<sup>3</sup>/s; minimum, 125 ft<sup>3</sup>/s June 28, 1965, gage height, 0.94 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 28, 1902, reached a stage of 24.9 ft, from floodmark, present site and datum, discharge, about 88,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,200 ft<sup>3</sup>/s, May 17, gage height, 9.86 ft; minimum daily, 670 ft<sup>3</sup>/s, Dec. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	1750	1770	1560	7880	2910	2180	1860	5100	1260	1060	1750
2	1590	1880	1600	1630	6030	2610	2190	1720	3870	1810	951	1560
3	1730	2150	1550	1450	5220	2550	3530	1570	3420	2060	905	1810
4	1390	1880	1340	1600	5150	2500	4900	1550	3250	1680	843	1690
5	1330	1700	1430	1510	5030	2350	5070	2540	3210	1700	1220	1870
6	1220	1670	1410	1480	4960	2230	4380	2470	2740	1330	1860	1660
7	1260	1810	1420	1290	4260	2150	3740	2510	2720	1010	3100	1470
8	1410	1670	1350	1220	3770	2040	3500	2490	2770	1110	2150	1330
9	1020	2060	1150	1200	3570	1970	3240	2160	3830	1120	1640	1250
10	970	2470	1040	1410	3890	2050	3020	3040	3160	1090	1670	1250
11	979	2080	1190	1990	3830	2030	3160	8460	2760	973	3150	1190
12	999	2040	1230	1750	3550	2020	3630	8490	2480	1460	2460	1150
13	903	2040	1260	1460	4110	2130	3210	5740	2260	4280	2240	1130
14	873	2040	1100	1240	3130	2010	2990	5640	2030	3290	4610	1070
15	841	1860	1090	1330	3230	1890	3120	4990	1970	2720	3790	2100
16	841	2270	924	1290	3220	1850	2970	4790	1850	2630	3390	2450
17	1300	5910	886	1410	3170	2060	2770	15900	1750	3310	2530	2210
18	2010	4200	894	1620	2930	3430	2730	11400	1780	2430	2110	2030
19	3550	3500	825	1940	2870	3540	2410	10000	2190	2020	2030	1440
20	7340	3250	e800	1970	2710	3720	2340	7330	2600	1700	2010	1560
21	8750	2550	e795	2160	2700	3610	2480	6340	2220	1440	2140	1580
22	5710	2510	e780	2640	2550	3160	2500	5500	1870	1660	2360	1820
23	4480	2300	e760	2590	3190	2950	2320	4210	1770	1810	2570	1790
24	5790	2090	e740	2370	4180	2690	2330	3510	1830	1700	2640	1530
25	3650	2030	e720	2460	4060	2590	2120	3250	1680	1380	2750	1540
26	3160	2060	e700	5780	3510	2520	2090	2920	1490	1240	2530	1360
27	2740	2060	e695	6450	3300	2370	2050	2860	1380	1160	2280	1460
28	2250	2090	e690	5450	3070	2270	1880	2660	1250	1030	2180	1400
29	2080	2060	e680	5030	---	2130	1820	3840	1240	1010	2360	1320
30	1990	1930	e670	13400	---	2120	1830	8810	1320	994	2120	1250
31	1950	---	e660	10900	---	2280	---	7390	---	977	2070	---
TOTAL	75366	69910	32349	89580	109070	76730	86500	155940	71790	53384	69719	47020
MEAN	2431	2330	1044	2890	3895	2475	2883	5030	2393	1722	2249	1567
MAX	8750	5910	1770	13400	7880	3720	5070	15900	5100	4280	4610	2450
MIN	841	1670	670	1200	2550	1850	1820	1550	1240	973	843	1070
CFSM	1.90	1.82	.82	2.26	3.05	1.94	2.25	3.93	1.87	1.35	1.76	1.23
IN.	2.19	2.03	.94	2.61	3.17	2.23	2.52	4.54	2.09	1.55	2.03	1.37

CAL YR 1989 TOTAL 836882 MEAN 2293 MAX 22600 MIN 543 CFSM 1.79 IN. 24.34  
WTR YR 1990 TOTAL 937358 MEAN 2568 MAX 15900 MIN 670 CFSM 2.01 IN. 27.26

e Estimated.

## LEHIGH RIVER BASIN

93

01454700 LEHIGH RIVER AT GLENDON, PA

LOCATION.--Lat 40°40'09", long 75°14'12", Northampton County, Hydrologic Unit 02040106, on right bank 140 ft upstream from highway bridge in Hugh Moore Parkway at Glendon, 1.9 mi upstream from mouth, and 2.0 mi southwest of Easton.

DRAINAGE AREA.--1,359 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1966 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 164.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated discharge, which are fair. Flow regulated by Francis E. Walter Reservoir (station 01447780), Penn Forest Reservoir (station 01449400), and Wild Creek Reservoir (station 01449700) and since February 1971, Beltzville Lake (station 01449790) about 60 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 2,885 ft<sup>3</sup>/s, 28.82 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,600 ft<sup>3</sup>/s, June 23, 1972, gage height, 24.86 ft from rating curve extended above 36,000 ft<sup>3</sup>/s; minimum daily discharge, 330 ft<sup>3</sup>/s, Jan. 31, Feb. 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,700 ft<sup>3</sup>/s, May 17, gage height, 16.03 ft; minimum daily discharge, 850 ft<sup>3</sup>/s, Dec. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1510	1990	2000	1930	8870	3290	2430	2040	6070	1530	1320	1990
2	1920	2060	1830	1910	6940	2950	2460	1920	4620	1960	1220	1760
3	2130	2410	1770	1690	6060	2870	4270	1760	3980	2330	1160	1990
4	1690	2150	1560	1840	6060	2790	5740	1750	3770	1950	1090	1870
5	1610	1930	1650	1780	5850	2620	5870	3030	3720	1950	1430	2040
6	1460	1890	1640	1720	5730	2490	5030	2780	3180	1660	2110	1860
7	1460	2020	1650	1550	4920	2400	4300	2780	3100	1290	3990	1670
8	1720	1900	1600	1480	4330	2280	3970	2740	3180	1370	2440	1520
9	1250	2220	1410	1450	4070	2210	3660	2390	4760	1410	1870	1470
10	1170	2800	1290	1720	4590	2290	3420	3440	3730	1360	1850	1470
11	1190	2320	1430	2310	4490	2260	3610	9500	3180	1240	3390	1420
12	1220	2260	1470	2050	4100	2250	4130	9370	2830	1650	2750	1370
13	1130	2240	1510	1740	4740	2370	3620	6610	2590	5160	2430	1350
14	1070	2280	1360	1510	3630	2260	3360	6410	2340	3880	5170	1290
15	996	2090	1350	1610	3700	2130	3580	5740	2330	3090	4260	2170
16	992	2380	1210	1550	3720	2090	3370	5350	2150	2970	3750	2750
17	1380	6670	1120	1680	3640	2300	3110	16100	2030	3680	2830	2390
18	2340	4870	1160	1910	3310	3990	3070	12200	2070	2820	2340	2280
19	4040	3940	1110	2200	3240	4020	2690	11000	2560	2280	2190	1650
20	9260	3660	e1050	2260	3060	4280	2600	8360	2970	2000	2260	1710
21	10000	2900	e1020	2510	3020	4140	2770	7210	2550	1740	2380	1750
22	6630	2770	e1000	3020	2900	3580	2790	6410	2180	1880	2630	2040
23	5230	2580	e980	2940	3650	3320	2570	4910	2060	2040	2850	1990
24	6570	2310	e920	2690	4920	3010	2570	4030	2090	1970	2940	1710
25	4290	2250	e910	2870	4700	2860	2380	3700	1960	1620	3080	1720
26	3600	2300	e900	7130	4020	2760	2330	3340	1780	1460	2850	1540
27	3120	2290	e890	7500	3770	2620	2270	3240	1670	1390	2520	1630
28	2530	2340	e880	6260	3510	2510	2100	2990	1530	1270	2430	1560
29	2320	2300	e870	5860	---	2380	2010	4830	1510	1250	2610	1480
30	2220	2150	e850	14800	---	2380	2010	10900	1620	1260	2370	1420
31	2230	---	e1250	11900	---	2550	---	8530	---	1260	2290	---
TOTAL	88278	78270	39640	103370	125540	86250	98090	175360	84110	62720	78800	52860
MEAN	2848	2609	1279	3335	4484	2782	3270	5657	2804	2023	2542	1762
MAX	10000	6670	2000	14800	8870	4280	5870	16100	6070	5160	5170	2750
MIN	992	1890	850	1450	2900	2090	2010	1750	1510	1240	1090	1290

CAL YR 1989 TOTAL 983921 MEAN 2696 MAX 25100 MIN 719  
WTR YR 1990 TOTAL 1073288 MEAN 2941 MAX 16100 MIN 850

e Estimated.

## LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA

LOCATION.--Lat 40°41'12", long 75°12'32", Northampton County, Hydrologic Unit 02040106, at Third Street Bridge, Easton, U.S. Highway 611.

DRAINAGE AREA.--1,364 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

pH: October 1972 to September 1974, October 1975 to current year.

WATER TEMPERATURES: October 1961 to current year.

DISSOLVED OXYGEN: June 1966 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1961.

REMARKS.--Station not operated Oct. 1 to Mar. 31. Other interruption in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 581 microsiemens Aug. 19, 1963; minimum, 70 microsiemens Nov. 14, 1970.

pH: Maximum, 8.4 Aug. 8, 1980; minimum, 6.0 Mar. 16, 1978.

WATER TEMPERATURE: Maximum, 30.5°C July 29, 1970, and July 21, 1980; minimum, 0.0°C on many days during winter months.

DISSOLVED OXYGEN: Maximum, 15.7 mg/L April 14, 1986; minimum 0.0mg/L Aug. 4, 1966.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	235	222	228	246	233	240
2	---	---	---	---	---	---	226	218	222	249	239	245
3	---	---	---	---	---	---	227	199	214	258	244	251
4	---	---	---	---	---	---	202	169	180	271	259	265
5	---	---	---	---	---	---	172	159	164	270	221	252
6	---	---	---	---	---	---	169	159	165	220	196	207
7	---	---	---	---	---	---	192	169	180	202	192	197
8	---	---	---	---	---	---	192	171	185	200	190	195
9	---	---	---	---	---	---	190	170	184	205	195	200
10	---	---	---	---	---	---	198	190	193	220	206	215
11	---	---	---	---	---	---	202	196	199	204	118	141
12	---	---	---	---	---	---	197	174	185	126	109	115
13	---	---	---	---	---	---	188	178	181	136	116	125
14	---	---	---	---	---	---	191	181	187	139	129	133
15	---	---	---	---	---	---	192	187	190	145	129	137
16	---	---	---	---	---	---	192	185	188	160	146	148
17	---	---	---	---	---	---	209	194	204	---	---	---
18	---	---	---	---	---	---	209	201	205	---	---	---
19	---	---	---	---	---	---	212	206	209	---	---	---
20	---	---	---	---	---	---	225	213	219	---	---	---
21	---	---	---	---	---	---	220	213	217	130	123	127
22	---	---	---	---	---	---	219	199	211	139	127	131
23	---	---	---	---	---	---	209	199	205	157	140	147
24	---	---	---	---	---	---	220	207	214	176	158	166
25	---	---	---	---	---	---	217	207	213	183	176	178
26	---	---	---	---	---	---	235	217	228	189	183	185
27	---	---	---	---	---	---	237	228	233	185	183	188
28	---	---	---	---	---	---	241	230	238	188	183	185
29	---	---	---	---	---	---	252	236	245	208	163	186
30	---	---	---	---	---	---	243	234	238	158	148	152
31	---	---	---	---	---	---	---	---	---	155	139	145
MONTH	---	---	---	---	---	---	252	159	204	271	109	180



## LEHIGH RIVER BASIN

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01454720 LEHIGH RIVER AT EASTON PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	172	145	157	305	297	302	330	317	323	222	215	219
2	193	171	177	302	286	299	328	311	319	242	221	233
3	200	192	195	281	209	233	332	324	329	247	229	241
4	199	191	194	227	211	219	344	330	338	228	219	225
5	202	188	195	245	229	239	342	317	335	242	225	233
6	210	196	203	---	---	---	337	266	294	228	219	223
7	220	210	217	---	---	---	267	198	224	247	229	240
8	221	200	209	---	---	---	222	217	219	265	246	257
9	213	191	200	---	---	---	253	219	236	271	259	264
10	196	189	192	319	302	310	271	254	262	269	261	264
11	203	195	198	327	311	319	272	209	244	278	261	267
12	220	205	213	337	319	330	218	207	212	292	278	285
13	231	221	227	312	184	235	232	215	226	299	286	292
14	244	229	238	183	167	173	238	147	197	310	297	301
15	261	243	253	195	185	193	161	147	153	313	259	304
16	267	253	261	200	190	195	172	162	168	248	166	189
17	270	259	264	202	163	185	197	173	181	184	166	178
18	265	237	258	184	162	168	221	199	214	190	181	184
19	269	244	260	224	188	213	236	219	229	218	187	205
20	251	217	241	239	224	233	237	225	230	265	219	246
21	223	214	218	264	241	256	239	219	227	261	247	252
22	249	225	239	286	264	275	229	219	223	252	236	247
23	266	250	260	275	237	251	228	207	219	246	230	238
24	263	248	258	248	236	242	218	195	208	242	233	238
25	250	243	247	264	240	250	209	189	198	252	239	246
26	274	243	258	291	264	275	198	186	191	261	250	254
27	284	272	279	305	292	297	203	193	200	273	262	268
28	303	283	293	317	301	307	217	203	213	270	260	265
29	320	302	309	319	310	316	224	204	215	270	264	267
30	320	301	313	318	313	316	213	204	209	270	260	265
31	---	---	---	323	306	312	219	211	216	---	---	---
MONTH	320	145	234	337	162	257	344	147	234	313	166	246

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	7.4	7.3	7.4	7.4	7.3	7.4
2	---	---	---	---	---	---	7.4	7.3	7.4	7.5	7.3	7.4
3	---	---	---	---	---	---	7.4	7.3	7.3	7.5	7.4	7.4
4	---	---	---	---	---	---	7.3	7.2	7.2	7.4	7.3	7.4
5	---	---	---	---	---	---	7.3	7.2	7.2	7.3	7.3	7.3
6	---	---	---	---	---	---	7.3	7.2	7.2	7.3	7.2	7.3
7	---	---	---	---	---	---	7.4	7.2	7.3	7.3	7.2	7.3
8	---	---	---	---	---	---	7.4	7.3	7.3	7.3	7.2	7.3
9	---	---	---	---	---	---	7.4	7.3	7.3	7.3	7.2	7.3
10	---	---	---	---	---	---	7.3	7.2	7.3	7.3	7.2	7.2
11	---	---	---	---	---	---	7.3	7.2	7.2	7.3	7.0	7.1
12	---	---	---	---	---	---	7.3	7.2	7.3	7.1	7.0	7.0
13	---	---	---	---	---	---	7.4	7.3	7.3	7.1	7.0	7.1
14	---	---	---	---	---	---	7.4	7.3	7.3	7.1	7.1	7.1
15	---	---	---	---	---	---	7.4	7.3	7.3	7.1	7.0	7.0
16	---	---	---	---	---	---	7.4	7.3	7.3	7.1	7.1	7.1
17	---	---	---	---	---	---	7.4	7.3	7.3	---	---	---
18	---	---	---	---	---	---	7.4	7.2	7.3	---	---	---
19	---	---	---	---	---	---	7.5	7.3	7.4	---	---	---
20	---	---	---	---	---	---	7.5	7.4	7.5	---	---	---
21	---	---	---	---	---	---	7.5	7.3	7.4	7.1	7.0	7.1
22	---	---	---	---	---	---	7.5	7.3	7.4	7.1	7.1	7.1
23	---	---	---	---	---	---	7.6	7.3	7.5	7.1	7.1	7.1
24	---	---	---	---	---	---	7.5	7.3	7.4	7.2	7.2	7.2
25	---	---	---	---	---	---	7.5	7.3	7.4	7.2	7.2	7.2
26	---	---	---	---	---	---	7.6	7.3	7.4	7.2	7.2	7.2
27	---	---	---	---	---	---	7.7	7.3	7.5	7.3	7.2	7.2
28	---	---	---	---	---	---	7.6	7.3	7.5	7.3	7.2	7.2
29	---	---	---	---	---	---	7.6	7.3	7.4	7.3	7.2	7.2
30	---	---	---	---	---	---	7.4	7.3	7.3	7.3	7.2	7.2
31	---	---	---	---	---	---	---	---	---	7.2	7.1	7.2
MONTH	---	---	---	---	---	---	7.7	7.2	7.3	7.5	7.0	7.2

## LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.2	7.1	7.2	7.6	7.4	7.5	7.6	7.4	7.5	7.5	7.3	7.4
2	7.3	7.2	7.2	7.6	7.5	7.5	7.8	7.5	7.6	7.6	7.4	7.5
3	7.3	7.2	7.3	7.5	7.3	7.4	7.8	7.5	7.6	7.6	7.4	7.5
4	7.3	7.3	7.3	7.4	7.3	7.3	7.9	7.5	7.7	7.6	7.4	7.5
5	7.3	7.3	7.3	7.4	7.4	7.4	7.7	7.4	7.5	7.5	7.4	7.4
6	7.3	7.3	7.3	---	---	---	7.9	7.2	7.3	7.4	7.3	7.4
7	7.4	7.3	7.3	---	---	---	7.3	7.2	7.2	7.4	7.3	7.4
8	7.4	7.3	7.3	---	---	---	7.3	7.2	7.2	7.6	7.3	7.5
9	7.3	7.2	7.3	---	---	---	7.3	7.3	7.3	7.6	7.4	7.5
10	7.3	7.2	7.2	7.5	7.4	7.5	7.3	7.2	7.3	7.7	7.4	7.5
11	7.3	7.2	7.3	7.4	7.3	7.3	7.3	7.2	7.3	7.7	7.5	7.5
12	7.4	7.3	7.3	7.4	7.2	7.3	7.3	7.2	7.3	7.6	7.4	7.5
13	7.4	7.3	7.3	7.3	7.2	7.3	7.4	7.3	7.3	7.6	7.4	7.5
14	7.4	7.3	7.3	7.2	7.2	7.2	7.4	7.0	7.2	7.6	7.4	7.5
15	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.0	7.1	7.6	7.4	7.5
16	7.4	7.3	7.4	7.3	7.2	7.3	7.2	7.1	7.1	7.5	7.2	7.3
17	7.4	7.4	7.4	7.3	7.2	7.2	7.3	7.1	7.2	7.3	7.2	7.2
18	7.5	7.3	7.4	7.3	7.1	7.2	7.3	7.2	7.3	7.6	7.3	7.3
19	7.4	7.3	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.4	7.4	7.4
20	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3	8.1	7.4	7.6
21	7.3	7.2	7.3	7.4	7.4	7.4	8.1	7.3	7.3	7.5	7.4	7.5
22	7.4	7.3	7.3	7.5	7.4	7.4	7.4	7.3	7.4	7.5	7.3	7.4
23	7.4	7.3	7.4	7.4	7.3	7.4	7.4	7.3	7.3	7.5	7.3	7.4
24	7.4	7.4	7.4	7.4	7.3	7.4	7.3	7.1	7.2	7.6	7.5	7.5
25	7.4	7.4	7.4	7.5	7.4	7.4	7.3	7.2	7.3	7.5	7.5	7.5
26	7.4	7.4	7.4	7.7	7.4	7.6	7.3	7.2	7.3	7.5	7.5	7.5
27	7.5	7.4	7.5	7.6	7.5	7.5	7.4	7.2	7.3	7.6	7.5	7.5
28	7.6	7.4	7.5	7.7	7.4	7.6	7.4	7.3	7.3	7.5	7.4	7.5
29	7.7	7.5	7.6	7.8	7.4	7.6	7.4	7.3	7.4	7.6	7.4	7.5
30	7.6	7.5	7.5	7.8	7.4	7.6	7.4	7.3	7.4	7.6	7.4	7.5
31	---	---	---	7.6	7.4	7.5	7.4	7.3	7.4	---	---	---
MONTH	7.7	7.1	7.3	7.8	7.1	7.4	8.1	7.0	7.3	8.1	7.2	7.5

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	8.0	7.5	8.0	17.5	16.5	17.0
2	---	---	---	---	---	---	9.0	8.0	8.5	17.5	17.0	17.5
3	---	---	---	---	---	---	9.0	9.0	9.0	17.0	16.5	17.0
4	---	---	---	---	---	---	9.0	7.5	8.5	16.5	15.0	16.0
5	---	---	---	---	---	---	8.5	7.0	8.0	15.0	14.0	14.5
6	---	---	---	---	---	---	9.0	8.5	8.5	15.5	13.5	14.5
7	---	---	---	---	---	---	8.5	8.0	8.0	15.5	14.5	15.0
8	---	---	---	---	---	---	8.5	7.5	8.0	17.0	15.0	16.0
9	---	---	---	---	---	---	9.5	7.5	8.5	17.5	16.5	17.0
10	---	---	---	---	---	---	10.0	9.0	9.5	17.5	17.0	17.5
11	---	---	---	---	---	---	10.5	9.5	10.0	16.5	13.5	14.5
12	---	---	---	---	---	---	9.5	8.5	9.0	13.5	12.0	12.5
13	---	---	---	---	---	---	9.5	8.0	9.0	13.5	12.5	13.0
14	---	---	---	---	---	---	10.0	9.0	9.5	15.0	13.0	14.0
15	---	---	---	---	---	---	11.0	9.5	10.0	16.5	15.0	15.5
16	---	---	---	---	---	---	12.5	10.5	11.5	16.0	15.5	15.5
17	---	---	---	---	---	---	12.5	11.5	12.0	---	---	---
18	---	---	---	---	---	---	11.5	10.5	11.0	---	---	---
19	---	---	---	---	---	---	12.0	10.0	11.0	---	---	---
20	---	---	---	---	---	---	13.0	11.5	12.0	---	---	---
21	---	---	---	---	---	---	13.0	13.0	13.0	14.5	13.0	14.0
22	---	---	---	---	---	---	14.0	12.5	13.0	14.0	12.5	13.5
23	---	---	---	---	---	---	16.0	13.5	14.5	14.5	14.0	14.0
24	---	---	---	---	---	---	16.5	15.5	16.0	15.0	13.5	14.5
25	---	---	---	---	---	---	16.0	15.0	15.5	16.5	14.5	15.5
26	---	---	---	---	---	---	18.0	16.0	16.5	16.5	15.5	16.0
27	---	---	---	---	---	---	20.0	18.0	18.5	17.0	15.0	16.0
28	---	---	---	---	---	---	21.0	19.5	20.5	18.5	16.5	17.5
29	---	---	---	---	---	---	21.0	18.5	20.0	18.5	15.5	17.5
30	---	---	---	---	---	---	18.5	17.0	17.5	15.5	14.5	15.0
31	---	---	---	---	---	---	---	---	---	15.5	14.5	15.0
MONTH	---	---	---	---	---	---	21.0	7.0	11.8	18.5	12.0	15.4

## LEHIGH RIVER BASIN

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01454720 LEHIGH RIVER AT EASTON, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.0	15.0	16.0	25.5	24.5	25.0	25.0	24.0	24.5	23.0	22.0	22.5
2	18.5	16.5	17.5	24.5	23.5	24.0	25.0	23.5	24.0	23.5	22.5	23.0
3	19.5	18.5	19.0	23.5	22.5	23.0	25.5	23.5	24.5	23.0	23.0	23.0
4	19.5	18.5	19.0	24.5	23.0	23.5	26.0	24.0	25.0	23.0	22.0	22.5
5	18.0	17.0	17.5	25.0	24.5	25.0	25.0	23.5	24.5	22.0	21.5	22.0
6	19.0	17.0	18.0	---	---	---	23.5	22.5	23.0	22.0	21.0	21.5
7	20.0	18.5	19.0	---	---	---	23.0	22.0	22.5	22.5	21.5	22.0
8	20.0	19.0	19.5	---	---	---	23.5	22.0	22.5	23.0	22.0	22.5
9	19.5	18.5	19.0	---	---	---	23.0	22.5	22.5	22.0	20.0	21.0
10	19.5	18.5	19.0	25.0	24.5	25.0	22.5	21.5	22.0	20.5	19.5	20.0
11	19.0	18.0	19.0	24.5	23.0	24.0	22.0	21.0	21.5	21.5	20.0	20.5
12	19.0	17.5	18.0	23.0	20.5	22.0	23.0	21.5	22.5	22.5	21.0	21.5
13	19.5	18.0	19.0	20.0	18.0	18.5	23.5	22.5	23.0	23.0	22.0	22.5
14	19.5	19.0	19.0	18.5	18.0	18.0	23.5	22.0	23.0	22.5	22.0	22.5
15	19.0	18.5	19.0	20.5	18.5	19.5	22.0	21.0	21.5	22.5	21.5	22.0
16	20.5	19.0	19.5	22.5	20.5	21.5	22.5	21.0	21.5	21.5	19.5	20.5
17	22.5	20.5	21.0	23.0	21.5	22.5	23.5	22.0	22.5	19.5	18.0	18.5
18	23.0	22.5	22.5	24.0	22.5	23.0	24.5	23.0	23.5	18.0	16.5	17.0
19	23.0	22.0	22.5	25.5	23.5	24.5	24.0	23.5	24.0	17.0	16.0	16.5
20	22.5	21.5	22.0	25.5	24.5	25.0	23.5	20.5	22.0	17.0	16.0	16.5
21	21.5	20.5	21.0	25.5	25.0	25.0	20.5	18.5	19.5	17.0	16.0	16.5
22	23.0	21.0	22.0	25.0	24.5	25.0	18.5	18.0	18.5	17.0	16.5	16.5
23	23.0	22.5	23.0	25.0	24.5	24.5	18.5	18.5	18.5	16.5	15.5	16.0
24	23.0	22.0	22.5	25.0	24.0	24.5	19.5	18.5	19.0	15.5	15.0	15.5
25	22.0	21.5	21.5	25.0	24.5	25.0	21.5	19.5	20.5	15.5	14.5	15.0
26	21.5	20.5	21.0	25.5	24.5	25.0	22.5	21.0	22.0	15.5	15.0	15.5
27	23.0	21.5	22.0	25.5	25.0	25.0	23.5	22.0	22.5	17.0	15.5	16.0
28	24.0	23.0	23.5	26.0	24.5	25.0	23.5	22.5	23.0	17.5	16.5	16.5
29	25.0	23.5	24.0	26.0	25.0	25.5	23.5	23.0	23.5	18.5	17.0	17.5
30	25.5	24.5	25.0	26.0	25.0	25.5	23.5	22.5	23.0	19.0	18.0	18.5
31	---	---	---	26.0	25.0	25.5	23.0	22.0	22.5	---	---	---
MONTH	25.5	15.0	20.3	26.0	18.0	23.7	26.0	18.0	22.3	23.5	14.5	19.4

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	11.6	11.2	11.4	10.2	9.0	9.4
2	---	---	---	---	---	---	11.7	11.2	11.4	10.2	8.8	9.3
3	---	---	---	---	---	---	11.1	10.7	10.9	10.5	9.0	9.5
4	---	---	---	---	---	---	11.4	10.9	11.1	9.6	9.0	9.2
5	---	---	---	---	---	---	11.8	11.4	11.6	9.5	9.0	9.3
6	---	---	---	---	---	---	11.8	11.4	11.6	10.0	9.4	9.6
7	---	---	---	---	---	---	12.0	11.5	11.7	9.8	9.4	9.6
8	---	---	---	---	---	---	12.1	11.8	11.9	9.9	9.2	9.6
9	---	---	---	---	---	---	12.1	11.8	12.0	9.5	8.9	9.3
10	---	---	---	---	---	---	11.9	11.3	11.5	8.9	8.4	8.7
11	---	---	---	---	---	---	11.2	10.8	11.0	10.4	8.7	9.6
12	---	---	---	---	---	---	11.9	11.2	11.6	11.0	10.4	10.8
13	---	---	---	---	---	---	12.1	11.7	11.9	10.7	10.3	10.4
14	---	---	---	---	---	---	11.9	11.4	11.7	10.3	9.8	10.2
15	---	---	---	---	---	---	11.6	11.0	11.3	9.8	9.6	9.7
16	---	---	---	---	---	---	11.2	10.6	11.0	9.7	8.9	9.4
17	---	---	---	---	---	---	10.7	10.2	10.4	---	---	---
18	---	---	---	---	---	---	11.8	10.5	11.1	---	---	---
19	---	---	---	---	---	---	11.9	11.1	11.5	---	---	---
20	---	---	---	---	---	---	11.5	10.7	11.1	---	---	---
21	---	---	---	---	---	---	10.7	10.0	10.4	10.8	10.4	10.5
22	---	---	---	---	---	---	11.3	10.1	10.6	10.8	10.5	10.8
23	---	---	---	---	---	---	11.0	9.7	10.3	10.5	10.1	10.3
24	---	---	---	---	---	---	10.7	9.3	9.9	10.4	10.1	10.2
25	---	---	---	---	---	---	10.6	9.2	9.7	10.2	9.7	10.0
26	---	---	---	---	---	---	10.7	9.2	9.8	9.8	9.5	9.6
27	---	---	---	---	---	---	10.3	8.6	9.3	9.9	9.5	9.7
28	---	---	---	---	---	---	10.2	8.2	8.9	9.5	9.1	9.3
29	---	---	---	---	---	---	8.9	7.9	8.3	9.3	8.6	9.0
30	---	---	---	---	---	---	9.7	8.2	8.8	9.9	9.2	9.7
31	---	---	---	---	---	---	---	---	---	9.8	9.6	9.7
MONTH	---	---	---	---	---	---	12.1	7.9	10.8	11.0	8.4	9.7

## LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	9.9	9.4	9.7	8.5	7.3	7.8	9.1	7.3	8.0	8.9	8.3	8.6
2	9.7	9.3	9.5	8.8	7.6	8.0	9.5	7.8	8.5	9.1	8.2	8.5
3	9.3	9.0	9.1	8.9	8.2	8.5	9.6	7.9	8.6	8.9	8.1	8.4
4	9.0	8.8	8.9	8.9	8.0	8.4	9.8	7.7	8.6	9.2	8.2	8.6
5	9.6	9.1	9.3	8.3	7.7	7.9	8.4	7.5	7.8	8.8	8.3	8.5
6	9.5	9.1	9.3	---	---	---	8.1	7.4	7.8	8.9	8.1	8.4
7	9.3	8.9	9.1	---	---	---	8.1	7.7	7.9	8.8	7.7	8.2
8	9.1	8.8	9.0	---	---	---	8.5	8.1	8.3	---	---	---
9	9.0	8.5	8.7	---	---	---	8.5	8.1	8.2	---	---	---
10	8.9	8.8	8.8	8.6	7.9	8.3	8.3	7.8	8.0	---	---	---
11	9.1	8.7	8.9	8.0	7.3	7.5	8.2	7.8	8.0	---	---	---
12	9.6	9.0	9.3	8.2	7.6	7.9	8.3	7.9	8.0	---	---	---
13	9.3	8.9	9.1	9.4	8.4	9.1	8.2	7.8	8.0	---	---	---
14	9.1	8.8	9.0	9.4	9.2	9.4	8.0	7.5	7.8	8.6	7.5	8.1
15	9.2	8.8	9.0	9.2	9.0	9.1	8.2	8.0	8.1	---	---	---
16	9.2	8.7	8.9	8.9	8.7	8.8	8.1	7.9	8.0	---	---	---
17	9.1	8.4	8.8	8.8	8.5	8.7	8.0	7.8	7.9	---	---	---
18	8.9	7.9	8.3	8.8	8.3	8.5	7.9	7.6	7.8	---	---	---
19	8.2	7.8	8.0	8.5	7.9	8.2	7.7	7.4	7.6	---	---	---
20	8.3	7.9	8.1	8.5	7.8	8.1	8.0	7.5	7.7	---	---	---
21	8.7	8.3	8.5	8.2	7.6	7.9	8.6	8.0	8.3	---	---	---
22	8.8	8.2	8.5	8.5	7.6	8.0	8.9	8.6	8.7	---	---	---
23	8.5	7.9	8.1	8.4	7.8	8.0	8.8	8.6	8.7	---	---	---
24	8.5	8.0	8.2	8.5	7.8	8.1	8.9	8.2	8.7	---	---	---
25	8.9	8.3	8.6	9.1	7.8	8.3	8.9	8.6	8.7	---	---	---
26	9.2	8.6	8.8	9.2	8.0	8.4	8.6	8.3	8.5	---	---	---
27	9.2	8.4	8.7	8.8	7.7	8.2	8.4	8.2	8.3	---	---	---
28	9.2	8.1	8.5	9.2	7.7	8.3	8.4	8.0	8.2	---	---	---
29	9.2	7.8	8.3	9.3	7.5	8.2	8.4	8.0	8.1	---	---	---
30	8.6	7.7	8.0	9.3	7.4	8.2	8.5	7.9	8.2	---	---	---
31	---	---	---	8.7	7.3	7.9	8.8	8.2	8.4	---	---	---
MONTH	9.9	7.7	8.8	9.4	7.3	8.3	9.8	7.3	8.2	9.2	7.5	8.4

# LEHIGH RIVER BASIN

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## LAKES AND RESERVOIRS IN LEHIGH RIVER BASIN

01447780 FRANCIS E. WALTER RESERVOIR (formerly published as Bear Creek Reservoir).--Lat 41°06'45", long 75°43'15", Luzerne County, Hydrologic Unit 02040106, at dam on Lehigh River, 2,200 ft downstream from Bear Creek and 5 mi northeast of White Haven. DRAINAGE AREA, 289 mi<sup>2</sup>. PERIOD OF RECORD, February 1961 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Reservoir formed by an earthfill embankment covered with a rock shell, with concrete spillway at elevation 1,450.0 ft. Storage began Feb. 17, 1961; water in reservoir first reached conservation pool elevation in June 1961. Total capacity at elevation 1,450.0 ft is 110,700 acre-ft of which 108,700 acre-ft is controlled storage above elevation 1,300.0 ft, conservation pool. Dead storage is 2,000 acre-ft. Reservoir is used for flood control and recreation. Flow regulated by three gates and low-flow by-pass system. Records furnished by the Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 62,100 acre-ft Sept. 28, 1985, elevation, 1,417.08 ft; minimum (after establishment of conservation pool), 980 acre-ft July 6, 1982, elevation, 1,287.70 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 8,890 acre-ft, May. 18, elevation, 1,340.27 ft; minimum, 1,470 acre-ft, Nov.20, elevation, 1,294.60 ft.

01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, Hydrologic Unit 02040106, at dam on Wild Creek, 0.7 mi upstream from Hatchery, 2.6 mi upstream from Wild Creek Dam, 4.4 mi upstream from mouth, and 10 mi northeast of Palmerton. DRAINAGE AREA, 16.5 mi<sup>2</sup>. PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

Reservoir formed by an earthfill dam, with ungated concrete spillway at elevation 1,000.00 ft. Storage began in October 1958. Capacity at elevation 1,000.00 ft is 19,980 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is done by valves on pipe through dam. Records furnished by city of Bethlehem. Figures given herein include diversion, since October 1969, from Tunkhannock Creek basin in to Wild Creek basin.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 20,800 acre-ft, Apr. 16, 1983, elevation, 1,001.69 ft; minimum, 176 acre-ft, Oct. 6, 1965, elevation, 902.40 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 20,530 acre-ft, May. 17, elevation, 1,000.94 ft; minimum, 14,850 acre-ft, Jan. 23, elevation, 988.02 ft.

01449700 WILD CREEK RESERVOIR.--Lat 40°53'50", long 75°33'50", Carbon County, Hydrologic Unit 02040106, at dam on Wild Creek, 1.6 mi upstream from mouth, 2.4 mi south of Hatchery, and 7.5 mi northeast of Palmerton. DRAINAGE AREA, 22.2 mi<sup>2</sup>. PERIOD OF RECORD, January 1941 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

Reservoir formed by earthfill dam, with concrete ungated spillway at elevation 820.00 ft. Storage began January 27, 1941; water in reservoir first reached minimum pool elevation in February 1941. Total capacity at elevation 820.00 ft is 12,500 acre-ft of which 12,000 acre-ft is controlled storage. Reservoir is used for municipal water supply. Figures given herein represent usable contents. Regulation is accomplished by valves on pipe through dam. Records furnished by city of Bethlehem. Since October 1969 the basin upstream has received diversion from Tunkhannock Creek basin.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 12,880 acre-ft, May 23, 1942, elevation, 822.93 ft; minimum (after first filling), 2,680 acre-ft, Nov. 15, 1966, elevation, 774.10 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 12,290 acre-ft, May 19, elevation, 820.96 ft; minimum, 11,190 acre-ft, Nov. 25, elevation, 816.79 ft.

01449790 BELTZVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.45 mi upstream from gaging station on Pohopoco Creek, 0.55 mi upstream from Sawmill Run and 2.3 mi northeast of Parryville. DRAINAGE AREA, 96.3 mi<sup>2</sup>. PERIOD OF RECORD, February 1971 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earth and rockfill dam with ungated, partially lined spillway at elevation 651.00 ft. Storage began Feb. 8, 1971. Capacity at elevation 651.00 ft is 68,300 acre-ft. Ordinary minimum (conservation) pool elevation is 628.00 ft, capacity, 41,250 acre-ft. Dead storage is 1,390 acre-ft. Reservoir is used for recreation, flood control, low flow augmentation and water supply. Figures given herein represent total contents. Regulation is accomplished by a multi-level water-quality outlet system, and two flood-control gates. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 49,390 acre-ft, Jan. 6, 1976, elevation, 629.19 ft minimum, 15,110 acre-ft, Mar. 31, 1983, elevation, 588.79 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 44,400 acre-ft, May 18, elevation, 631.26 ft; minimum, 40,800 acre-ft, Feb. 4, May 23, elevation 627.56

## LEHIGH RIVER BASIN

## LAKES AND RESERVOIRS IN LEHIGH RIVER BASIN--Continued

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

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)
<u>01447780 Francis E. Walter Reservoir</u>				<u>01449400 Penn Forest Reservoir</u>		
Sept. 30 .....	1,307.41	2,780	--	993.63	17,160	--
Oct. 31 .....	1,306.99	2,720	- 1.0	991.33	16,170	- 16.1
Nov. 30 .....	1,299.64	1,960	- 12.8	992.86	16,800	+ 10.6
Dec. 31 .....	1,302.82	2,270	+ 5.0	989.39	15,390	- 22.9
CAL YR 1989 .....	--	--	+ 0.5	--	--	+ 0.9
Jan. 31 .....	1,305.86	2,600	+ 5.4	990.92	16,010	+ 10.1
Feb. 28 .....	1,299.96	2,000	- 10.8	998.98	19,500	+ 62.9
Mar. 31 .....	1,300.08	2,010	+ 0.2	1,000.25	20,120	+ 10.1
Apr. 30 .....	1,300.11	2,010	0	1,000.17	20,080	- 0.7
May 31 .....	1,307.76	2,810	+ 13.4	1,000.42	20,220	+ 2.3
June 30 .....	1,301.58	2,150	- 11.1	1,000.10	20,040	- 3.0
July 31 .....	1,300.64	2,060	- 1.5	998.50	19,280	- 12.4
Aug. 31 .....	1,299.56	1,950	- 1.8	1,000.04	20,000	+ 11.7
Sept. 30 .....	1,306.69	2,690	+ 12.4	992.27	16,560	- 57.8
WTR YR 1990 .....	--	--	- 0.1	--	--	- 0.8
<u>01449700 Wild Creek Reservoir</u>				<u>01449790 Beltzville Lake</u>		
Sept. 30 .....	817.54	11,400	--	628.06	41,300	--
Oct. 31 .....	818.56	11,680	+ 4.6	628.06	41,300	0
Nov. 30 .....	816.88	11,220	- 7.7	628.05	41,290	- 0.2
Dec. 31 .....	818.60	11,690	+ 7.6	628.10	41,330	+ 0.7
CAL YR 1989 .....	--	--	+ 0.6	--	--	+ 0.1
Jan. 31 .....	819.70	11,940	+ 4.1	628.94	42,150	+ 13.3
Feb. 28 .....	819.96	11,990	+ 0.9	628.02	41,260	- 16.0
Mar. 31 .....	820.19	12,060	+ 1.1	628.08	41,210	+ 0.8
Apr. 30 .....	820.09	12,030	- 0.5	628.09	41,320	+ 0.2
May 31 .....	820.48	12,140	+ 1.8	627.85	41,090	- 3.7
June 30 .....	819.29	11,860	- 4.7	628.02	41,260	+ 2.9
July 31 .....	818.76	11,730	- 2.1	628.06	41,300	+ 0.7
Aug. 31 .....	818.72	11,720	- 0.2	628.00	41,240	- 1.0
Sept. 30 .....	818.48	11,660	- 1.0	628.00	41,240	0
WTR YR 1990 .....	--	--	+ 0.4	--	--	- 0.1



## TOHICKON CREEK BASIN

01459500 TOHICKON CREEK NEAR PIPERSVILLE, PA

LOCATION.--Lat 40°26'01", long 75°07'01", Bucks County, Hydrologic Unit 02040105, on right bank at highway bridge, 1.5 mi northeast of Pipersville, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--97.4 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1935 to current year.

REVISED RECORDS.--WDR PA-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 258.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated record, which are poor. Regulated since December 1973 by Nockamixon Lake about 6.2 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--55 years, 148 ft<sup>3</sup>/s, 20.67 in/yr, adjusted for storage since December 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft<sup>3</sup>/s, July 7, 1984, gage height, 11.32 ft from rating curve extended above 3,600 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 10.48 ft; minimum, 0.05 ft<sup>3</sup>/s, Sept. 24, 29, Oct. 6, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,640 ft<sup>3</sup>/s, May 30, gage height, 7.21; minimum daily discharge 3.7 ft<sup>3</sup>/s, Sept. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	87	93	584	416	86	52	65	344	25	6.2	22
2	241	66	71	e230	280	79	121	56	184	21	4.9	19
3	364	65	e58	e100	222	79	607	41	115	17	4.1	16
4	220	389	e47	e65	363	84	658	36	82	15	4.5	13
5	124	344	e40	e77	444	67	405	670	53	21	4.8	11
6	82	17	36	89	299	66	254	458	40	24	13	9.8
7	62	11	e35	71	214	61	212	234	36	21	141	9.0
8	45	11	e33	65	168	52	219	137	30	18	122	8.0
9	36	113	e32	82	141	49	167	91	202	16	67	6.6
10	28	81	e32	180	372	54	131	357	231	15	45	5.9
11	29	109	e31	250	495	62	189	966	126	14	59	5.4
12	27	104	e29	258	335	68	203	432	67	14	47	5.0
13	26	83	e29	177	245	70	147	495	43	145	35	4.5
14	24	74	e28	112	190	63	113	516	35	181	50	4.5
15	22	74	e28	86	161	56	363	317	374	122	35	4.9
16	21	124	e28	77	173	53	378	197	327	113	26	5.0
17	124	201	e28	99	178	61	250	193	176	70	21	5.8
18	181	155	e28	195	128	189	185	154	555	45	18	5.1
19	743	107	e27	249	110	196	126	106	1230	33	51	4.4
20	2110	83	27	193	95	242	98	71	547	25	36	4.0
21	1320	101	27	315	71	263	99	58	270	21	24	3.7
22	491	61	e27	447	72	178	109	53	158	19	24	7.9
23	271	69	e27	344	152	131	96	46	104	19	28	10
24	175	61	e27	255	462	276	76	39	70	17	35	8.9
25	125	54	e27	601	349	341	69	33	48	13	40	7.7
26	96	69	e27	2560	183	19	69	34	37	11	61	7.0
27	78	96	e26	1080	123	12	60	40	30	9.6	49	6.6
28	65	166	e26	459	102	10	52	38	26	8.4	72	6.3
29	59	174	e26	437	---	9.7	44	1060	23	7.4	55	6.0
30	53	131	e27	2630	---	17	43	3710	28	6.7	39	5.9
31	67	---	e27	933	---	35	---	941	---	6.3	27	---
TOTAL	7368	3280	1054	13300	6543	3028.7	5595	11644	5591	1093.4	1244.5	238.9
MEAN	238	109	34.0	429	234	97.7	186	376	186	35.3	40.1	7.96
MAX	2110	389	93	2630	495	341	658	3710	1230	181	141	22
MIN	21	11	26	65	71	9.7	43	33	23	6.3	4.1	3.7
MEAN#	229	109	34.0	433	229	82.7	199	384	177	31.9	40.1	3.26
CFSM#	2.35	1.12	.35	4.45	2.35	.85	2.04	3.94	1.82	.33	.41	.03
IN.#	2.71	1.25	.40	5.13	2.45	.98	2.28	4.55	2.03	.38	.48	.04

CAL YR 1989 TOTAL 78472.9 MEAN 215 MAX 6230 MIN 4.4 MEAN# 215 CFSM# 2.21 IN.# 29.97  
WTR YR 1990 TOTAL 59980.5 MEAN 164 MAX 3710 MIN 3.7 MEAN# 162 CFSM# 1.66 IN.# 22.59

# Adjusted for change in contents in Nockamixon Lake.

e Estimated.

## TOHICKON CREEK BASIN

## RESERVOIR IN TOHICKON CREEK BASIN

01459350 NOCKAMIXON RESERVOIR.--Lat 40°28'13", long 75°11'10", Bucks County, Hydrologic Unit 02040105, at dam on Tohickon Creek, 6.2 mi upstream from gaging station on Tohickon Creek, 2.9 mi upstream from Mink Run, 1.3 mi east of Ottsville. DRAINAGE AREA, 73.3 mi<sup>2</sup>. PERIOD OF RECORD, December 1973 to current year. GAGE, water stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Resources).

Reservoir formed by earthfill dam with concrete spillway at elevation 395.0 ft. Storage began December 1973. Total capacity 66,500 acre-ft at elevation 410 ft. Reservoir is used primarily for recreation, but can be used for water supply and flood control. Records furnished by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 44,380 acre-ft, Jan. 20, 1979, elevation 397.85 ft; minimum (after first filling) 15,900 acre-ft, around Dec. 31, 1975, elevation 372.78 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 43,100 acre-ft, May 21, elevation 397.00 ft; minimum, 39,280 acre-ft, Nov. 5, elevation 394.35 ft.

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

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)
<u>01459350 Nockamixon Reservoir</u>						
Sept. 30 .....	395.60	41,040	--			
Oct. 31 .....	395.20	40,480	- 9.1			
Nov. 30 .....	395.20	40,480	0			
Dec. 31 .....	395.20	40,480	0			
CAL YR 1989 .....	--	--	0			
Jan. 31 .....	395.40	40,750	+ 4.4			
Feb. 28 .....	395.20	40,480	- 4.9			
Mar. 31 .....	394.55	39,560	- 15.0			
Apr. 30 .....	395.10	40,340	+ 13.1			
May 31 .....	395.45	40,820	+ 7.8			
June 30 .....	395.05	40,270	- 9.2			
July 31 .....	394.90	40,060	- 3.4			
Aug. 31 .....	394.90	40,060	0			
Sept. 30 .....	394.70	39,780	- 4.7			
WTR YR 1990 .....	--	--	- 1.7			

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ  
(National stream quality accounting network and Radiochemical program station)

LOCATION.--Lat 40°13'18", long 74°46'42", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft upstream from Calhoun Street Bridge at Trenton, 0.5 mi upstream from Assumpink Creek, and at mile 134.5.  
DRAINAGE AREA.--6,780 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1913 to current year. October 1912 to February 1913 monthly discharge only, published in WSP 1302. Gage-height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 951: Drainage area. WSP 1302: 1913-20. WSP 1382: 1924, 1928.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1965, at datum 7.77 ft higher. Feb. 24, 1913 to Oct. 2, 1928, nonrecording gage on downstream side of highway bridge at site 450 ft downstream.

REMARKS.--Records excellent except for estimated daily discharges, which are good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, Neversink, Wild Creek, and Merrill Creek Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs. Diversion to Bradshaw Reservoir and to Delaware and Raritan Canal (see Delaware River basin, diversions). Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply (see Delaware River basin, diversions). Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above National Geodetic Vertical Datum of 1929, discharge estimated, 295,000 ft<sup>3</sup>/s. Maximum elevation since 1903, 30.6 ft above National Geodetic Vertical Datum of 1929, Mar. 8, 1904, from floodmark (ice jam).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8820	11500	9210	e6050	38300	14600	12800	7160	23400	5830	4580	8770
2	8390	11600	8490	e6500	30400	14000	12700	7140	18100	6720	4950	7470
3	10200	12300	7540	e5800	27200	13500	15000	6780	14900	7470	4520	6250
4	9790	12300	6490	e6000	30200	13400	21200	6450	12600	7190	4400	5970
5	8840	11400	5410	6460	30800	12800	26900	9790	11600	6460	4140	5610
6	8010	10900	6820	6200	29200	11900	24000	12000	11600	5790	5520	6110
7	7250	10600	6460	5840	24800	11300	20900	11100	10400	5150	11900	5930
8	6830	10300	6800	5310	22500	10700	18900	10200	10400	4850	15100	5650
9	6170	10800	6460	5320	20500	10100	17100	9240	12700	4560	12100	5440
10	5450	13200	5670	5720	21100	10200	15500	9620	11700	4600	10200	4810
11	5540	13700	5390	8070	25200	9970	14800	23200	9740	4610	10500	4230
12	5590	13200	5350	7650	27300	9120	16700	29600	8640	4810	11300	4420
13	5520	11800	5990	6510	24500	9550	21000	29400	8730	10200	11800	5060
14	5480	10600	5970	5760	21700	11200	19100	27400	8060	15900	11700	4830
15	5140	10700	5220	5190	19600	12100	18900	33400	9280	14000	14500	4890
16	4910	10700	4670	5100	19100	12200	18100	31100	8780	11200	11900	7760
17	5100	13800	e4200	5440	19500	12100	16500	44900	7400	10800	10100	6570
18	9260	19800	4270	6230	23200	15000	15200	47200	6740	11600	8190	6280
19	11900	17800	e4050	7260	22300	17600	13800	41900	11300	9640	7230	5810
20	32700	15000	e4550	8700	19800	19100	12700	34800	10700	8430	7150	4900
21	62400	13400	e4450	11100	17900	20400	12100	29300	9940	7600	6360	5140
22	64100	12200	e4050	13100	16300	23100	12100	27500	8390	7510	6680	5220
23	40300	11900	e4150	12300	16300	21300	11400	25500	7410	7220	7500	5980
24	29900	10800	e4850	11800	20500	19700	10800	22400	7360	8130	9180	5360
25	24300	9940	e4400	13000	24000	18900	10400	19800	6480	8000	11300	4920
26	19500	9780	e4350	24000	21200	17500	9550	17500	5920	6580	10800	4640
27	16600	9550	e4350	35000	17500	16200	9260	15800	6020	5890	10400	4380
28	14800	9880	e4600	33300	15900	14700	9260	14200	5670	5590	9590	4570
29	13400	9770	e5000	25500	---	13500	8580	15000	5550	5170	9430	4550
30	12200	9520	e4800	42700	---	12700	7360	34000	5640	4650	9760	4600
31	11300	---	e4800	46900	---	12900	---	29500	---	4250	9660	---
MEAN	15470	11960	5445	12700	23090	14240	15090	22030	9838	7432	9111	5537
MAX	64100	19800	9210	46900	38300	23100	26900	47200	23400	15900	15100	8770
MIN	4910	9520	4050	5100	15900	9120	7360	6450	5550	4250	4140	4230
STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)												
MEAN	6810	10390	12290	12170	12920	20710	22280	14360	9162	7153	6004	5854
MAX	28710	27340	31070	34950	27550	60840	52680	31690	33460	25720	30290	22490
(WY)	1956	1928	1974	1979	1951	1936	1940	1989	1972	1928	1955	1933
MIN	1632	1868	2037	2539	3500	7715	6828	5209	2572	1548	1808	1762
(WY)	1942	1915	1923	1981	1920	1981	1985	1965	1965	1965	1965	1932
SUMMARY STATISTICS												
				FOR 1990 WATER YEAR					FOR PERIOD OF RECORD			
AVERAGE FLOW					12600				11660 Unadjusted			
HIGHEST ANNUAL MEAN									19810 1928			
LOWEST ANNUAL MEAN									4708 1965			
HIGHEST DAILY MEAN					64100 Oct 22				279000a Aug 20 1955			
LOWEST DAILY MEAN					4050 Dec 19				1240 Oct 31 1914			
INSTANTANEOUS PEAK FLOW					76700 Oct 21				329000a Aug 20 1955			
INSTANTANEOUS PEAK STAGE					16.45 Oct 21				28.60b Aug 20 1955			
INSTANTANEOUS LOW FLOW					3710 Dec 19				1180 Oct 31 1963			
10 PERCENTILE					24400				24600			
50 PERCENTILE					10200				7890			
95 PERCENTILE					4560				2320			

a From rating curve extended above 230,000 ft<sup>3</sup>/s.

b From high-water mark in gage house.

e Estimated.

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1968 to September 1978, May 1979 to current year.

pH: June 1968 to September 1978, May to September 1979, February 1980 to August 1982, April 1983 to current year.

WATER TEMPERATURE: October 1944 to September 1978, May 1979 to current year.

DISSOLVED OXYGEN: October 1962 to September 1978, May 1979 to current year.

SUSPENDED-SEDIMENT DISCHARGE: Water years 1949 to 1981.

INSTRUMENTATION.--Temperature recorder since October 1944, water-quality monitor since October 1962. Monitor probes are located within raw water intake of Trenton Filtration Plant.

REMARKS.--Missing continuous water-quality records are the result of malfunctions of the instrument. Unpublished records of suspended sediment discharge for the period October 1, 1981 to March 31, 1982 are available in files of the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 400 microsiemens, Jan. 24, 1959; minimum, 50 microsiemens, Mar. 19, 1945.

pH: Maximum, 10.3, August 9, 10, 1983; minimum, 5.3, June 22, 1972.

WATER TEMPERATURE: Maximum, 34.0°C, Aug. 6; minimum, 0.0°C on many days during the winter months.

DISSOLVED OXYGEN: Maximum, 20.0 mg/L, Feb. 11, 1989; minimum, 4.0 mg/L, Nov. 9, 1972.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 280 microsiemens, Jan. 3; minimum, 92 microsiemens, Oct. 22.

pH: Maximum, 9.6, Mar. 13, 14; minimum, 6.8, Oct. 22.

WATER TEMPERATURE: Maximum, 29.5°C, July 30; minimum, 0.0°C on many days during the winter months.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Mar. 12; minimum, 6.7 mg/L, Aug. 6-8.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)
NOV 1989												
16...	1200	11000	175	7.9	12.0	1.2	10.6	100	0.9	K330	K54	61
FEB 1990												
13...	1215	24100	131	7.6	4.0	2.6	--	--	1.6	30	14	42
MAY												
16...	1200	31500	95	7.3	15.0	13	8.9	88	1.3	--	360	32
AUG												
23...	1045	7300	201	7.9	20.5	3.6	8.5	94	0.7	K100	480	64

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE IT-FLD (MG/L AS HCO3)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3)	ALKA- LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 1989												
16...	16	5.0	8.2	1.2	50	41	42	17	11	0.1	3.7	91
FEB 1990												
13...	11	3.4	6.5	1.2	27	22	23	13	10	0.1	4.4	67
MAY												
16...	8.8	2.4	4.9	0.7	--	--	*18	11	8.0	<0.1	3.5	53
AUG												
23...	15	6.4	9.6	1.5	--	--	*50	21	14	<0.1	4.9	108

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 1989											
16...	3	0.01	89	0.01	0.94	0.02	0.03	0.4	0.04	0.02	0.02
FEB 1990											
13...	9	--	88	<0.01	0.88	0.06	0.05	0.4	0.23	0.13	0.02
MAY											
16...	63	--	93	0.01	0.60	0.05	0.04	0.6	0.10	0.02	0.02
AUG											
23...	12	--	91	0.02	1.20	0.07	0.01	0.5	0.07	0.05	0.03

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

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

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 1989 16...	1200	20	<1	24	<0.5	<1.0	<1	<3	1	30
FEB 1990 13...	1215	40	<1	27	<0.5	1.0	<5	<1	3	27
MAY 16...	1200	20	<1	23	<0.5	1.0	<1	<3	2	38
AUG 23...	1045	50	<1	25	<0.5	<1.0	<1	<3	3	25

DATE	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)
NOV 1989 16...	<1	<4	10	0.1	<10	1	<1	<1.0	63	<6
FEB 1990 13...	<1	<4	17	<0.1	10	1	<1	<1.0	45	<6
MAY 16...	1	<4	6	<0.1	<10	1	<1	<1.0	36	<6
AUG 23...	<1	<4	7	<0.1	<10	1	<1	<1.0	81	<6

DATE	ZINC, DIS- SOLVED (UG/L AS ZN)	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 NATURAL DIS- SOLVED (UG/L AS U)
NOV 1989 16...	10	--	--	--	--	--	--	--	--
FEB 1990 13...	12	--	--	--	--	--	--	--	--
MAY 16...	10	<0.4	2.3	1.5	2.4	1.4	2.3	0.11	0.04
AUG 23...	13	<0.4	<0.4	2.1	0.5	1.7	0.4	0.14	0.16

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	181	175	178	174	172	173	249	211	223
2	---	---	---	177	175	176	174	170	172	262	210	234
3	224	205	211	176	174	175	181	172	176	280	251	270
4	224	214	219	176	167	172	192	181	186	250	221	234
5	213	203	206	169	167	168	201	193	198	221	216	219
6	209	204	206	170	168	169	213	202	209	217	207	213
7	213	207	209	170	167	169	206	197	200	207	198	202
8	218	213	215	178	169	173	205	199	202	221	200	208
9	230	219	225	178	168	173	202	196	200	272	211	235
10	233	226	230	179	171	175	200	198	199	253	212	236
11	231	225	228	178	160	171	206	198	203	223	213	218
12	236	231	234	160	150	154	214	197	206	237	225	232
13	237	233	235	160	150	156	221	212	217	235	216	224
14	242	236	239	168	158	162	213	202	208	217	212	215
15	236	231	234	168	164	166	204	201	203	220	213	215
16	237	230	234	168	163	166	218	202	208	228	213	220
17	235	231	233	182	164	170	224	181	207	232	227	230
18	235	215	224	183	121	148	230	186	207	236	229	233
19	227	178	213	124	114	117	244	189	223	230	220	225
20	191	112	160	131	125	127	252	244	247	222	211	216
21	134	98	119	140	131	135	249	244	247	211	185	198
22	97	92	94	144	140	142	249	243	247	188	179	184
23	113	98	105	152	144	149	252	248	251	189	179	185
24	130	113	121	157	152	155	252	248	250	179	174	177
25	131	126	128	169	157	163	253	240	248	190	166	175
26	145	131	138	168	166	167	239	224	233	175	149	159
27	154	146	150	171	167	169	231	224	227	176	131	158
28	158	154	157	174	171	173	236	232	234	128	118	123
29	162	158	160	175	171	173	234	226	230	130	124	126
30	170	162	167	176	174	175	226	214	220	140	114	127
31	176	169	173	---	---	---	220	209	212	141	114	131
MONTH	242	92	189	183	114	162	253	170	214	280	114	201
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	128	115	121	---	---	---	157	153	156	188	182	184
2	129	122	127	---	---	---	156	152	155	192	186	189
3	129	124	126	157	152	155	155	149	152	192	188	190
4	128	121	125	159	155	157	159	150	153	192	188	190
5	124	119	121	157	152	155	148	124	133	190	142	170
6	126	121	124	156	152	155	124	122	124	197	166	185
7	131	125	128	163	155	160	127	124	125	180	163	171
8	136	131	133	168	162	166	130	127	129	163	162	163
9	139	134	136	170	167	169	132	129	131	165	161	163
10	142	135	138	173	169	171	137	130	135	167	146	163
11	143	137	141	176	171	174	144	137	140	170	124	147
12	135	123	127	179	174	176	145	142	145	144	111	127
13	131	123	126	180	176	179	141	119	128	110	105	107
14	130	125	127	176	166	173	121	117	119	109	103	107
15	136	127	131	165	152	160	124	119	121	108	97	103
16	142	135	138	152	150	151	128	122	127	102	95	98
17	142	140	142	153	150	152	131	128	129	119	101	109
18	141	125	133	162	152	157	137	131	135	110	103	107
19	129	123	126	163	141	153	140	137	139	113	110	111
20	131	128	129	141	134	137	142	139	141	115	110	112
21	137	130	132	141	133	137	147	142	146	120	114	118
22	143	134	137	136	123	129	151	147	150	124	119	121
23	148	138	142	127	123	125	156	151	154	121	118	120
24	152	146	149	129	127	128	154	152	153	124	118	121
25	148	133	140	130	127	128	157	152	155	130	124	127
26	133	128	131	129	127	128	161	156	159	136	131	132
27	138	132	134	131	128	130	170	159	166	143	137	140
28	145	138	143	135	131	133	172	167	169	146	144	146
29	---	---	---	140	135	138	171	163	167	147	132	143
30	---	---	---	146	140	143	181	168	173	145	118	133
31	---	---	---	153	147	150	---	---	---	145	133	139
MONTH	152	115	132	180	123	151	181	117	144	197	95	140



## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	136	131	133	221	210	217	229	218	224	171	168	170
2	146	136	141	215	202	209	230	220	227	175	170	172
3	155	147	150	202	196	199	223	217	221	179	173	175
4	167	156	163	206	188	200	220	214	217	194	180	188
5	172	167	171	188	177	182	220	213	218	201	195	198
6	175	167	173	190	180	184	218	181	204	202	196	199
7	168	166	167	203	190	198	200	179	193	205	193	201
8	179	167	174	205	195	202	197	162	180	194	192	194
9	178	159	173	206	195	200	165	160	163	197	193	196
10	176	159	170	221	201	212	165	147	161	200	193	198
11	175	173	174	225	216	221	179	132	157	211	196	202
12	182	175	179	230	213	226	204	181	195	221	210	216
13	188	181	185	216	200	209	191	165	179	223	216	222
14	186	183	185	212	166	191	176	164	170	215	206	211
15	184	161	179	163	144	151	187	151	173	213	200	208
16	198	163	184	165	147	158	151	148	149	213	209	211
17	205	195	199	173	165	170	162	151	157	214	181	200
18	207	195	204	171	155	166	170	162	166	180	176	178
19	209	154	180	156	151	154	183	171	177	185	180	183
20	201	191	197	173	155	162	188	183	185	186	184	185
21	199	191	194	177	171	174	192	187	189	199	186	193
22	191	183	187	177	172	174	202	193	198	208	194	204
23	196	188	191	184	172	176	202	196	199	207	204	205
24	204	195	199	193	186	190	199	190	197	211	204	208
25	204	194	199	189	175	181	188	170	176	205	201	203
26	205	198	201	191	181	185	185	171	181	205	202	204
27	207	205	207	195	190	194	180	167	174	213	204	209
28	211	204	209	199	194	197	171	166	169	218	213	215
29	212	204	210	203	197	201	177	171	174	220	217	219
30	216	205	212	207	199	204	179	173	176	217	213	215
31	---	---	---	218	205	210	175	172	174	---	---	---
MONTH	216	131	183	230	144	190	230	132	185	223	168	199

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	---	---	---	8.3	8.0	8.1
2	---	---	---	---	---	---	---	---	---	8.3	8.1	8.2
3	7.9	7.7	7.8	---	---	---	---	---	---	8.4	8.1	8.2
4	7.9	7.7	7.9	---	---	---	---	---	---	8.4	7.9	8.2
5	7.8	7.7	7.7	---	---	---	---	---	---	8.7	7.9	8.2
6	7.9	7.6	7.7	---	---	---	---	---	---	8.6	8.0	8.2
7	8.0	7.6	7.7	---	---	---	---	---	---	8.7	7.9	8.2
8	7.9	7.6	7.7	---	---	---	---	---	---	8.6	7.8	8.2
9	8.1	7.6	7.8	---	---	---	---	---	---	8.7	7.7	8.1
10	8.0	7.6	7.8	---	---	---	---	---	---	8.9	7.9	8.2
11	8.2	7.7	8.0	---	---	---	---	---	---	8.3	7.8	8.0
12	8.0	7.6	7.8	---	---	---	---	---	---	8.2	7.6	7.8
13	8.2	7.7	7.9	---	---	---	---	---	---	8.5	7.7	8.0
14	8.0	7.8	7.9	---	---	---	---	---	---	8.7	7.9	8.3
15	8.3	7.9	8.1	---	---	---	---	---	---	8.6	7.9	8.2
16	8.3	7.9	8.1	---	---	---	8.8	8.2	8.5	8.8	7.6	8.2
17	8.5	7.5	8.0	---	---	---	9.0	8.4	8.7	9.1	8.0	8.6
18	7.6	7.4	7.5	---	---	---	9.0	8.4	8.7	9.0	8.1	8.5
19	7.5	7.2	7.4	---	---	---	9.0	8.5	8.8	8.9	7.8	8.4
20	7.5	7.0	7.3	---	---	---	9.0	8.5	8.8	8.2	7.6	8.0
21	7.4	6.9	7.2	---	---	---	9.0	8.6	8.8	7.8	7.4	7.5
22	7.2	6.8	7.1	---	---	---	8.9	8.6	8.8	7.6	7.3	7.4
23	7.2	7.0	7.1	---	---	---	8.9	8.8	8.8	7.9	7.3	7.6
24	7.3	7.1	7.2	---	---	---	9.0	8.8	8.9	8.1	7.4	7.6
25	7.3	7.1	7.2	---	---	---	8.9	8.6	8.8	7.5	7.2	7.4
26	7.3	7.2	7.2	---	---	---	8.8	8.5	8.7	7.3	7.1	7.2
27	7.4	7.2	7.3	---	---	---	8.9	8.4	8.7	7.4	7.2	7.3
28	7.5	7.3	7.4	---	---	---	8.9	8.5	8.7	7.1	7.1	7.1
29	7.5	7.2	7.4	---	---	---	9.0	8.5	8.8	7.2	7.1	7.2
30	7.5	7.2	7.3	---	---	---	8.9	8.5	8.7	7.4	7.1	7.2
31	7.4	7.3	7.4	---	---	---	8.5	8.2	8.4	7.3	7.1	7.2
MONTH	8.5	6.8	7.6	---	---	---	---	---	---	9.1	7.1	7.9

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	7.4	7.1	7.3	---	---	---	8.7	7.8	8.2	8.8	7.4	8.0
2	7.5	7.4	7.5	---	---	---	9.1	7.7	8.4	8.7	7.5	8.1
3	7.5	7.5	7.5	8.3	7.8	8.0	8.6	7.8	8.1	8.6	7.5	8.1
4	7.5	7.5	7.5	8.5	7.9	8.2	7.8	7.6	7.7	7.9	7.4	7.6
5	7.6	7.5	7.5	8.7	8.0	8.2	7.7	7.5	7.6	7.4	7.2	7.3
6	7.5	7.5	7.5	8.5	7.9	8.1	7.7	7.4	7.6	7.8	7.3	7.5
7	7.6	7.5	7.5	8.9	8.0	8.4	8.1	7.4	7.7	8.0	7.5	7.7
8	7.7	7.5	7.6	9.0	8.1	8.5	8.6	7.5	8.0	8.0	7.5	7.7
9	7.7	7.6	7.6	9.0	7.9	8.5	8.9	7.6	8.2	7.9	7.4	7.6
10	7.6	7.6	7.6	9.1	8.1	8.5	8.9	7.7	8.3	7.5	7.2	7.4
11	7.7	7.6	7.6	9.2	8.0	8.6	8.3	7.5	7.9	---	---	---
12	7.6	7.6	7.6	9.5	8.2	8.9	8.8	7.5	8.1	---	---	---
13	7.6	7.5	7.6	9.6	8.6	9.2	8.8	7.6	8.2	---	---	---
14	7.7	7.5	7.6	9.6	8.7	9.2	8.8	7.5	8.1	---	---	---
15	7.7	7.6	7.6	9.5	8.4	9.0	7.9	7.4	7.6	---	---	---
16	7.7	7.6	7.7	9.4	8.2	8.9	9.0	7.6	8.3	---	---	---
17	7.9	7.7	7.8	9.0	7.8	8.4	8.6	7.7	8.1	---	---	---
18	7.9	7.8	7.8	8.8	7.6	8.1	9.1	7.6	8.3	---	---	---
19	7.8	7.6	7.7	8.2	7.7	7.9	9.4	7.9	8.8	---	---	---
20	7.9	7.7	7.8	7.7	7.5	7.6	9.5	8.2	9.0	---	---	---
21	8.0	7.7	7.9	8.0	7.5	7.7	9.0	8.1	8.6	---	---	---
22	8.2	7.8	7.9	8.0	7.5	7.7	9.5	7.9	8.8	---	---	---
23	8.0	7.7	7.9	8.1	7.5	7.8	9.5	8.6	9.1	---	---	---
24	7.9	7.8	7.9	8.0	7.5	7.7	9.5	8.7	9.2	---	---	---
25	7.9	7.8	7.8	8.7	7.5	8.0	9.3	8.5	8.9	7.7	7.6	7.7
26	8.0	7.8	7.9	8.9	7.7	8.3	9.4	8.0	8.8	7.7	7.6	7.7
27	7.9	7.7	7.8	9.0	7.7	8.5	9.4	8.6	9.0	7.8	7.6	7.7
28	8.1	7.8	7.9	9.1	7.8	8.6	9.2	8.5	8.9	7.8	7.6	7.7
29	---	---	---	9.3	8.0	8.7	8.6	7.5	8.1	7.6	7.4	7.5
30	---	---	---	8.8	7.9	8.4	8.5	7.4	7.8	7.5	7.4	7.4
31	---	---	---	8.8	7.7	8.2	---	---	---	7.8	7.4	7.5
MONTH	8.2	7.1	7.7	9.6	7.5	8.3	9.5	7.4	8.3	---	---	---
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.8	7.7	7.7	8.5	7.5	8.1	8.7	7.7	8.2	8.1	7.7	7.8
2	7.8	7.7	7.8	8.7	7.8	8.2	8.6	7.9	8.3	8.2	7.8	7.9
3	7.8	7.7	7.7	8.6	7.8	8.2	8.8	7.9	8.4	8.3	7.8	8.1
4	7.8	7.6	7.7	8.7	7.9	8.3	8.8	8.0	8.5	8.6	7.9	8.2
5	7.8	7.6	7.7	8.6	7.5	8.0	8.5	7.7	8.2	8.6	8.0	8.3
6	7.8	7.6	7.7	8.5	7.5	7.9	8.1	7.3	7.6	8.6	8.1	8.3
7	8.2	7.5	7.9	8.7	7.7	8.2	7.5	7.3	7.4	8.5	7.8	8.2
8	8.4	8.0	8.1	8.6	7.7	8.2	7.4	7.3	7.3	8.4	7.8	8.1
9	8.1	7.7	8.0	8.3	7.6	7.9	7.5	7.4	7.4	8.1	7.7	8.0
10	7.9	7.7	7.8	8.3	7.4	7.8	7.5	7.3	7.4	8.1	7.6	7.8
11	8.1	7.9	8.0	7.8	7.4	7.5	7.5	7.1	7.3	8.4	7.6	8.0
12	8.5	8.0	8.2	7.6	7.4	7.5	7.6	7.4	7.5	8.5	7.9	8.2
13	8.6	8.1	8.3	7.5	7.4	7.5	7.6	7.4	7.5	8.4	7.8	8.1
14	8.6	8.1	8.3	7.6	7.4	7.5	7.6	7.4	7.5	8.5	7.8	8.1
15	8.3	7.6	8.0	7.4	7.3	7.4	7.5	7.3	7.4	8.4	7.6	8.1
16	8.4	7.7	8.0	7.6	7.3	7.5	7.8	7.3	7.6	8.1	7.7	7.9
17	8.8	8.0	8.4	7.7	7.5	7.6	7.9	7.7	7.8	7.9	7.5	7.7
18	9.1	8.2	8.6	7.6	7.4	7.5	8.0	7.7	7.9	7.9	7.4	7.7
19	8.7	7.6	8.0	7.7	7.3	7.5	8.0	7.7	7.8	8.3	7.5	7.9
20	7.9	7.7	7.8	7.9	7.3	7.6	7.8	7.7	7.8	8.6	7.8	8.2
21	7.7	7.5	7.6	8.0	7.4	7.7	7.9	7.7	7.8	8.6	7.9	8.2
22	7.7	7.4	7.5	8.1	7.4	7.7	7.9	7.7	7.8	8.1	7.9	8.0
23	7.6	7.3	7.5	7.9	7.4	7.6	7.8	7.7	7.8	8.3	7.8	8.0
24	7.6	7.2	7.4	8.0	7.5	7.7	7.7	7.6	7.7	8.5	7.9	8.1
25	8.5	7.5	8.0	8.0	7.5	7.7	7.7	7.6	7.6	8.6	8.0	8.2
26	8.6	7.7	8.2	8.2	7.5	7.8	7.8	7.6	7.7	8.6	8.0	8.2
27	8.7	7.8	8.2	8.3	7.6	7.9	7.8	7.6	7.7	8.7	7.9	8.2
28	8.4	7.7	8.1	8.3	7.6	8.0	7.8	7.6	7.7	8.5	7.9	8.1
29	8.2	7.5	7.9	8.5	7.6	8.0	7.8	7.5	7.7	8.7	7.9	8.2
30	8.2	7.5	7.9	8.6	7.7	8.2	7.9	7.7	7.8	8.6	7.9	8.2
31	---	---	---	8.6	7.7	8.1	7.8	7.6	7.7	---	---	---
MONTH	9.1	7.2	7.9	8.7	7.3	7.8	8.8	7.1	7.7	8.7	7.4	8.1

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	14.5	13.5	14.0	4.5	3.5	4.0	.0	.0	.0
2	---	---	---	13.5	13.0	13.0	3.5	3.0	3.0	.0	.0	.0
3	18.0	16.5	17.0	13.0	11.5	12.5	3.0	.5	2.5	.0	.0	.0
4	16.5	15.5	16.0	11.5	10.0	11.0	.5	.0	.0	.0	.0	.0
5	16.0	14.5	15.0	10.0	9.5	10.0	1.0	.0	.5	.5	.0	.0
6	16.0	15.0	15.5	9.5	9.5	9.5	2.5	1.0	1.5	2.0	.5	1.5
7	16.5	15.0	16.0	10.5	9.0	10.0	3.0	2.0	2.5	3.0	2.0	2.5
8	15.0	14.0	14.5	11.5	10.5	11.0	2.0	1.0	1.5	2.5	1.0	2.0
9	14.0	12.5	13.5	12.5	11.5	12.0	1.5	.5	1.0	3.0	1.0	2.0
10	13.5	12.0	12.5	11.5	11.0	11.0	1.5	.0	.5	4.0	2.5	3.0
11	14.5	12.0	13.0	10.5	10.0	10.5	2.0	.5	1.0	4.0	3.0	3.5
12	15.0	12.0	13.5	10.5	9.5	10.0	2.0	1.5	1.5	3.5	2.5	3.0
13	16.0	13.0	14.5	9.5	8.5	9.0	3.0	1.5	2.0	2.5	1.5	2.0
14	15.5	14.0	15.0	10.0	9.0	9.5	2.0	1.0	1.5	2.5	1.0	1.5
15	17.0	14.0	15.5	11.0	9.5	10.5	1.5	.5	1.0	2.5	1.5	2.0
16	18.0	16.0	17.0	12.5	11.0	11.5	1.0	.0	.5	3.5	1.5	2.5
17	17.5	16.5	17.0	11.0	10.0	10.0	.0	.0	.0	5.0	3.0	4.0
18	17.0	15.0	16.0	10.0	8.0	9.0	.0	.0	.0	6.5	5.0	5.5
19	15.0	12.5	14.0	7.5	7.0	7.0	.0	.0	.0	5.5	4.0	5.0
20	12.5	12.0	12.5	7.0	6.5	7.0	.0	.0	.0	4.0	3.0	3.5
21	12.0	10.5	11.0	6.5	4.5	5.5	.0	.0	.0	3.0	2.5	3.0
22	10.5	10.0	10.0	4.5	4.0	4.0	.0	.0	.0	3.0	2.0	2.5
23	10.5	9.5	10.0	4.0	3.5	4.0	.0	.0	.0	3.0	2.5	3.0
24	10.5	9.5	10.0	3.5	2.5	3.0	.0	.0	.0	4.0	3.0	3.5
25	10.5	9.5	10.0	3.0	2.0	2.5	.0	.0	.0	4.5	3.5	4.0
26	11.5	10.0	10.5	4.0	3.0	3.5	.0	.0	.0	5.0	4.5	4.5
27	12.0	10.5	11.5	4.5	3.5	4.0	.0	.0	.0	4.0	2.0	3.5
28	13.0	11.5	12.0	6.0	4.5	5.5	.0	.0	.0	2.0	.5	1.0
29	13.5	12.5	13.0	5.5	4.0	5.0	.0	.0	.0	3.0	2.0	2.5
30	14.0	12.5	13.5	4.5	4.0	4.0	.0	.0	.0	4.0	3.0	3.5
31	14.0	13.5	14.0	---	---	---	.0	.0	.0	3.5	3.0	3.5
MONTH	18.0	9.5	13.6	14.5	2.0	8.3	4.5	.0	.8	6.5	.0	2.5
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.5	2.5	3.0	---	---	---	7.0	7.0	7.0	20.0	17.5	18.5
2	4.0	3.5	3.5	---	---	---	8.0	7.0	7.5	19.5	18.0	19.0
3	4.5	4.0	4.5	4.5	3.5	4.0	8.0	8.0	8.0	18.0	17.0	17.5
4	4.0	3.5	4.0	4.5	3.0	4.0	8.0	7.5	8.0	17.0	15.5	16.5
5	3.5	3.0	3.0	5.0	3.5	4.0	8.5	7.0	7.5	15.5	14.5	15.0
6	3.0	2.5	3.0	4.5	3.5	4.0	8.0	7.5	8.0	16.5	15.0	15.5
7	3.5	2.5	3.0	4.5	2.5	3.5	8.0	7.0	7.5	16.5	15.0	16.0
8	4.5	3.5	4.0	4.5	3.0	3.5	8.0	6.5	7.5	18.0	15.5	16.5
9	5.0	4.0	4.5	4.0	3.5	4.0	8.5	6.5	7.5	18.0	17.0	17.5
10	6.0	5.0	5.5	5.5	4.0	5.0	10.0	8.0	9.0	18.0	16.5	17.5
11	5.5	5.0	5.5	6.5	5.0	6.0	10.0	9.0	10.0	16.5	15.5	16.0
12	5.0	4.5	4.5	9.0	6.5	8.0	9.0	8.5	9.0	15.5	13.5	14.5
13	4.5	3.5	4.0	11.5	9.0	10.5	9.5	7.5	8.5	13.5	13.5	13.5
14	5.0	4.5	4.5	13.5	11.5	12.5	9.0	7.5	8.5	15.0	13.5	14.0
15	5.0	4.5	4.5	13.5	12.0	13.0	9.5	8.5	9.0	15.0	14.0	14.5
16	5.0	4.5	4.5	14.5	13.0	14.0	11.0	8.5	10.0	15.0	14.5	15.0
17	5.0	4.5	4.5	15.0	14.5	14.5	10.5	10.0	10.5	16.0	15.0	15.5
18	4.5	3.5	4.0	14.5	13.5	14.0	11.0	9.0	10.0	15.5	15.0	15.0
19	4.0	3.0	3.5	13.5	12.0	12.5	11.5	9.5	10.5	15.0	14.0	14.5
20	3.5	2.5	3.0	12.0	9.5	10.5	13.0	11.0	12.0	15.5	14.5	15.0
21	3.5	2.5	3.0	9.5	8.5	9.0	13.0	12.0	12.5	15.0	14.0	14.5
22	4.5	3.0	3.5	9.0	7.5	8.5	14.0	12.0	13.0	14.5	13.5	14.0
23	6.0	4.5	5.5	9.5	8.0	8.5	15.5	13.0	14.0	14.5	13.0	14.0
24	6.0	5.5	6.0	8.5	7.5	8.0	16.0	14.0	15.0	15.0	13.5	14.5
25	6.0	3.5	5.0	8.0	7.0	7.5	15.0	14.5	14.5	16.0	14.0	15.0
26	3.5	2.5	3.0	8.0	6.5	7.5	18.0	14.5	16.0	16.0	15.0	15.5
27	2.5	1.5	2.0	8.0	6.5	7.5	20.0	17.0	18.5	17.0	15.0	16.0
28	2.5	1.5	2.0	8.0	6.0	7.0	21.5	19.0	20.0	18.0	16.0	17.0
29	---	---	---	8.0	7.0	7.5	20.5	18.5	20.0	17.5	16.0	17.0
30	---	---	---	7.5	7.0	7.0	18.5	18.0	18.5	16.5	15.0	16.0
31	---	---	---	7.0	6.5	7.0	---	---	---	17.0	15.0	16.0
MONTH	6.0	1.5	4.0	15.0	2.5	8.0	21.5	6.5	11.0	20.0	13.0	15.5

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	15.5	17.0	28.5	25.5	27.0	27.5	24.0	26.0	25.5	24.0	25.0
2	19.0	17.0	18.0	27.0	24.5	25.5	28.0	24.0	26.0	26.0	24.0	25.0
3	20.0	18.5	19.5	26.0	24.0	25.0	28.5	24.5	26.5	26.0	24.0	25.0
4	20.5	19.5	20.0	27.0	24.5	26.0	29.5	25.5	27.0	25.5	22.5	24.0
5	20.5	18.5	19.5	28.0	25.5	26.5	27.0	25.0	26.0	24.5	22.5	23.5
6	20.5	18.5	19.5	28.0	25.0	26.0	26.0	24.0	25.0	25.0	23.0	24.0
7	21.5	20.0	20.5	28.0	25.0	26.5	25.0	24.0	24.5	25.5	23.5	24.5
8	21.0	20.5	20.5	26.5	24.5	25.5	25.0	23.5	24.5	25.5	23.0	24.0
9	21.0	20.5	20.5	28.5	24.0	26.0	24.5	23.5	24.0	23.0	21.0	22.0
10	22.0	20.0	21.0	28.0	25.5	26.5	23.5	22.5	23.5	24.0	21.0	22.5
11	21.0	19.0	20.5	26.0	24.0	25.0	24.5	22.0	23.5	25.5	21.5	23.5
12	21.5	18.5	20.0	24.0	22.0	23.0	25.0	23.0	24.0	25.0	22.5	23.5
13	21.5	19.5	20.5	22.0	20.0	21.0	25.5	23.5	24.5	24.5	23.0	23.5
14	21.0	20.0	20.5	20.0	19.5	19.5	26.0	24.0	25.0	24.5	22.5	23.5
15	21.5	19.5	20.5	21.5	19.5	20.5	25.0	23.5	24.5	24.5	23.0	23.5
16	22.5	19.5	21.0	23.0	21.0	22.0	24.5	23.5	24.0	23.0	22.0	22.5
17	24.5	21.5	23.0	24.0	22.0	23.0	25.5	23.5	24.5	21.5	19.5	21.0
18	25.5	22.5	24.0	25.5	23.5	24.5	26.5	24.5	25.5	19.5	17.5	18.5
19	23.5	22.0	23.0	27.0	25.0	26.0	27.0	25.0	26.0	18.0	17.0	17.5
20	23.5	22.0	23.0	28.0	25.5	26.5	24.5	22.0	23.0	19.0	16.5	17.5
21	23.0	22.0	22.5	28.0	26.0	27.0	22.0	21.0	21.5	19.5	16.5	18.0
22	24.5	22.0	23.0	28.0	26.0	27.0	21.0	20.5	21.0	18.0	17.0	17.5
23	25.0	23.0	24.0	27.5	26.0	26.5	20.5	20.0	20.5	18.0	16.0	17.0
24	24.5	23.0	24.0	27.0	25.5	26.5	20.5	20.0	20.0	17.0	15.5	16.5
25	24.0	22.5	23.0	28.0	25.5	26.5	22.0	20.0	20.5	18.0	14.5	16.0
26	24.5	21.5	23.0	28.0	25.5	27.0	23.5	21.5	22.5	17.5	15.5	16.5
27	25.5	22.5	24.0	27.5	26.0	26.5	24.5	22.5	23.5	19.5	15.5	17.5
28	27.5	23.5	25.0	27.5	26.0	26.5	25.5	23.5	24.5	20.0	17.0	18.5
29	28.0	24.5	26.0	28.5	25.5	27.0	26.0	24.5	25.0	20.5	18.0	19.0
30	28.0	25.0	26.5	29.5	26.0	27.5	26.0	24.0	25.0	20.5	18.5	19.5
31	---	---	---	28.5	26.0	27.0	25.5	24.0	25.0	---	---	---
MONTH	28.0	15.5	22.0	29.5	19.5	25.5	29.5	20.0	24.0	26.0	14.5	21.0

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	10.0	9.4	9.6	12.8	12.2	12.5	---	---	---
2	---	---	---	10.0	9.5	9.7	13.1	12.7	12.8	---	---	---
3	9.1	8.5	8.8	9.9	9.6	9.8	13.1	12.7	12.9	---	---	---
4	9.4	8.6	9.0	10.6	9.8	10.2	13.7	13.1	13.4	---	---	---
5	9.7	8.9	9.3	10.9	10.4	10.7	13.9	13.4	13.6	---	---	---
6	9.9	9.1	9.4	10.8	10.5	10.6	13.7	13.3	13.5	---	---	---
7	9.9	9.0	9.4	10.9	10.6	10.7	13.8	13.1	13.5	---	---	---
8	10.0	9.2	9.6	10.7	10.2	10.5	13.8	13.5	13.6	---	---	---
9	10.4	9.5	9.9	10.2	9.6	9.9	14.2	13.4	13.9	---	---	---
10	10.9	9.9	10.4	10.0	9.6	9.8	14.6	13.9	14.2	---	---	---
11	11.1	10.2	10.6	10.4	9.8	10.1	14.7	13.9	14.3	---	---	---
12	11.2	10.4	10.7	10.8	10.2	10.5	14.3	13.7	14.0	---	---	---
13	11.4	10.3	10.8	11.1	10.6	10.8	14.4	13.4	13.8	---	---	---
14	11.3	10.5	10.8	11.0	10.6	10.8	14.6	13.7	14.1	---	---	---
15	11.7	10.3	10.9	10.8	10.5	10.6	15.3	13.8	14.5	---	---	---
16	11.5	10.0	10.8	10.5	9.7	10.0	14.6	13.6	14.1	---	---	---
17	10.5	9.1	9.9	10.4	9.7	10.1	15.1	14.0	14.4	---	---	---
18	9.2	8.7	8.9	10.8	10.0	10.4	14.5	13.4	13.9	---	---	---
19	9.6	8.8	9.1	11.3	10.8	11.1	14.6	13.5	14.0	---	---	---
20	9.8	9.6	9.7	11.2	11.0	11.1	14.2	13.4	13.9	---	---	---
21	10.1	9.9	10.0	11.7	11.1	11.4	14.3	13.4	13.9	---	---	---
22	10.5	10.0	10.3	12.1	11.7	11.9	14.3	13.8	14.1	---	---	---
23	10.7	10.5	10.6	12.3	11.9	12.1	14.7	14.2	14.4	---	---	---
24	10.8	10.6	10.7	12.7	12.2	12.5	14.8	14.1	14.4	---	---	---
25	10.8	10.5	10.7	12.9	12.6	12.8	14.2	13.5	13.9	---	---	---
26	10.8	10.5	10.7	12.7	12.3	12.5	13.8	13.1	13.4	---	---	---
27	10.6	10.3	10.5	12.5	12.2	12.4	13.4	12.6	13.0	---	---	---
28	10.3	10.0	10.2	12.3	11.6	12.0	13.0	12.2	12.6	---	---	---
29	10.2	9.9	10.0	12.1	11.5	11.8	---	---	---	---	---	---
30	10.2	9.8	9.9	12.5	11.9	12.2	---	---	---	---	---	---
31	9.8	9.4	9.6	---	---	---	---	---	---	---	---	---
MONTH	11.7	8.5	10.0	12.9	9.4	11.0	15.3	12.2	13.7	---	---	---

## DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	13.5	11.9	12.7	12.0	7.6	9.6
2	---	---	---	---	---	---	14.0	11.9	12.8	11.4	7.8	9.6
3	---	---	---	13.6	12.7	13.1	12.2	11.1	11.7	10.8	8.0	9.4
4	---	---	---	13.5	12.3	12.9	11.1	10.6	10.9	9.3	7.9	8.6
5	---	---	---	13.7	12.4	13.0	11.6	10.8	11.2	8.6	8.2	8.4
6	---	---	---	13.5	12.3	12.8	11.6	11.0	11.2	9.6	8.2	8.8
7	---	---	---	14.4	12.6	13.4	12.2	11.1	11.6	10.2	8.6	9.3
8	---	---	---	14.7	12.8	13.7	12.9	11.3	12.1	10.2	8.7	9.3
9	---	---	---	14.4	12.8	13.5	13.5	11.5	12.4	9.7	8.3	8.9
10	---	---	---	14.4	12.4	13.2	13.4	11.4	12.2	8.5	7.9	8.2
11	---	---	---	14.6	12.1	13.1	11.9	10.4	11.2	8.5	8.3	8.4
12	---	---	---	15.5	11.8	13.4	12.9	10.6	11.7	9.3	8.5	9.0
13	---	---	---	15.4	11.2	13.1	13.1	11.1	12.0	9.5	9.3	9.3
14	---	---	---	14.9	10.5	12.3	13.0	11.3	12.2	9.6	9.2	9.4
15	---	---	---	13.8	10.0	11.7	11.7	11.0	11.4	9.5	9.2	9.4
16	---	---	---	13.7	9.9	11.6	13.3	10.9	12.0	9.3	9.1	9.2
17	13.0	12.4	12.7	11.5	9.4	10.4	12.0	10.7	11.4	9.1	8.6	8.9
18	13.2	12.7	13.0	11.5	8.9	10.0	13.7	10.3	11.9	9.1	8.8	9.0
19	13.2	12.9	13.0	10.8	9.4	10.1	15.1	11.0	12.9	9.4	9.1	9.2
20	13.5	12.9	13.2	10.4	9.7	10.1	14.8	11.1	12.8	9.3	9.0	9.2
21	13.6	13.1	13.3	11.8	10.4	11.1	12.7	10.8	11.5	9.2	9.0	9.1
22	13.4	12.9	13.2	12.1	11.0	11.5	14.8	10.2	12.4	9.6	9.2	9.5
23	12.9	12.3	12.6	12.2	11.2	11.7	14.6	10.6	12.5	9.9	9.5	9.7
24	12.2	11.8	11.9	12.0	11.1	11.6	14.5	10.1	12.1	---	---	---
25	12.5	11.7	12.0	13.0	11.3	12.2	13.0	9.8	10.9	---	---	---
26	13.4	12.6	13.0	13.5	11.8	12.6	14.4	9.4	11.5	---	---	---
27	13.7	13.2	13.5	14.0	11.8	12.9	14.2	9.1	11.4	---	---	---
28	14.2	13.4	13.8	14.6	12.1	13.2	13.0	8.6	10.7	---	---	---
29	---	---	---	14.9	12.2	13.5	9.2	7.9	8.5	---	---	---
30	---	---	---	13.6	12.1	12.8	11.0	7.5	8.8	---	---	---
31	---	---	---	13.6	11.7	12.6	---	---	---	---	---	---
MONTH	---	---	---	15.5	8.9	12.3	15.1	7.5	11.6	---	---	---
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	10.6	7.3	9.0	9.9	7.6	8.7	8.5	7.5	8.0
2	---	---	---	10.2	7.3	8.6	10.0	7.4	8.7	8.7	7.6	8.1
3	---	---	---	10.0	7.4	8.5	10.4	7.5	8.8	8.9	7.5	8.2
4	---	---	---	10.2	7.5	8.7	10.6	7.4	8.9	9.3	7.8	8.5
5	---	---	---	9.6	7.2	8.0	9.2	7.1	8.1	9.4	8.0	8.7
6	---	---	---	9.6	6.8	8.0	8.7	6.7	7.6	9.5	8.1	8.7
7	---	---	---	10.2	7.2	8.6	7.1	6.7	6.8	9.5	7.9	8.6
8	9.5	8.4	8.9	10.6	7.4	8.9	7.1	6.7	6.9	9.7	7.9	8.8
9	8.8	7.9	8.5	10.5	7.5	8.6	7.5	7.1	7.2	9.8	8.4	9.0
10	8.2	7.8	8.0	9.9	7.0	8.3	7.7	7.2	7.4	10.6	8.2	9.2
11	8.8	7.9	8.3	7.9	6.8	7.3	7.8	7.4	7.5	11.0	8.5	9.6
12	9.7	8.3	8.9	7.8	7.1	7.4	7.9	7.3	7.6	11.1	8.7	9.8
13	9.7	8.5	9.1	8.0	7.7	7.9	7.7	7.2	7.4	10.6	8.3	9.3
14	9.6	8.4	9.0	8.4	8.0	8.3	7.7	7.2	7.4	10.4	8.1	9.1
15	9.4	8.0	8.6	8.5	8.3	8.4	7.5	7.1	7.3	10.4	7.9	9.1
16	9.8	8.0	8.8	8.5	8.1	8.3	7.7	7.2	7.5	9.4	8.2	8.7
17	10.6	8.2	9.4	8.6	7.9	8.2	8.0	7.4	7.7	10.1	7.9	9.0
18	11.2	8.2	9.3	8.4	7.8	8.1	8.1	7.3	7.7	10.7	8.6	9.6
19	8.3	7.0	7.4	8.7	7.6	8.1	8.1	7.2	7.5	10.4	9.0	9.6
20	8.0	6.9	7.4	8.9	7.5	8.1	7.9	7.2	7.5	11.3	9.0	10.0
21	8.1	7.2	7.5	9.0	7.5	8.2	8.2	7.6	7.9	11.4	9.3	10.3
22	9.2	7.4	8.2	9.1	7.5	8.2	8.4	7.8	8.1	9.8	8.9	9.4
23	9.5	7.5	8.2	8.7	7.4	8.0	8.5	7.9	8.2	10.7	8.7	9.6
24	9.9	7.4	8.6	8.9	7.6	8.2	8.4	8.0	8.1	---	---	---
25	10.2	7.7	8.9	9.1	7.6	8.3	8.0	7.8	7.9	---	---	---
26	10.8	7.9	9.3	9.5	7.7	8.6	8.1	7.7	7.8	---	---	---
27	10.5	7.8	9.2	9.6	7.7	8.6	8.1	7.5	7.7	---	---	---
28	11.2	7.7	9.4	9.5	7.7	8.6	8.1	7.4	7.7	---	---	---
29	11.5	7.6	9.3	10.0	7.7	8.8	8.0	7.3	7.6	---	---	---
30	11.0	7.3	9.1	10.6	7.6	8.9	8.1	7.2	7.6	---	---	---
31	---	---	---	10.4	7.6	8.8	8.3	7.4	7.8	---	---	---
MONTH	---	---	---	10.6	6.8	8.3	10.6	6.7	7.8	---	---	---

## NESHAMINY CREEK BASIN

01464645 NORTH BRANCH NESHAMINY CREEK BELOW LAKE GALENA NEAR NEW BRITIAN, PA

LOCATION.--Lat 40°19'01", long 75°12'15", Bucks County, Hydrologic Unit 02040201, on left bank, 2.0 miles north of Chalfont on Callowhill Road, and 0.3 mile below Lake Galena (Peace Valley Reservoir).

DRAINAGE AREA.--16.2 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1985 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 280 ft., from Topographic map.

REMARKS.--Records fair except for periods of estimated discharges, which are poor. Flow regulated by Peace Valley Reservoir (Lake Galena) about 0.3 mile upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,280 ft<sup>3</sup>/s, Sept. 20, 1989, gage height, 4.35 ft; minimum daily discharge, 3.1 ft<sup>3</sup>/s, Dec. 22, 23, 24, 25, 29, 30, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,000 ft<sup>3</sup>/s, Oct. 20, gage height, 4.09 ft; minimum daily discharge, 3.1 ft<sup>3</sup>/s, Dec. 22, 23, 24, 25, 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	15	88	7.2	98	4.4	4.5	26	74	e5.1	7.2	4.8
2	e32	13	59	3.9	96	4.3	4.8	26	45	e4.3	7.5	4.8
3	e28	13	59	3.6	95	4.5	12	26	31	e4.0	7.5	4.8
4	e25	12	85	3.6	97	4.2	20	18	24	3.6	6.9	5.1
5	e22	11	100	3.7	95	4.1	27	42	18	3.6	7.0	4.6
6	e19	9.6	98	3.6	58	4.1	32	43	14	3.6	7.6	3.6
7	e17	9.2	98	3.6	5.0	3.8	36	32	12	3.6	8.0	3.6
8	e15	9.3	73	3.7	4.7	3.8	35	25	10	3.6	6.3	3.6
9	e13	27	51	5.2	4.5	3.8	30	20	19	3.6	5.5	3.6
10	e11	43	51	8.7	7.1	3.8	42	38	19	3.6	5.6	3.6
11	e9.0	34	44	6.1	5.5	3.8	11	94	16	3.6	5.6	3.6
12	e9.0	27	3.6	4.9	5.3	3.8	13	60	12	3.6	5.5	3.6
13	e9.0	22	3.6	4.3	4.9	3.8	13	49	42	4.5	5.5	3.6
14	e10	19	3.5	3.9	4.8	3.8	13	76	53	3.9	5.5	4.6
15	e10	18	3.3	4.0	4.6	3.8	44	51	35	3.8	4.8	6.2
16	e11	19	3.5	17	4.9	3.8	49	42	93	3.8	5.6	6.2
17	11	19	3.3	26	4.6	4.2	37	80	209	3.7	6.2	5.6
18	29	17	3.3	27	4.4	5.5	31	60	98	3.7	3.8	5.3
19	117	14	3.3	26	4.5	4.2	24	41	57	5.3	5.6	7.7
20	418	12	3.3	27	4.2	6.7	21	30	37	6.1	5.5	8.6
21	285	12	3.3	29	4.1	6.4	20	24	27	5.8	5.1	8.4
22	121	8.6	3.1	64	4.3	19	19	34	21	5.5	4.7	8.0
23	67	9.6	3.1	93	5.5	31	25	37	16	5.5	4.7	7.5
24	44	8.1	3.1	92	7.4	30	27	34	13	5.4	4.5	6.0
25	32	7.4	3.1	106	5.2	30	16	23	10	6.1	4.5	6.7
26	26	8.2	3.2	111	4.5	29	5.8	4.7	8.1	6.3	4.5	8.2
27	22	9.6	3.2	99	4.4	29	5.8	4.3	6.6	7.6	5.2	8.6
28	18	66	3.2	97	5.3	29	5.8	4.2	5.8	7.7	4.9	8.6
29	16	105	3.1	104	---	29	6.6	110	5.0	7.1	4.8	8.4
30	14	104	3.1	113	---	22	16	448	4.4	7.5	4.8	7.7
31	14	---	3.4	100	---	4.4	---	153	---	7.4	4.8	---
TOTAL	1489.0	701.6	871.6	1201.0	648.7	343.0	646.3	1755.2	1034.9	152.5	175.2	175.2
MEAN	48.0	23.4	28.1	38.7	23.2	11.1	21.5	56.6	34.5	4.92	5.65	5.84
MAX	418	105	100	113	98	31	49	448	209	7.7	8.0	8.6
MIN	9.0	7.4	3.1	3.6	4.1	3.8	4.5	4.2	4.4	3.6	3.8	3.6
†	-0.7	-6.2	-27.3	23.9	2.9	0.3	5.7	7.2	-7.2	-5.5	1.5	-6.4
MEAN#	47.3	17.2	0.8	62.6	26.1	11.4	27.2	63.8	27.3	0	7.15	0
CFSM#	2.92	1.06	.05	3.86	1.61	.70	1.68	3.94	1.69	0	.44	0
IN.#	3.37	1.18	.06	4.46	1.68	.81	1.87	4.54	1.88	0	.51	0

CAL YR 1989 TOTAL 11545.8 MEAN 31.6 MAX 700 MIN 3.1 MEAN# 31.6 CFSM# 1.96 IN.# 26.66  
WTR YR 1990 TOTAL 9194.2 MEAN 25.2 MAX 448 MIN 3.1 MEAN# 24.2 CFSM# 1.49 IN.# 20.29

† Change in contents of Lake Galena, in cubic feet per second.

# Adjusted for change in contents at Lake Galena.

e Estimated.



## NESHAMINY CREEK BASIN

01464710 PINE RUN AT CHALFONT, PA

LOCATION.--Lat 40°17'20", long 75°12'11", Buck County, Hydrologic Unit 02040203 on right bank, 40 ft upstream from abandoned bridge at Forest Park Water Company water intakes, 500 ft upstream from mouth, in Chalfont.

DRAINAGE AREA.--11.60 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1990 to September 1990.

GAGE.--Synergetics Data Collection Platform and steel V-notch weir. Altitude of gage is 250 ft. from topographic map.

REMARKS.--Records good. Diversion of water just above gage for municipal supply by Forest Park Water Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290 ft<sup>3</sup>/s, May 29, 1990, gage height, 3.82 ft; minimum daily discharge, 1.1 ft<sup>3</sup>/s, August 3, 4, September 10, 19, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 290 ft<sup>3</sup>/s, May 29, gage height, 3.82 ft; minimum daily discharge, 1.1 ft<sup>3</sup>/s, August 3, 4, September 10, 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	12	11	14	22	5.2	1.5	3.6
2	---	---	---	---	---	11	12	9.5	18	4.7	1.3	3.2
3	---	---	---	---	---	11	40	7.8	16	4.4	1.1	3.0
4	---	---	---	---	---	10	28	7.6	15	4.1	1.1	2.5
5	---	---	---	---	---	9.4	21	73	13	4.7	1.8	2.2
6	---	---	---	---	---	9.4	17	19	12	6.0	41	2.5
7	---	---	---	---	---	8.7	19	12	12	4.7	89	2.6
8	---	---	---	---	---	8.2	19	11	11	4.2	12	2.4
9	---	---	---	---	---	8.3	14	9.6	36	4.2	5.9	1.8
10	---	---	---	---	---	8.6	13	43	16	4.9	6.0	1.1
11	---	---	---	---	---	8.5	15	66	11	4.1	7.6	1.7
12	---	---	---	---	---	8.3	14	20	9.7	4.3	5.9	1.7
13	---	---	---	---	---	7.9	12	21	8.7	20	5.0	1.7
14	---	---	---	---	---	7.5	12	43	7.9	11	4.6	3.3
15	---	---	---	---	---	7.5	54	19	57	8.6	3.7	5.3
16	---	---	---	---	---	7.5	25	24	17	6.2	3.2	3.3
17	---	---	---	---	---	8.6	18	75	11	4.7	3.0	5.4
18	---	---	---	---	---	18	16	26	23	4.1	2.6	2.4
19	---	---	---	---	---	11	14	19	48	3.8	2.9	1.1
20	---	---	---	---	---	26	12	16	16	3.4	5.5	2.2
21	---	---	---	---	---	22	14	15	13	3.6	5.2	2.1
22	---	---	---	---	---	13	14	14	11	3.3	4.8	8.2
23	---	---	---	---	---	13	12	13	9.8	3.5	5.0	8.5
24	---	---	---	---	---	12	12	12	8.8	4.3	4.3	3.7
25	---	---	---	---	---	11	10	11	7.8	3.2	4.0	2.6
26	---	---	---	---	---	11	11	12	7.1	2.6	5.4	2.3
27	---	---	---	---	---	9.1	9.8	12	6.8	2.2	7.5	2.2
28	---	---	---	---	---	8.4	8.6	10	6.1	2.2	12	2.0
29	---	---	---	---	---	8.2	8.2	103	5.6	2.1	6.2	1.8
30	---	---	---	---	---	10	10	188	5.9	2.0	4.5	1.6
31	---	---	---	---	---	13	---	37	---	1.8	4.3	---
TOTAL	---	---	---	---	---	338.1	495.6	962.5	462.2	148.1	267.9	88.0
MEAN	---	---	---	---	---	10.9	16.5	31.0	15.4	4.78	8.64	2.93
MAX	---	---	---	---	---	26	54	188	57	20	89	8.5
MIN	---	---	---	---	---	7.5	8.2	7.6	5.6	1.8	1.1	1.1
CFSM	---	---	---	---	---	.94	1.42	2.68	1.33	.41	.74	.25
IN.	---	---	---	---	---	1.08	1.59	3.09	1.48	.47	.86	.28

## NESHAMINY CREEK BASIN

01464750 NESHAMINY CREEK NEAR RUSHLAND, PA

LOCATION.--Lat 40°15'27", long 75°02'03", Bucks County, Hydrologic Unit 02040201, on left bank at bridge on Rushland Road at Rusland, 2000 ft upstream from confluence with Little Neshaminy Creek.

DRAINAGE AREA.--91.0 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1986 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 160 ft., from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft<sup>3</sup>/s, Sept. 20, 1989, gage height, 12.33 ft; minimum daily discharge, 15 ft<sup>3</sup>/s, Aug. 14, 1987, Aug. 4, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,870 ft<sup>3</sup>/s, May 30, gage height, 10.91 ft; minimum daily discharge, 15 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	106	e135	e785	e340	86	92	141	282	e69	19	27
2	220	91	e120	e115	e240	80	86	103	198	e49	17	24
3	211	89	e110	e72	e175	80	403	95	158	e33	16	21
4	140	93	e145	e64	e320	77	278	91	136	e28	15	20
5	110	81	e165	e62	e280	68	203	375	118	26	16	19
6	93	75	e165	e60	e220	63	156	202	97	31	172	20
7	82	71	e167	e60	e160	60	185	145	86	28	704	20
8	71	71	e145	e62	135	56	230	125	82	23	94	19
9	65	349	e105	e220	120	54	153	108	205	23	54	19
10	57	289	e100	e880	327	56	147	307	133	24	75	19
11	64	164	e88	e395	264	56	142	585	94	24	111	18
12	63	136	e77	e185	175	55	123	222	81	24	65	17
13	49	114	e65	105	155	53	107	208	67	149	46	19
14	49	104	e57	86	137	49	97	518	59	69	49	21
15	47	99	e52	77	122	49	534	216	599	63	41	43
16	46	114	e50	79	118	46	279	347	e135	46	33	29
17	50	155	e48	100	119	58	193	829	e92	34	31	62
18	165	105	e47	126	99	192	169	296	e280	27	31	37
19	653	92	e46	137	91	104	135	196	e990	24	34	24
20	1620	86	e46	121	89	282	121	153	e180	22	54	24
21	974	79	e46	289	80	224	113	134	e130	24	65	23
22	398	73	e47	276	79	137	127	117	e98	71	49	78
23	246	70	e45	233	120	134	104	122	e84	39	70	96
24	191	73	e43	213	324	122	106	111	e79	34	49	41
25	161	69	e41	664	156	115	101	101	e70	26	42	29
26	139	72	e40	1340	102	109	84	81	e62	21	39	25
27	120	85	e39	520	93	102	78	88	e57	20	39	25
28	102	127	e37	334	88	94	77	70	e51	20	116	24
29	93	207	e36	364	---	90	71	940	e47	20	47	24
30	92	187	e34	1160	---	101	91	1940	e88	19	36	23
31	100	---	e100	464	---	114	---	567	---	18	31	---
TOTAL	6544	3526	2441	9648	4728	2966	4785	9533	4838	1128	2260	890
MEAN	211	118	78.7	311	169	95.7	159	308	161	36.4	72.9	29.7
MAX	1620	349	167	1340	340	282	534	1940	990	149	704	96
MIN	46	69	34	60	79	46	71	70	47	18	15	17
CFM	2.32	1.29	.87	3.42	1.86	1.05	1.75	3.38	1.77	.40	.80	.33
IN.	2.68	1.44	1.00	3.94	1.93	1.21	1.96	3.90	1.98	.46	.92	.36

CAL YR 1989 TOTAL 78446 MEAN 215 MAX 3130 MIN 29 CFM 2.36 IN. 32.07  
WTR YR 1990 TOTAL 53287 MEAN 146 MAX 1940 MIN 15 CFM 1.60 IN. 21.78

e Estimated.

## NESHAMINY CREEK BASIN

01464984 LITTLE NESHAMINY CREEK AT WALTON ROAD NEAR JACKSONVILLE, PA

LOCATION.--Lat 40°14'26", long 75°03'15", Bucks County, Hydrologic Unit 02040203, on right bank, 15 ft downstream from old bridge abutment on Walton Road, 2.0 mi upstream from mouth and 1.0 mi northwest of Jacksonville.

DRAINAGE AREA.--40.06 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 146.27 ft. above Philadelphia Electric Co. datum.

REMARKS.--Records good except for periods of estimated discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,970 ft<sup>3</sup>/s, Jul. 27, 1989, gage height, 9.99 ft; minimum daily discharge, 4.1 ft<sup>3</sup>/s, Aug. 23, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,420 ft<sup>3</sup>/s, Aug. 7, gage height, 7.59 ft; minimum daily discharge, 5.2 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	52	36	303	91	40	46	70	71	20	7.9	17
2	188	42	33	42	77	39	43	38	57	16	6.0	17
3	100	50	33	28	69	40	216	33	51	14	5.6	17
4	50	46	27	24	140	37	134	31	48	12	5.2	16
5	41	38	29	27	119	34	90	134	40	11	5.4	16
6	38	37	28	26	71	34	59	47	37	11	187	17
7	36	35	29	22	63	32	118	35	36	10	877	16
8	32	39	25	24	55	30	110	31	36	8.8	47	15
9	31	323	25	103	53	30	61	28	97	8.9	28	14
10	29	114	e22	360	355	33	54	344	42	12	142	15
11	31	59	e20	142	139	31	90	322	32	9.5	68	14
12	32	48	e19	68	93	31	59	64	29	10	30	13
13	29	42	e18	39	76	29	48	153	26	171	45	13
14	27	41	e17	29	65	27	44	302	25	44	90	18
15	25	44	e16	30	57	25	434	72	227	42	28	51
16	23	64	e15	32	59	25	114	402	50	29	22	20
17	52	60	e14	36	55	53	83	327	33	17	19	35
18	67	40	e14	48	45	175	71	95	173	14	18	19
19	322	36	e13	46	46	54	55	64	425	11	21	17
20	1100	36	e13	56	41	274	50	52	58	9.7	28	17
21	314	34	e12	149	38	121	51	50	40	15	28	15
22	99	32	e11	85	41	65	49	46	35	72	25	136
23	72	37	e11	51	71	54	44	42	34	57	26	46
24	59	35	e11	45	153	47	40	38	28	29	20	19
25	54	34	e11	511	59	46	39	35	25	15	18	17
26	51	44	e10	763	41	42	39	42	23	11	18	17
27	48	51	e10	147	41	38	36	44	20	9.8	25	16
28	45	83	e10	88	42	36	33	35	18	8.6	79	15
29	41	52	e10	194	---	34	31	962	17	8.4	22	16
30	40	39	e10	863	---	47	62	984	32	7.4	28	14
31	53	---	e20	131	---	61	---	127	---	9.8	18	---
TOTAL	3183	1687	572	4512	2255	1664	2403	5049	1865	723.9	1987.1	688
MEAN	103	56.2	18.5	146	80.5	53.7	80.1	163	62.2	23.4	64.1	22.9
MAX	1100	323	36	863	355	274	434	984	425	171	877	136
MIN	23	32	10	22	38	25	31	28	17	7.4	5.2	13

CAL YR 1989 TOTAL 15404.3 MEAN 86.1 MAX 2180 MIN 5.7  
WTR YR 1990 TOTAL 26589.0 MEAN 72.8 MAX 1100 MIN 5.2

e Estimated.

## NESHAMINY CREEK BASIN

01465050 MILL CREEK NEAR WYCOMBE, PA

LOCATION.--Lat 40°17'30", long 75°02'19", Bucks County, Hydrologic Unit 02040201, on Creek Road at Briarwood Day Camp about 3 miles southeast of Doylestown.

DRAINAGE AREA.--14.0 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1985 to February 1989, October 1989 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 210 ft, from topographic map.

REMARKS.--Records good except for periods of estimated discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1370 ft<sup>3</sup>/s, July 26, 1988, gage height, 6.76 ft; maximum gage height, 6.98 ft, Nov. 26, 1986; minimum daily discharge, 0.66 ft<sup>3</sup>/s, Sept. 14, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 589 ft<sup>3</sup>/s, Oct. 20, gage height, 6.42 ft; minimum discharge, 2.1 ft<sup>3</sup>/s, August 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	12	35	32	15	14	13	27	7.9	2.9	6.5
2	32	17	12	10	30	15	13	11	24	7.6	2.5	6.0
3	22	18	12	8.4	27	15	25	10	23	7.0	2.3	5.7
4	17	16	10	7.4	38	14	24	11	21	6.7	2.1	5.4
5	16	15	11	7.8	29	13	18	40	19	7.8	2.8	5.1
6	16	15	12	7.4	25	13	16	15	17	9.4	22	5.1
7	15	14	11	6.8	24	12	20	13	17	6.4	99	4.7
8	14	15	10	7.6	22	12	18	12	16	5.9	9.5	4.1
9	13	36	e9.5	12	21	12	16	11	39	6.0	7.2	4.4
10	13	21	e9.0	45	44	13	15	45	18	5.9	22	4.4
11	14	17	e8.6	21	27	12	18	41	16	5.7	20	4.1
12	12	16	e8.0	14	25	11	15	20	14	6.2	11	4.0
13	12	15	e7.5	11	22	11	14	25	13	20	8.9	3.6
14	12	14	e7.0	9.4	21	10	14	29	13	8.0	8.4	4.9
15	12	14	e6.8	9.6	20	9.7	47	19	26	7.8	7.1	6.0
16	12	18	e6.6	9.7	21	9.5	22	29	15	6.9	6.6	4.1
17	15	15	e6.2	10	19	13	20	64	13	5.8	6.1	6.6
18	21	14	e5.8	13	18	21	18	25	17	5.4	5.7	4.0
19	46	12	e5.6	11	18	13	17	21	22	5.1	7.0	3.8
20	268	13	e5.4	12	16	32	16	19	15	4.8	8.5	4.0
21	61	13	e5.2	22	16	21	18	19	13	4.8	7.6	3.6
22	34	12	e5.1	17	17	17	16	17	12	6.5	8.1	11
23	29	14	e5.0	14	20	16	15	16	12	5.0	7.2	6.5
24	25	13	e4.8	13	25	15	14	15	11	4.7	11	4.4
25	23	12	e4.7	73	18	14	14	14	10	4.2	10	3.9
26	21	14	e4.5	110	15	14	14	16	9.8	3.8	10	3.7
27	20	13	e4.2	35	15	13	13	15	9.9	3.8	17	3.6
28	19	16	e4.1	28	16	13	12	13	9.3	3.5	16	3.4
29	18	13	e4.0	58	---	12	12	129	8.8	3.4	9.2	3.3
30	17	12	e4.0	156	---	15	14	161	8.6	3.2	8.2	3.1
31	21	---	8.2	39	---	15	---	34	---	3.0	7.1	---
TOTAL	886	467	229.8	833.1	641	441.2	522	922	489.4	192.2	373.0	143.0
MEAN	28.6	15.6	7.41	26.9	22.9	14.2	17.4	29.7	16.3	6.20	12.0	4.77
MAX	268	36	12	156	44	32	47	161	39	20	99	11
MIN	12	12	4.0	6.8	15	9.5	12	10	8.6	3.0	2.1	3.1
CFSM	2.04	1.11	.53	1.92	1.64	1.02	1.24	2.12	1.17	.44	.86	.34
IN.	2.35	1.24	.61	2.21	1.70	1.17	1.39	2.45	1.30	.51	.99	.38

CAL YR 1989 TOTAL 2056.3 MEAN 14.4 MAX 268 MIN 4.0 CFSM 1.03 IN. 5.46  
WTR YR 1990 TOTAL 6139.7 MEAN 16.8 MAX 268 MIN 2.1 CFSM 1.20 IN. 16.31

e Estimated.

## NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA

LOCATION.--Lat 40°10'26", long 74°57'26", Bucks County, Hydrologic Unit 02040201, on left bank at bridge on State Highway 213, 0.3 mi downstream from Mill Creek, and 1.7 mi west of Langhorne.

DRAINAGE AREA.--210 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1332: 1949. WSP 1432: 1936-37. WDR PA-83-1: 1982(P)

GAGE.--Water-stage recorder. Datum of gage is 40.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year. Some regulation at low flow by mills above station. Flow regulated by upstream reservoirs on Little Neshaminy Creek, Robin Run, Pine Run, North Branch Neshaminy Creek, and Core Creek (combined flood control capacity, about 9,560 acre-ft). Occasional regulation by Springfield Lake, capacity, 650 mil gal, completed in 1934; no significant regulation except during period May 1934 to January 1944, when the lake was filling, and in September 1949, July 1954, July through October 1957, September, October 1961. Interceptor sewer installed along left bank in May, June 1966.

AVERAGE DISCHARGE.--56 years, 295 ft<sup>3</sup>/s, 19.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,300 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 22.84 ft, from floodmarks, from rating curve extended above 4,700 ft<sup>3</sup>/s, on basis of contracted-opening measurement at gage height 15.94 ft, and slope-area measurement of peak flow; minimum discharge, 1.9 ft<sup>3</sup>/s, Sept. 8, 1957; minimum gage height, 0.35 ft, Sept. 1, 2, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23, 1933, reached a stage of 17.3 ft, from floodmark, discharge, 30,000 ft<sup>3</sup>/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,830 ft<sup>3</sup>/s, May 30, gage height, 10.02 ft; minimum daily discharge, 37 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	238	247	2220	556	181	214	278	478	99	49	100
2	415	195	214	e240	481	172	194	200	352	81	42	90
3	543	190	195	e180	435	172	590	170	291	73	39	81
4	299	193	160	e150	549	169	591	164	261	67	37	74
5	243	172	218	e152	649	149	403	510	224	64	46	70
6	217	162	217	e150	433	145	313	333	193	72	319	73
7	200	159	214	e140	336	140	357	218	176	68	1770	71
8	179	165	205	190	282	130	469	182	166	59	264	66
9	166	730	168	403	258	129	311	157	383	60	149	62
10	155	659	e150	767	727	134	268	637	279	61	575	62
11	152	326	e140	814	644	134	332	1660	185	57	493	61
12	160	264	e120	370	391	130	277	446	157	57	244	57
13	138	227	e110	229	341	126	225	415	138	348	165	58
14	130	212	e100	168	299	121	206	1030	130	190	251	61
15	127	209	e97	167	269	115	1080	419	909	176	153	141
16	124	226	e98	161	258	113	581	822	421	148	122	117
17	157	294	e100	175	258	139	390	1520	239	92	110	114
18	276	208	e105	211	219	485	349	563	230	73	104	118
19	946	184	e105	240	208	265	277	370	1320	64	106	74
20	4290	174	e100	220	200	626	248	291	439	60	156	69
21	2310	169	e95	414	175	553	240	261	279	56	171	66
22	758	147	e92	482	178	315	255	234	224	201	138	189
23	554	154	e91	343	247	270	222	219	195	121	158	277
24	505	149	e91	304	485	244	211	204	168	132	152	123
25	397	141	e90	1110	309	231	205	185	141	79	126	88
26	324	153	e88	3210	207	217	197	182	126	62	122	74
27	280	182	e87	925	189	201	180	192	114	53	160	72
28	224	229	e86	546	188	185	172	160	105	51	355	68
29	208	295	e85	555	---	178	163	1610	95	51	171	64
30	195	260	e83	3620	---	203	172	4940	110	49	146	64
31	217	---	150	829	---	252	---	943	---	47	148	---
TOTAL	15082	7066	4101	19685	9771	6624	9692	19515	8528	2871	7041	2704
MEAN	487	236	132	635	349	214	323	630	284	92.6	227	90.1
MAX	4290	730	247	3620	727	626	1080	4940	1320	348	1770	277
MIN	124	141	83	140	175	113	163	157	95	47	37	57

CAL YR 1989 TOTAL 160445 MEAN 440 MAX 6470 MIN 51  
WTR YR 1990 TOTAL 112680 MEAN 309 MAX 4940 MIN 37

e Estimated.

## POQUESSING CREEK BASIN

01465798 POQUESSING CREEK AT GRANT AVENUE, PHILADELPHIA, PA

LOCATION.--Lat 40°03'25", long 74°59'08", Philadelphia County, Hydrologic Unit 02040202, on right bank 600 ft upstream from Delaware River Expressway and 3,000 ft upstream from mouth in northeast Philadelphia.

DRAINAGE AREA.--21.4 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1965 to current year. Records for 1971-74 published in WDR PA-81-1.

REVISED RECORD.--WDR PA-86-1:1985.

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 2.68 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except periods of estimated daily discharges which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 33.2 ft<sup>3</sup>/s, 21.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,400 ft<sup>3</sup>/s, July 28, 1982, gage height, 15.35 ft, from flood-mark, from rating curve extended above 550 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 1.1 ft<sup>3</sup>/s, Aug. 9, 1966, gage height, 2.43 ft.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1315	2590	8.67	May 29	1530	1250	6.84
May 10	2115	1560	7.3	June 19	1545	*3350	*9.56

Minimum daily discharge, 3.1 ft<sup>3</sup>/s, Sept. 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	10	190	21	13	14	22	18	11	5.8	5.3
2	101	12	9.9	26	19	13	15	13	15	9.3	5.4	4.9
3	23	18	9.7	15	19	13	84	12	37	8.3	5.2	4.6
4	13	13	8.3	11	39	13	34	18	27	8.2	5.1	4.3
5	11	11	9.4	10	29	12	21	79	12	9.5	81	6.3
6	13	11	9.7	9.6	19	13	18	14	11	9.2	162	11
7	12	12	10	8.8	17	13	67	13	13	7.6	70	4.9
8	10	32	8.7	56	16	12	22	12	17	7.0	9.7	4.0
9	9.6	144	9.9	126	15	12	16	12	103	25	7.1	4.3
10	9.4	35	9.3	65	107	18	16	446	13	15	177	4.0
11	10	17	11	33	42	13	37	89	16	7.2	113	3.8
12	9.3	13	11	19	25	13	16	19	14	15	15	3.9
13	8.9	11	12	14	21	12	14	59	12	98	94	4.1
14	8.9	11	11	11	18	11	14	27	25	13	67	7.7
15	8.5	13	8.9	16	16	11	210	16	169	45	11	37
16	8.5	47	8.9	17	16	11	23	18	14	18	8.8	5.6
17	65	22	7.8	12	16	68	29	24	11	8.2	7.9	45
18	40	12	7.6	11	14	92	20	15	200	7.6	7.4	4.8
19	140	9.7	7.5	11	14	16	15	13	369	7.2	7.4	4.2
20	589	9.4	7.8	47	14	133	15	13	27	6.7	17	6.5
21	42	13	7.5	50	13	25	22	23	18	34	12	3.9
22	20	9.6	6.5	23	17	16	16	16	67	41	13	147
23	16	17	6.6	14	50	15	14	16	37	51	13	11
24	15	19	6.6	12	37	16	15	14	15	17	7.9	5.0
25	14	14	6.2	175	20	14	17	15	12	7.7	6.6	3.6
26	13	21	6.0	199	14	13	14	38	11	6.5	5.9	3.4
27	13	18	5.8	39	13	12	13	17	11	6.4	19	3.5
28	13	36	5.7	21	14	12	13	14	10	6.2	15	3.2
29	12	15	5.6	42	---	12	13	374	9.9	6.8	29	3.1
30	12	11	5.4	216	---	46	78	83	9.8	5.8	28	3.1
31	33	---	20	29	---	21	---	26	---	5.7	6.3	---
TOTAL	1304.1	646.7	270.3	1528.4	675	714	915	1570	1323.7	524.1	1032.5	363.0
MEAN	42.1	21.6	8.72	49.3	24.1	23.0	30.5	50.6	44.1	16.9	33.3	12.1
MAX	589	144	20	216	107	133	210	446	369	98	177	147
MIN	8.5	9.4	5.4	8.8	13	11	13	12	9.8	5.7	5.1	3.1
CFSM	1.97	1.01	.41	2.30	1.13	1.08	1.43	2.37	2.06	.79	1.56	.57
IN.	2.27	1.12	.47	2.66	1.17	1.24	1.59	2.73	2.30	.91	1.79	.63

CAL YR 1989 TOTAL 16195.3 MEAN 44.4 MAX 1270 MIN 3.8 CFSM 2.07 IN. 28.15  
WTR YR 1990 TOTAL 10866.8 MEAN 29.8 MAX 589 MIN 3.1 CFSM 1.39 IN. 18.89

e Estimated.



## PENNYPACK CREEK BASIN

01467048 PENNYPACK CREEK AT LOWER RHAWN STREET BRIDGE, PHILADELPHIA, PA

LOCATION.--Lat 40°03'00", long 75°01'59", Philadelphia County, Hydrologic Unit 02040202, on left bank at downstream side of footbridge pier, 400 ft downstream from Lower Rhawn Street bridge, 0.8 mi upstream from Wooden Bridge Run, in Philadelphia.

DRAINAGE AREA.--49.8 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1965 to current year. Records for 1971-74 published in WDR PA-81-1.

REVISED RECORDS.--WDR PA-81-1: 1974. WDR PA-89-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 21.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for periods of estimated discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 92.6 ft<sup>3</sup>/s, 25.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,770 ft<sup>3</sup>/s, July 28, 1982, gage height, 13.15 ft, from rating curve extended above 3,900 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 6.0 ft<sup>3</sup>/s, Oct. 11, 1966, gage height, 1.97 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1715	*2600	*6.50	May 30	0030	2050	5.83
Apr. 15	0930	1950	5.71	June 18	2030	2050	5.83
May 10	1900	2360	6.21	Aug. 7	0545	1810	5.53

Minimum daily discharge, 21.0 ft<sup>3</sup>/s, Sept. 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	69	43	369	94	55	70	105	76	36	26	33
2	297	53	41	51	89	55	73	56	69	35	26	31
3	96	66	41	41	82	55	440	53	97	36	25	30
4	56	55	38	39	148	52	207	63	87	32	25	29
5	51	51	40	41	105	51	106	231	61	37	145	30
6	53	52	41	38	77	52	80	60	59	38	405	42
7	50	53	40	37	72	50	350	54	60	32	611	31
8	47	85	38	105	68	49	157	51	65	30	51	30
9	45	400	39	192	67	51	78	50	239	52	38	28
10	44	98	42	187	336	59	73	616	59	68	443	31
11	47	58	38	94	113	51	275	416	54	31	234	35
12	44	52	40	60	94	50	79	79	53	48	50	27
13	44	49	41	49	78	49	62	221	50	330	145	27
14	43	49	38	44	72	48	57	123	74	67	253	53
15	41	64	36	54	68	47	932	71	456	172	49	93
16	41	96	38	51	69	47	119	94	62	87	42	32
17	188	57	e42	48	65	167	131	79	53	38	39	133
18	136	44	e43	49	60	272	120	64	259	34	37	30
19	375	43	e43	46	62	60	68	60	435	32	38	27
20	1160	47	e43	124	59	278	63	58	60	30	65	31
21	201	47	e42	107	57	87	76	68	55	92	51	26
22	91	42	e37	63	76	62	68	59	78	238	53	373
23	75	52	e38	52	121	57	61	55	63	85	50	56
24	68	52	e38	49	118	61	61	54	45	53	39	28
25	63	46	e35	388	64	67	63	52	43	33	37	24
26	61	61	e33	532	55	61	62	100	42	30	34	23
27	58	59	e32	113	56	57	58	66	41	30	145	23
28	57	89	e31	82	57	54	56	51	39	30	183	22
29	56	50	e31	167	---	54	55	828	37	30	129	21
30	57	44	e30	627	---	212	143	506	37	30	100	21
31	81	---	e103	115	---	130	---	92	---	32	38	---
TOTAL	3775	2083	1255	4014	2482	2500	4243	4535	2908	1948	3606	1420
MEAN	122	69.4	40.5	129	88.6	80.6	141	146	96.9	62.8	116	47.3
MAX	1160	400	103	627	336	278	932	828	456	330	611	373
MIN	41	42	30	37	55	47	55	50	37	30	25	21
CFSM	2.45	1.39	.81	2.60	1.78	1.62	2.84	2.94	1.95	1.26	2.34	.95
IN.	2.82	1.56	.94	3.00	1.85	1.87	3.17	3.39	2.17	1.46	2.69	1.06

CAL YR 1989 TOTAL 41832 MEAN 115 MAX 1550 MIN 22 CFSM 2.30 IN. 31.25  
WTR YR 1990 TOTAL 34769 MEAN 95.3 MAX 1160 MIN 21 CFSM 1.91 IN. 25.97

e Estimated.

## FRANKFORD CREEK BASIN

01467087 FRANKFORD CREEK AT CASTOR AVENUE, PHILADELPHIA PA

LOCATION.--Lat 40°00'57", long 75°05'50", Philadelphia County, Hydrologic Unit 02040203, on left bank at upstream side of Castor Avenue bridge 2.8 mi upstream from mouth in Northeast Philadelphia.

DRAINAGE AREA.--30.4 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 44.7 ft<sup>3</sup>/s, 19.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft<sup>3</sup>/s, July 31, 1985, gage height, 11.82 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 1.1 ft<sup>3</sup>/s, Sept. 5, 1985, gage height, 1.40 ft.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 30	1715	3060	6.01	Aug. 5	2000	3660	6.57
June 18	2045	*3870	*6.76				

Minimum daily discharge, 5.0 ft<sup>3</sup>/s, Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	e15	e18	212	17	14	9.4	26	19	15	15	e9.0
2	126	e13	17	23	16	14	12	19	19	14	11	e7.8
3	25	e21	17	36	17	13	88	18	69	14	9.2	e7.0
4	17	e19	16	27	27	14	20	46	31	13	7.2	e6.6
5	19	e18	16	e25	e21	14	13	117	19	12	288	13
6	e20	e18	16	23	e19	15	13	13	19	10	387	22
7	e19	e18	16	16	20	15	46	13	20	8.5	172	e8.5
8	e18	57	16	69	19	11	20	13	49	9.2	16	e5.8
9	e17	129	17	50	22	11	17	13	92	10	11	e5.9
10	e17	22	17	23	210	15	19	551	19	11	e240	e6.1
11	e18	19	16	e17	31	10	50	58	15	13	e130	e6.9
12	e18	16	15	15	28	11	20	22	14	85	e30	e6.1
13	e17	16	14	15	22	13	16	152	14	180	e110	e5.7
14	16	15	e14	15	19	13	14	25	30	36	e90	e18
15	e16	25	e14	22	18	14	245	20	361	196	e30	e45
16	e16	49	e14	17	19	14	17	21	20	29	e17	e12
17	101	19	e14	18	20	123	35	26	17	19	e14	e50
18	29	18	e14	20	19	80	20	20	348	12	e13	e11
19	160	e17	e14	20	19	14	17	20	60	e11	e13	e7.8
20	416	e17	e14	97	18	97	17	19	22	e11	e28	e10
21	24	e20	e14	32	17	17	24	21	19	207	e20	e7.0
22	20	e17	e14	19	38	15	18	20	37	129	e17	e180
23	16	23	e14	15	52	16	16	18	e23	30	e17	e27
24	14	22	e15	12	27	17	17	17	18	15	e17	e9.5
25	17	21	e15	289	15	15	19	17	18	12	e16	e6.8
26	17	e26	e15	130	14	14	48	62	18	8.8	e16	e6.4
27	16	e22	e15	28	15	14	22	20	18	12	e38	e6.0
28	16	e40	e15	25	15	14	19	17	17	15	e40	e5.7
29	16	e20	16	192	---	11	20	702	16	13	e50	e5.2
30	16	18	21	e70	---	32	200	67	16	11	e40	e5.0
31	17	---	64	14	---	15	---	22	---	49	e12	---
TOTAL	1284	770	527	1586	794	705	1111.4	2195	1457	1210.5	1914.4	522.8
MEAN	41.4	25.7	17.0	51.2	28.4	22.7	37.0	70.8	48.6	39.0	61.8	17.4
MAX	416	129	64	289	210	123	245	702	361	207	387	180
MIN	10	13	14	12	14	10	9.4	13	14	8.5	7.2	5.0
CFSM	1.36	.84	.56	1.68	.93	.75	1.22	2.33	1.60	1.28	2.03	.57
IN.	1.57	.94	.64	1.94	.97	.86	1.36	2.69	1.78	1.48	2.34	.64

CAL YR 1989 TOTAL 19144.4 MEAN 52.5 MAX 1340 MIN 5.4 CFSM 1.73 IN. 23.43  
WTR YR 1990 TOTAL 14077.1 MEAN 38.6 MAX 702 MIN 5.0 CFSM 1.27 IN. 17.23

e Estimated.

## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA

LOCATION.--Lat 39°57'11", long 75°08'05", Philadelphia County, Hydrologic Unit 02040202, at center of river on a line 200 ft upstream of bridge from the north side of pier 12 north through channel station +14.3 to pier-head line on New Jersey side of river.

DRAINAGE AREA.--7,993 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1949 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1963 to current year.

pH: October 1967 to current year.

WATER TEMPERATURE: November 1960 to current year.

DISSOLVED OXYGEN: November 1960 to current year.

INSTRUMENTATION.--Water-quality monitor located at river end of pier 12 north about 100 ft upstream from bridge. From November 1960 to July 1988 located on edge of pier 11.

REMARKS.--Further information on this station is given in U.S. Geological Survey Water-Supply Paper 1809-0. Station not operated Dec. 1 to March 12. Other interruptions in the record were due to malfunctions of the instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,450 microsiemens, Nov. 20, 1964; minimum, 65 microsiemens, Sept. 15, 1979.

pH: Maximum, 8.7, Oct. 14, 1979; minimum, 4.7, Dec. 29, 1978.

WATER TEMPERATURES: Maximum, 31.0°C, July 13-15, 1966; minimum, freezing point on many days during winter months.

DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Dec. 14, 1962; minimum, 0.0 mg/L, on many days.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	210	197	203	192	167	177	---	---	---	---	---	---
2	217	203	209	190	177	184	---	---	---	---	---	---
3	216	206	210	197	182	190	---	---	---	---	---	---
4	218	197	211	208	193	200	---	---	---	---	---	---
5	220	208	214	208	197	202	---	---	---	---	---	---
6	227	213	218	213	201	206	---	---	---	---	---	---
7	229	219	222	216	208	212	---	---	---	---	---	---
8	232	225	228	218	210	215	---	---	---	---	---	---
9	238	230	232	224	214	218	---	---	---	---	---	---
10	242	233	237	219	210	215	---	---	---	---	---	---
11	247	234	241	217	203	211	---	---	---	---	---	---
12	248	240	243	218	176	209	---	---	---	---	---	---
13	251	240	245	216	168	209	---	---	---	---	---	---
14	254	244	249	---	---	---	---	---	---	---	---	---
15	260	247	252	218	210	214	---	---	---	---	---	---
16	262	248	255	222	207	215	---	---	---	---	---	---
17	263	251	259	220	204	213	---	---	---	---	---	---
18	265	252	258	216	199	207	---	---	---	---	---	---
19	274	246	257	211	155	199	---	---	---	---	---	---
20	261	234	245	207	199	203	---	---	---	---	---	---
21	238	209	228	---	---	---	---	---	---	---	---	---
22	202	134	157	210	199	204	---	---	---	---	---	---
23	136	117	127	213	203	209	---	---	---	---	---	---
24	125	115	120	222	199	211	---	---	---	---	---	---
25	128	118	123	213	184	198	---	---	---	---	---	---
26	132	125	128	---	---	---	---	---	---	---	---	---
27	143	128	134	---	---	---	---	---	---	---	---	---
28	153	134	143	---	---	---	---	---	---	---	---	---
29	158	143	151	---	---	---	---	---	---	---	---	---
30	163	153	158	---	---	---	---	---	---	---	---	---
31	169	157	163	---	---	---	---	---	---	---	---	---
MONTH	274	115	204	224	155	205	---	---	---	---	---	---

## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	175	162	168	197	188	193
2	---	---	---	---	---	---	174	163	169	200	190	196
3	---	---	---	---	---	---	179	165	173	205	193	200
4	---	---	---	---	---	---	177	168	172	210	199	204
5	---	---	---	---	---	---	180	167	174	211	203	207
6	---	---	---	---	---	---	198	170	178	211	200	206
7	---	---	---	---	---	---	198	178	185	212	203	209
8	---	---	---	---	---	---	190	160	174	218	208	212
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	210	196	206
12	---	---	---	---	---	---	---	---	---	211	187	202
13	---	---	---	204	194	197	---	---	---	202	178	189
14	---	---	---	206	197	202	---	---	---	187	164	176
15	---	---	---	208	198	204	---	---	---	173	146	159
16	---	---	---	210	200	206	---	---	---	148	131	139
17	---	---	---	216	200	206	---	---	---	138	125	132
18	---	---	---	212	204	209	---	---	---	130	117	122
19	---	---	---	211	201	206	---	---	---	129	123	126
20	---	---	---	209	192	203	---	---	---	127	120	124
21	---	---	---	203	186	194	---	---	---	132	123	129
22	---	---	---	197	180	188	---	---	---	135	127	130
23	---	---	---	191	169	182	---	---	---	137	129	132
24	---	---	---	185	168	174	---	---	---	140	131	135
25	---	---	---	178	163	171	180	171	175	148	134	141
26	---	---	---	174	160	167	183	175	179	153	139	145
27	---	---	---	172	159	165	187	174	181	151	142	147
28	---	---	---	182	159	170	189	179	185	153	145	149
29	---	---	---	186	158	169	196	182	190	155	146	152
30	---	---	---	181	161	173	197	185	192	154	146	149
31	---	---	---	178	163	170	---	---	---	160	154	157
MONTH	---	---	---	216	158	187	198	160	178	218	117	164
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	160	150	155	242	229	237	243	217	228	218	206	213
2	161	153	157	248	231	239	259	221	235	219	201	212
3	165	156	161	249	237	242	259	223	237	218	199	210
4	174	161	166	249	236	243	253	221	240	224	201	213
5	173	161	169	250	239	245	259	225	244	226	205	216
6	191	160	171	255	241	248	261	220	239	224	204	215
7	191	166	176	260	242	253	250	214	229	226	207	218
8	187	166	175	260	246	257	237	213	223	242	206	222
9	187	174	178	261	248	255	233	219	226	237	210	225
10	185	176	180	262	249	257	240	225	232	233	211	224
11	189	180	185	265	252	255	234	216	226	230	214	221
12	---	---	---	269	252	261	224	201	213	237	215	224
13	---	---	---	271	249	260	215	190	205	240	218	227
14	---	---	---	266	239	253	207	180	194	236	221	228
15	---	---	---	258	230	244	202	173	186	242	224	232
16	---	---	---	245	228	235	193	172	182	240	219	232
17	---	---	---	247	232	238	197	178	184	243	220	232
18	---	---	---	248	234	240	194	184	188	241	223	229
19	209	202	205	248	231	239	194	184	190	243	224	235
20	212	203	208	248	230	239	200	189	194	243	228	237
21	228	204	211	249	229	240	204	193	198	249	231	241
22	225	211	218	253	220	239	206	193	201	---	---	---
23	221	212	217	252	218	236	208	194	202	245	235	240
24	220	215	218	246	210	229	208	193	202	---	---	---
25	240	215	227	244	209	224	207	190	198	---	---	---
26	249	222	231	235	203	220	202	186	193	---	---	---
27	232	222	228	233	205	220	213	189	199	---	---	---
28	234	225	229	232	207	221	228	196	208	---	---	---
29	236	225	232	234	208	221	219	203	209	---	---	---
30	239	229	236	234	210	222	215	207	211	---	---	---
31	---	---	---	235	216	226	217	207	212	---	---	---
MONTH	249	150	197	271	203	240	261	172	211	249	199	225

## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

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

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

## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.8	6.8	6.8	7.2	7.0	7.1	6.9	6.8	6.9	7.1	7.0	7.0
2	6.8	6.7	6.8	7.2	7.1	7.2	6.9	6.9	6.9	7.1	7.0	7.0
3	6.8	6.7	6.7	7.2	7.1	7.1	6.9	6.8	6.9	7.1	7.0	7.1
4	6.8	6.5	6.7	7.2	7.1	7.1	6.9	6.9	6.9	7.2	7.1	7.1
5	6.8	6.4	6.7	7.2	7.1	7.1	6.9	6.9	6.9	7.1	7.1	7.1
6	6.8	6.7	6.7	7.2	7.1	7.1	6.9	6.8	6.9	7.0	7.0	7.0
7	6.8	6.7	6.7	7.2	7.1	7.1	6.9	6.8	6.8	7.0	7.0	7.0
8	6.8	6.7	6.7	---	---	---	7.0	6.8	6.9	7.1	7.0	7.0
9	6.8	6.6	6.7	7.1	6.9	7.0	7.0	6.9	6.9	7.1	7.0	7.0
10	6.8	6.7	6.7	---	---	---	7.0	6.9	6.9	7.0	6.9	6.9
11	---	---	---	7.1	7.0	7.1	7.0	6.9	6.9	---	---	---
12	---	---	---	7.1	7.0	7.0	6.9	6.9	6.9	6.9	6.8	6.9
13	---	---	---	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.8	6.8
14	---	---	---	7.0	6.9	7.0	6.9	6.9	6.9	6.9	6.8	6.8
15	---	---	---	7.0	6.9	6.9	6.9	6.9	6.9	6.9	6.8	6.8
16	---	---	---	7.0	6.9	7.0	6.9	6.8	6.8	6.9	6.8	6.9
17	---	---	---	7.1	6.9	7.0	6.9	6.8	6.8	7.0	6.9	6.9
18	---	---	---	7.2	7.0	7.0	6.9	6.8	6.8	7.0	6.9	7.0
19	7.2	6.9	7.0	7.3	7.0	7.1	6.9	6.8	6.8	7.1	6.9	7.0
20	7.3	7.1	7.2	7.3	7.0	7.1	6.9	6.9	6.9	7.0	6.9	7.0
21	7.2	7.0	7.1	7.3	7.1	7.1	6.9	6.9	6.9	7.1	6.9	7.0
22	7.1	7.0	7.0	7.1	7.0	7.1	6.9	6.9	6.9	---	---	---
23	7.0	7.0	7.0	7.1	7.0	7.0	6.9	6.9	6.9	7.0	6.9	7.0
24	7.0	6.9	7.0	7.1	7.0	7.0	6.9	6.8	6.9	---	---	---
25	7.1	7.0	7.0	7.0	6.9	7.0	6.8	6.8	6.8	---	---	---
26	7.0	6.9	7.0	7.0	6.9	6.9	6.9	6.8	6.8	---	---	---
27	7.0	6.9	7.0	7.0	6.9	6.9	6.9	6.8	6.8	---	---	---
28	7.1	7.0	7.0	6.9	6.9	6.9	6.9	6.8	6.9	---	---	---
29	7.1	7.0	7.0	7.0	6.9	6.9	7.0	6.9	6.9	---	---	---
30	7.1	7.0	7.1	6.9	6.9	6.9	7.1	6.9	7.0	---	---	---
31	---	---	---	6.9	6.8	6.9	7.1	7.0	7.0	---	---	---
MONTH	7.3	6.4	6.9	7.3	6.8	7.0	7.1	6.8	6.9	7.2	6.8	7.0

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	19.5	18.5	19.0	13.5	13.0	13.0	---	---	---	---	---	---
2	19.0	18.5	19.0	13.5	13.0	13.5	---	---	---	---	---	---
3	19.0	18.0	18.5	13.5	13.0	13.5	---	---	---	---	---	---
4	18.5	17.0	18.0	13.5	13.0	13.5	---	---	---	---	---	---
5	18.0	16.5	17.5	13.5	12.5	13.0	---	---	---	---	---	---
6	17.5	17.0	17.5	13.5	13.0	13.5	---	---	---	---	---	---
7	17.5	17.0	17.5	14.0	13.5	13.5	---	---	---	---	---	---
8	17.0	17.0	17.0	14.0	13.5	13.5	---	---	---	---	---	---
9	17.0	16.5	16.5	14.0	13.5	13.5	---	---	---	---	---	---
10	16.5	16.5	16.5	13.5	13.0	13.0	---	---	---	---	---	---
11	16.5	16.0	16.5	13.0	12.0	12.5	---	---	---	---	---	---
12	16.5	16.0	16.5	12.5	11.5	12.0	---	---	---	---	---	---
13	17.0	16.0	16.5	12.0	11.0	12.0	---	---	---	---	---	---
14	16.5	16.5	16.5	---	---	---	---	---	---	---	---	---
15	17.0	16.5	16.5	---	---	---	---	---	---	---	---	---
16	17.5	17.0	17.0	12.5	12.5	12.5	---	---	---	---	---	---
17	17.5	17.0	17.0	12.5	11.5	12.0	---	---	---	---	---	---
18	17.5	17.0	17.0	12.0	11.0	11.5	---	---	---	---	---	---
19	17.0	16.0	16.5	10.5	8.5	10.5	---	---	---	---	---	---
20	16.5	15.5	16.0	10.5	10.5	10.5	---	---	---	---	---	---
21	15.5	14.0	15.0	---	---	---	---	---	---	---	---	---
22	14.0	12.0	12.5	9.0	9.0	9.0	---	---	---	---	---	---
23	12.0	11.5	11.5	9.0	8.0	8.5	---	---	---	---	---	---
24	12.0	11.5	11.5	8.0	7.5	8.0	---	---	---	---	---	---
25	12.0	11.5	11.5	8.0	7.0	7.5	---	---	---	---	---	---
26	12.0	11.5	12.0	---	---	---	---	---	---	---	---	---
27	12.5	12.0	12.0	---	---	---	---	---	---	---	---	---
28	12.5	12.0	12.5	---	---	---	---	---	---	---	---	---
29	12.5	12.5	12.5	---	---	---	---	---	---	---	---	---
30	13.0	12.5	12.5	---	---	---	---	---	---	---	---	---
31	13.5	13.0	13.0	---	---	---	---	---	---	---	---	---
MONTH	19.5	11.5	15.5	14.0	7.0	11.8	---	---	---	---	---	---



## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	9.0	8.5	8.5	17.5	16.5	17.0
2	---	---	---	---	---	---	9.0	8.5	8.5	18.0	17.0	17.5
3	---	---	---	---	---	---	9.0	8.5	8.5	18.0	17.0	17.5
4	---	---	---	---	---	---	9.0	8.0	8.5	18.0	17.0	17.5
5	---	---	---	---	---	---	9.0	8.0	8.5	18.0	17.0	17.5
6	---	---	---	---	---	---	9.0	8.5	8.5	18.5	17.5	18.0
7	---	---	---	---	---	---	8.5	8.5	8.5	18.5	17.5	18.0
8	---	---	---	---	---	---	9.0	8.0	8.5	18.5	18.0	18.5
9	---	---	---	---	---	---	---	---	---	22.0	18.0	20.0
10	---	---	---	---	---	---	---	---	---	20.5	18.5	19.5
11	---	---	---	---	---	---	---	---	---	18.5	17.5	18.0
12	---	---	---	---	---	---	---	---	---	18.0	17.5	17.5
13	---	---	---	8.0	7.0	7.0	---	---	---	17.5	17.5	17.5
14	---	---	---	8.0	7.0	7.5	---	---	---	17.5	16.5	17.0
15	---	---	---	8.5	7.5	8.0	---	---	---	17.0	16.0	16.5
16	---	---	---	9.5	8.5	8.5	---	---	---	16.5	16.0	16.0
17	---	---	---	10.5	9.0	9.5	---	---	---	16.5	16.5	16.5
18	---	---	---	12.0	10.0	11.0	---	---	---	16.5	16.5	16.5
19	---	---	---	13.0	11.0	12.0	---	---	---	17.0	16.5	16.5
20	---	---	---	14.0	12.0	13.0	---	---	---	17.0	16.5	16.5
21	---	---	---	13.5	10.5	13.0	---	---	---	16.5	16.0	16.0
22	---	---	---	13.5	13.0	13.5	---	---	---	16.0	15.5	16.0
23	---	---	---	13.5	12.0	13.0	---	---	---	16.0	15.5	16.0
24	---	---	---	12.5	9.5	11.5	---	---	---	16.0	15.5	16.0
25	---	---	---	11.5	10.0	11.0	14.0	13.5	14.0	16.5	15.5	16.0
26	---	---	---	11.0	9.5	10.0	15.0	14.0	14.5	16.5	16.0	16.0
27	---	---	---	10.0	9.0	9.5	16.0	14.5	15.0	16.5	16.0	16.0
28	---	---	---	9.5	9.0	9.5	16.5	15.5	16.0	17.0	16.0	16.5
29	---	---	---	9.5	8.5	9.0	16.5	16.0	16.5	17.0	16.5	16.5
30	---	---	---	9.0	8.5	9.0	17.0	16.0	16.5	17.0	16.5	17.0
31	---	---	---	9.0	8.5	9.0	---	---	---	18.0	17.0	17.5
MONTH	---	---	---	14.0	7.0	10.2	17.0	8.0	11.5	22.0	15.5	17.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	17.5	18.0	26.0	25.5	25.5	27.0	26.5	26.5	24.5	24.0	24.5
2	18.5	18.0	18.0	25.5	25.5	25.5	26.5	26.0	26.5	25.0	24.5	24.5
3	19.0	18.5	18.5	25.5	25.0	25.5	27.0	26.5	26.5	25.0	24.5	25.0
4	20.5	19.0	19.0	25.5	25.0	25.5	27.0	26.5	26.5	25.0	24.5	24.5
5	19.5	17.0	18.5	26.0	25.5	25.5	27.0	26.5	26.5	25.0	24.5	24.5
6	20.0	19.0	19.5	26.0	25.5	26.0	27.0	26.5	26.5	25.0	24.5	25.0
7	20.5	19.5	20.0	26.0	25.5	26.0	27.0	26.5	26.5	25.5	25.0	25.0
8	21.0	20.0	20.5	---	---	---	27.0	26.5	27.0	25.0	24.5	25.0
9	21.5	20.5	21.0	26.5	25.5	26.0	27.0	26.5	27.0	24.5	24.5	24.5
10	22.0	21.0	21.5	---	---	---	26.5	26.5	26.5	24.5	24.0	24.5
11	22.0	21.0	21.5	26.5	26.0	26.5	26.5	26.0	26.5	---	---	---
12	---	---	---	26.0	25.5	26.0	26.5	26.0	26.5	25.0	24.5	24.5
13	---	---	---	25.5	24.5	25.0	26.5	26.0	26.0	25.0	24.5	24.5
14	---	---	---	25.0	24.5	24.5	26.5	25.5	26.0	24.5	24.5	24.5
15	---	---	---	25.0	24.5	24.5	26.0	24.0	26.0	24.5	24.5	24.5
16	---	---	---	25.0	24.5	25.0	26.0	25.5	26.0	24.5	24.0	24.0
17	---	---	---	25.5	25.0	25.0	26.0	25.5	26.0	24.0	23.5	23.5
18	---	---	---	25.5	25.0	25.5	26.5	26.0	26.0	23.5	23.0	23.0
19	23.5	23.0	23.5	25.5	25.0	25.5	26.5	26.0	26.0	23.0	22.5	22.5
20	24.0	23.5	23.5	26.0	25.0	25.5	26.0	25.0	25.5	22.5	22.0	22.5
21	24.0	23.5	23.5	26.0	25.5	25.5	25.0	24.5	25.0	22.0	22.0	22.0
22	24.0	23.5	24.0	26.0	25.5	26.0	24.5	24.0	24.5	---	---	---
23	24.5	24.0	24.0	26.5	26.0	26.0	24.5	24.0	24.0	21.5	21.0	21.5
24	24.5	24.0	24.0	26.5	26.0	26.0	24.0	24.0	24.0	---	---	---
25	24.0	24.0	24.0	26.5	26.0	26.5	24.0	23.5	24.0	---	---	---
26	24.5	24.0	24.0	27.0	26.0	26.5	24.0	24.0	24.0	---	---	---
27	24.5	24.0	24.5	27.0	26.5	26.5	24.5	24.0	24.0	---	---	---
28	25.0	24.5	24.5	27.0	26.5	26.5	25.0	24.5	24.5	---	---	---
29	25.5	25.0	25.0	27.0	26.5	26.5	25.0	24.5	24.5	---	---	---
30	25.5	25.0	25.5	27.0	26.5	26.5	25.0	24.5	24.5	---	---	---
31	---	---	---	27.0	26.5	26.5	24.5	24.5	24.5	---	---	---
MONTH	25.5	17.0	22.0	27.0	24.5	25.8	27.0	23.5	25.6	25.5	21.0	24.0

## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN BRIDGE AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	5.6	4.8	5.3	7.4	7.2	7.3	---	---	---	---	---	---
2	5.5	4.7	5.1	7.5	7.2	7.3	---	---	---	---	---	---
3	6.1	4.7	5.1	7.3	7.1	7.2	---	---	---	---	---	---
4	6.7	5.0	5.4	7.3	7.0	7.2	---	---	---	---	---	---
5	6.0	5.1	5.6	7.2	6.8	7.0	---	---	---	---	---	---
6	5.9	5.0	5.5	7.0	6.8	6.9	---	---	---	---	---	---
7	5.8	5.0	5.4	6.8	6.5	6.7	---	---	---	---	---	---
8	5.8	4.9	5.5	6.7	6.4	6.6	---	---	---	---	---	---
9	5.8	5.0	5.4	6.6	6.3	6.5	---	---	---	---	---	---
10	5.9	5.0	5.4	7.1	6.4	6.7	---	---	---	---	---	---
11	6.1	4.9	5.4	7.5	6.7	7.2	---	---	---	---	---	---
12	5.7	4.8	5.2	7.7	6.9	7.4	---	---	---	---	---	---
13	6.1	4.8	5.3	7.9	7.3	7.6	---	---	---	---	---	---
14	6.7	4.7	5.2	---	---	---	---	---	---	---	---	---
15	5.9	4.5	4.9	---	---	---	---	---	---	---	---	---
16	5.9	4.3	4.7	7.4	7.0	7.2	---	---	---	---	---	---
17	6.0	4.2	4.6	8.4	7.3	7.4	---	---	---	---	---	---
18	5.1	4.2	4.5	7.8	7.3	7.6	---	---	---	---	---	---
19	5.2	4.6	4.9	8.2	7.3	8.0	---	---	---	---	---	---
20	6.3	4.8	5.4	8.1	7.9	8.0	---	---	---	---	---	---
21	7.3	6.4	6.8	---	---	---	---	---	---	---	---	---
22	7.9	7.3	7.7	8.7	8.5	8.6	---	---	---	---	---	---
23	7.9	7.7	7.9	8.6	8.4	8.5	---	---	---	---	---	---
24	8.0	7.7	7.9	8.7	8.5	8.6	---	---	---	---	---	---
25	8.1	7.8	7.9	8.9	8.5	8.7	---	---	---	---	---	---
26	8.0	7.6	7.8	---	---	---	---	---	---	---	---	---
27	7.9	7.5	7.7	---	---	---	---	---	---	---	---	---
28	7.9	7.5	7.7	---	---	---	---	---	---	---	---	---
29	7.8	7.4	7.6	---	---	---	---	---	---	---	---	---
30	7.7	7.3	7.5	---	---	---	---	---	---	---	---	---
31	7.5	7.2	7.4	---	---	---	---	---	---	---	---	---
MONTH	8.1	4.2	6.1	8.9	6.3	7.5	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	9.3	8.8	9.1	7.4	6.9	7.2
2	---	---	---	---	---	---	9.3	8.8	9.0	7.2	6.8	7.0
3	---	---	---	---	---	---	9.2	8.8	9.0	7.0	6.6	6.8
4	---	---	---	---	---	---	9.2	9.0	9.1	6.8	6.4	6.7
5	---	---	---	---	---	---	9.4	9.1	9.2	6.6	6.2	6.4
6	---	---	---	---	---	---	9.6	9.0	9.4	6.5	6.0	6.2
7	---	---	---	---	---	---	---	---	---	6.5	6.1	6.3
8	---	---	---	---	---	---	9.2	8.8	9.0	6.8	6.2	6.4
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	6.9	6.4	6.5
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	9.8	9.4	9.6	---	---	---	7.1	6.6	6.8
14	---	---	---	9.9	9.4	9.6	---	---	---	7.1	6.4	6.7
15	---	---	---	9.9	9.4	9.6	---	---	---	7.7	6.6	7.2
16	---	---	---	9.7	9.4	9.5	---	---	---	7.8	7.3	7.7
17	---	---	---	9.6	9.0	9.3	---	---	---	7.8	7.4	7.7
18	---	---	---	9.1	8.6	8.9	---	---	---	8.1	7.7	7.9
19	---	---	---	8.9	8.2	8.6	---	---	---	7.9	7.5	7.7
20	---	---	---	8.4	7.7	8.0	---	---	---	8.0	7.5	7.8
21	---	---	---	8.7	7.4	7.7	---	---	---	8.3	7.7	8.0
22	---	---	---	7.6	7.3	7.4	---	---	---	8.3	7.8	8.1
23	---	---	---	8.4	7.3	7.6	---	---	---	8.2	7.8	8.0
24	---	---	---	9.5	7.8	8.2	---	---	---	8.2	7.7	8.0
25	---	---	---	9.1	7.9	8.3	9.2	8.6	9.0	8.2	7.7	7.9
26	---	---	---	9.0	8.0	8.4	8.8	8.3	8.5	8.3	7.7	8.0
27	---	---	---	9.0	8.3	8.6	8.5	8.0	8.2	8.3	7.8	8.0
28	---	---	---	8.8	8.4	8.5	8.2	7.7	7.9	8.2	7.6	8.0
29	---	---	---	9.4	8.4	8.7	8.0	7.5	7.7	8.2	7.6	7.9
30	---	---	---	9.6	8.4	9.1	7.9	7.3	7.6	7.9	7.4	7.7
31	---	---	---	9.5	8.8	9.1	---	---	---	7.9	7.4	7.6
MONTH	---	---	---	9.9	7.3	8.7	9.6	7.3	8.7	8.3	6.0	7.4

## DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.6	7.3	7.4	7.4	6.0	6.6	4.9	4.2	4.4	7.3	6.5	6.9
2	7.8	7.1	7.2	7.4	6.2	6.7	4.8	4.2	4.5	7.3	6.7	7.0
3	7.3	6.6	7.1	6.9	6.1	6.5	4.9	4.1	4.5	7.5	6.6	7.0
4	7.0	6.6	6.8	7.1	6.1	6.5	5.2	4.2	4.5	7.8	6.8	7.3
5	7.2	6.5	6.9	7.7	5.8	6.4	5.0	4.2	4.6	7.3	6.9	7.1
6	7.4	6.7	6.9	6.5	5.6	6.0	4.6	3.9	4.2	6.8	6.4	6.6
7	8.1	6.7	7.1	6.3	5.5	5.8	5.1	3.5	4.0	6.5	5.9	6.2
8	7.3	6.7	7.0	---	---	---	5.4	3.3	4.3	6.5	5.7	6.1
9	7.0	6.5	6.8	5.7	4.9	5.4	5.5	3.7	4.6	6.3	5.5	5.9
10	6.9	6.3	6.6	---	---	---	5.4	3.8	4.5	5.9	4.9	5.4
11	6.8	6.1	6.5	4.9	4.4	4.7	4.7	3.6	4.2	---	---	---
12	---	---	---	4.8	4.1	4.3	5.3	3.8	4.6	5.5	4.1	4.5
13	---	---	---	4.6	3.9	4.1	5.9	4.3	5.1	5.0	3.9	4.3
14	---	---	---	4.6	3.3	3.7	6.4	5.0	5.5	5.2	3.6	4.4
15	---	---	---	5.0	3.2	4.0	6.4	5.2	5.8	5.0	3.5	4.2
16	---	---	---	5.2	3.7	4.4	6.0	5.2	5.6	5.3	3.7	4.4
17	---	---	---	5.9	4.0	4.7	5.6	5.0	5.3	5.7	3.9	4.7
18	---	---	---	7.4	4.3	5.5	5.5	4.8	5.1	5.7	4.5	5.2
19	8.7	7.5	7.9	8.4	4.7	6.3	5.5	4.5	4.8	6.0	4.7	5.3
20	8.5	6.8	7.6	8.2	5.2	6.8	5.1	4.6	4.9	5.8	4.8	5.3
21	7.9	6.4	7.1	8.7	5.8	6.9	4.9	4.6	4.7	5.9	4.7	5.5
22	7.0	5.9	6.4	7.1	6.0	6.5	4.6	4.4	4.5	---	---	---
23	6.0	5.4	5.8	6.6	5.7	6.1	4.4	4.0	4.2	5.4	4.4	4.9
24	5.6	5.1	5.3	6.2	5.3	5.7	4.3	3.8	4.1	---	---	---
25	5.9	4.6	5.1	5.8	4.8	5.2	4.3	3.6	4.0	---	---	---
26	5.6	4.4	5.1	5.4	4.5	4.9	4.9	3.7	4.3	---	---	---
27	5.9	5.0	5.4	5.1	4.2	4.6	4.8	4.0	4.6	---	---	---
28	7.7	5.0	5.8	4.9	4.2	4.6	5.1	4.2	4.7	---	---	---
29	7.1	5.4	6.1	5.2	4.6	4.8	5.8	4.5	5.1	---	---	---
30	7.2	5.9	6.4	5.1	4.4	4.7	6.6	4.9	5.7	---	---	---
31	---	---	---	4.8	4.3	4.6	7.2	5.6	6.4	---	---	---
MONTH	8.7	4.4	6.5	8.7	3.2	5.4	7.2	3.3	4.8	7.8	3.5	5.6

## SCHUYLKILL RIVER BASIN

01468500 SCHUYLKILL RIVER AT LANDINGVILLE, PA

LOCATION.--Lat 40°37'45", long 76°07'30", Schuylkill County, Hydrologic Unit 02040203, on left bank 10 ft upstream from highway bridge at Landingville, 0.1 mi upstream from Mahannon Creek, and 5 mi downstream from West Branch Schuylkill River.

DRAINAGE AREA.--133 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1947 to April 1953, October 1963 to September 1965, August 1973 to current year.

REVISED RECORDS.--WDR PA-75-1: 1973(P), 1974(P).

GAGE.--Water-stage recorder. Datum of gage is 470.64 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 27, 1947, nonrecording gage 10 ft downstream at same datum.

REMARKS.--Records good except for periods of estimated record, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1948-52, 1964-65, 1975-90), 278 ft<sup>3</sup>/s, 28.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,570 ft<sup>3</sup>/s, Nov. 25, 1950; maximum gage height, 13.60 ft Apr. 16, 1983; minimum discharge, 19 ft<sup>3</sup>/s, Oct. 30, 31, Nov. 4, 1963; minimum gage height, 2.75 ft, Sept. 13, 21, 22, 23, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1972 reached a stage of 17.36 ft, discharge, 14,000 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1430	1750	7.21	Jan. 30	0100	1900	7.51
Nov. 16	1230	*2570	*8.82	May 10	1930	1470	6.60

Minimum daily discharge, 86 ft<sup>3</sup>/s, Oct. 8, 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	233	207	265	781	300	226	194	381	148	117	150
2	137	204	191	155	668	294	272	182	358	142	109	142
3	115	207	180	149	570	286	446	179	347	136	108	167
4	104	196	170	147	631	265	416	188	312	129	106	138
5	101	185	176	162	526	249	421	327	285	161	198	139
6	93	180	177	159	480	233	382	219	271	130	218	139
7	87	174	174	152	453	220	377	208	269	120	152	135
8	86	173	165	143	429	221	355	204	251	117	128	126
9	86	270	153	147	408	223	329	200	592	116	129	113
10	89	231	147	184	501	220	329	702	340	113	223	118
11	95	200	149	194	420	211	459	944	298	131	180	113
12	90	193	150	182	394	205	357	729	273	272	140	114
13	90	189	148	169	369	196	336	670	258	370	159	112
14	91	193	141	160	358	191	328	594	251	222	204	109
15	89	194	135	161	357	184	364	493	241	231	150	367
16	88	1200	e132	161	367	182	325	517	226	198	146	180
17	201	929	e130	167	345	272	305	850	214	177	143	167
18	144	686	e127	191	311	258	285	706	256	168	140	158
19	682	557	e125	196	303	220	273	620	282	160	132	159
20	1030	494	e123	198	283	341	260	555	233	158	174	155
21	828	444	e121	282	270	298	302	512	224	170	170	140
22	564	383	e119	293	294	305	266	468	215	161	257	250
23	436	358	e118	272	370	295	248	419	210	157	224	179
24	370	318	e117	275	473	282	235	384	198	143	213	157
25	332	290	e116	334	400	270	e226	351	188	133	214	153
26	296	275	e115	779	348	258	e222	360	181	128	192	170
27	271	261	e114	660	332	246	e219	323	174	125	184	157
28	244	258	e113	555	321	235	210	285	169	121	182	138
29	226	229	e111	671	---	229	207	431	160	119	196	133
30	213	217	e109	1420	---	244	211	578	172	119	174	131
31	225	---	364	983	---	234	---	413	---	128	165	---
TOTAL	7595	9921	4617	9966	11762	7667	9191	13805	7829	4903	5227	4609
MEAN	245	331	149	321	420	247	306	445	261	158	169	154
MAX	1030	1200	364	1420	781	341	459	944	592	370	257	367
MIN	86	173	109	143	270	182	207	179	160	113	106	109
CFSM	1.84	2.49	1.12	2.42	3.16	1.86	2.30	3.35	1.96	1.19	1.27	1.16
IN.	2.12	2.77	1.29	2.79	3.29	2.14	2.57	3.86	2.19	1.37	1.46	1.29

CAL YR 1989 TOTAL 105475 MEAN 289 MAX 2260 MIN 83 CFSM 2.17 IN. 29.50  
WTR YR 1990 TOTAL 97092 MEAN 266 MAX 1420 MIN 86 CFSM 2.00 IN. 27.16

e Estimated.

## SCHUYLKILL RIVER BASIN

01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA

LOCATION.--Lat 40°48'25", long 75°58'20", Schuylkill County, Hydrologic Unit 02040203, on left bank at pumping plant of Panther Valley Water Co., 0.6 mi upstream from Tamaqua, and 0.8 mi upstream from Panther Creek.

DRAINAGE AREA.--42.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for periods, published in WSP 1302. June 1916 to September 1919, gage heights and discharge measurements only, in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 756: Drainage area. WSP 971: 1942. WSP 1302: 1922, 1926-30. WSP 1432: 1920-21, 1933.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 817.48 ft above National Geodetic Vertical Datum of 1929. Prior to June 21, 1929, nonrecording gage at site 3,600 ft downstream at datum 28.64 ft lower.

REMARKS.--Record good except for periods of estimated record, which are fair. Flow regulated by Still Creek Reservoir (station 01469200) 6.5 mi upstream. Figures of daily discharge do not include water diverted from reservoir. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--71 years, 92.5 ft<sup>3</sup>/s, 29.27 in/yr, adjusted for diversion and, since February 1933, for storage.

EXTREMES FOR PERIOD OF PERIOD.--Maximum discharge, 7,790 ft<sup>3</sup>/s, Aug. 18, 1955, gage height, 11.10 ft, from rating curve extended above 3,200 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow; minimum, 1.8 ft<sup>3</sup>/s, Dec. 18, 1931, gage height, 1.21 ft; minimum daily, 2.9 ft<sup>3</sup>/s, Sept. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,470 ft<sup>3</sup>/s, Nov. 16, gage height, 5.30 ft; minimum daily discharge, 15.0 ft<sup>3</sup>/s, Oct. 10, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	58	56	135	290	93	72	58	111	33	22	37
2	25	52	53	96	230	89	75	53	105	31	20	37
3	23	51	49	64	185	87	126	50	101	29	20	42
4	19	49	51	42	203	82	131	53	94	28	18	34
5	17	45	46	37	188	74	132	130	82	27	29	31
6	16	43	46	38	164	70	127	98	74	28	48	30
7	16	41	44	35	153	62	128	88	79	26	35	28
8	16	40	39	33	143	58	121	79	71	26	27	26
9	16	57	e38	32	134	58	108	72	165	26	24	24
10	15	59	e36	39	168	60	102	327	116	25	42	25
11	16	50	35	46	149	60	136	601	92	26	46	23
12	15	46	35	44	132	57	112	394	81	49	32	22
13	16	43	34	39	119	53	102	321	73	96	88	21
14	16	43	34	35	115	50	99	295	68	49	140	21
15	16	44	e35	37	114	47	110	218	66	45	79	155
16	19	746	e34	38	122	45	103	311	63	40	68	71
17	38	653	e33	42	116	66	93	639	57	35	55	53
18	29	351	e32	51	102	85	84	555	60	33	51	44
19	195	244	e32	53	98	68	76	399	66	31	46	42
20	328	191	e31	52	91	105	72	292	57	29	49	47
21	315	154	e31	73	84	103	98	242	51	31	54	41
22	218	127	e31	86	86	102	90	188	48	33	70	58
23	162	113	e30	79	107	102	78	164	46	31	66	54
24	129	98	e30	78	140	102	71	141	44	28	70	46
25	108	88	e29	92	117	99	68	124	41	26	66	41
26	92	83	e29	281	99	92	67	121	40	24	57	46
27	80	76	e29	251	98	84	62	113	38	23	52	47
28	72	74	e28	211	97	77	60	99	36	21	49	42
29	65	67	e28	224	---	73	64	132	34	21	49	39
30	59	60	e28	577	---	76	65	196	34	21	43	39
31	59	---	77	390	---	74	---	128	---	21	39	---
TOTAL	2228	3846	1163	3330	3844	2353	2832	6691	2093	992	1554	1266
MEAN	71.9	128	37.5	107	137	75.9	94.4	216	69.8	32.0	50.1	42.2
MAX	328	746	77	577	290	105	136	639	165	96	140	155
MIN	15	40	28	32	84	45	60	50	34	21	18	21
MEAN#	81.7	150	42.6	119	151	84.9	104	225	79.9	35.6	62.4	52.1
CFSM#	1.96	3.51	.99	2.77	3.52	1.98	2.42	5.24	1.86	.83	1.45	1.21
IN.#	2.20	3.91	1.14	3.20	3.57	2.28	2.71	6.05	2.08	.96	1.68	1.36
†	9.0	8.6	8.4	9.6	9.0	9.0	9.1	9.3	10.6	7.5	8.9	8.9

CAL YR 1989 TOTAL 32147 MEAN 88.1 MAX 1030 MIN 14 MEAN# 99.0 CFSM# 2.31 IN.# 31.34  
WTR YR 1990 TOTAL 32192 MEAN 88.2 MAX 746 MIN 15 MEAN# 98.6 CFSM# 2.30 IN.# 31.21

# Adjusted for diversion and change in contents in Still Creek Reservoir.

† Diversion from Still Creek Reservoir equivalent in cubic feet per second, furnished by the borough.

e Estimated.

## SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA

LOCATION.--Lat 40°31'21", long 75°59'55", Berks County, Hydrologic Unit 02040203, on right bank 50 ft upstream from highway bridge at Berne, 0.5 mi upstream from Mill Creek, and 6.5 mi downstream from Little Schuylkill River. Water-quality sampling site at bridge 50 ft downstream.

DRAINAGE AREA.--355 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1947 to current year. Monthly discharge only for August 1947, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 310.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except periods of estimated discharge which are poor. Some regulation at low flow by mine pumpage and by Still Creek Reservoir (station 01469200) about 25 mi upstream.

AVERAGE DISCHARGE.--43 years, 707 ft<sup>3</sup>/s, 27.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft<sup>3</sup>/s, June 22, 1972, gage height, 19.90 ft, from flood-mark in gage shelter, from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum, 31 ft<sup>3</sup>/s, Sept. 2, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1930	5110	8.31	Jan. 30	0530	6460	8.90
Nov. 16	1730	*11,500	*10.76	May 10	2400	4500	8.02

Minimum daily discharge, 174 ft<sup>3</sup>/s, Oct. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	496	462	e1000	2350	810	531	425	987	260	253	282
2	270	431	418	e620	1870	754	574	387	854	248	202	279
3	293	423	403	e410	1530	723	1120	359	775	238	196	352
4	239	409	430	e390	1580	653	1250	360	692	226	185	268
5	223	365	388	e420	1420	581	1290	744	604	235	282	256
6	212	344	375	e410	1240	552	1110	554	548	276	464	264
7	199	348	381	e370	1160	505	1030	503	523	215	337	255
8	192	348	348	e400	1050	482	954	476	484	206	256	239
9	185	485	342	e500	972	474	836	458	1550	202	235	221
10	192	539	335	e480	1200	473	784	1600	1010	193	330	221
11	213	433	319	578	1090	466	1140	3530	809	204	479	215
12	201	411	319	503	994	444	940	2360	717	475	301	208
13	195	373	316	450	918	425	848	1890	643	989	273	209
14	180	388	304	398	879	399	807	1710	603	572	590	207
15	174	388	e300	390	866	385	933	1290	564	551	376	579
16	180	4480	e296	393	875	374	843	1230	530	475	327	393
17	347	4140	e292	403	837	743	763	2460	472	407	302	302
18	392	2340	e290	456	734	1110	710	2150	472	366	282	267
19	1540	1670	e288	486	716	847	650	1740	631	342	271	252
20	2960	1360	e282	465	677	1100	617	1410	515	318	297	282
21	2970	1170	e280	652	630	1000	693	1250	450	320	360	249
22	1760	948	e278	798	645	937	662	1090	432	312	477	401
23	1220	862	e275	736	918	875	591	937	397	297	544	378
24	973	756	e272	727	1680	793	547	831	386	272	473	286
25	819	674	e270	806	1420	737	523	738	359	255	489	263
26	714	645	e268	2450	1100	683	507	729	342	240	428	257
27	629	605	e265	2300	969	635	476	693	323	231	386	291
28	564	586	e262	1780	899	584	445	591	309	225	367	252
29	507	535	e260	1640	---	549	427	817	294	213	373	234
30	474	485	e258	5120	---	573	457	1920	307	210	346	225
31	472	---	e620	3260	---	575	---	1230	---	206	315	---
TOTAL	19697	27437	10196	29791	31219	20241	23058	36462	17582	9779	10796	8387
MEAN	635	915	329	961	1115	653	769	1176	586	315	348	280
MAX	2970	4480	620	5120	2350	1110	1290	3530	1550	989	590	579
MIN	174	344	258	370	630	374	427	359	294	193	185	207
CFSM	1.79	2.58	.93	2.71	3.14	1.84	2.17	3.31	1.65	.89	.98	.79
IN.	2.06	2.88	1.07	3.12	3.27	2.12	2.42	3.82	1.84	1.02	1.13	.88

CAL YR 1989 TOTAL 278366 MEAN 763 MAX 11500 MIN 169 CFSM 2.15 IN. 29.17  
WTR YR 1990 TOTAL 244645 MEAN 670 MAX 5120 MIN 174 CFSM 1.89 IN. 25.64

e Estimated.



## SCHUYLKILL RIVER BASIN

01470756 MAIDEN CREEK AT VIRGINVILLE, PA

LOCATION.--Lat 40°30'51", long 75°53'00", Berks County, Hydrologic Unit 02040203, on right bank 0.9 mi downstream from Sacony Creek, 0.9 mi southwest of Virginville, and 1.0 mi upstream from Moselem Creek.

DRAINAGE AREA.--159 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1973 to current year.

REVISED RECORD.--WDR PA-87-1: 1975(P), 1976(P), 1978(P), 1979(P), 1982-1984(P).

GAGE.--Water-stage recorder. Elevation of gage is 310 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for periods of estimated records which are poor. Several observation of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 264 ft<sup>3</sup>/s, 22.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s, Jan. 24, 1979, gage height, 12.67 ft; minimum, 11 ft<sup>3</sup>/s, Aug. 25, Sept. 24, 25, 1980; minimum gage height, 1.88 ft, Aug. 25, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of 17.2 feet, from floodmarks, discharge, about 40,000 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1930	3260	7.18	May 10	2030	2240	6.13
Jan. 30	0545	*3710	*7.58				

Minimum daily discharge, 51 ft<sup>3</sup>/s, Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	175	123	e520	834	282	172	148	440	94	79	108
2	247	151	112	e310	634	261	190	133	351	85	57	113
3	205	156	112	e250	497	248	620	122	302	78	53	187
4	153	147	e109	e250	548	219	751	125	265	73	52	110
5	137	130	e101	e260	452	195	632	366	227	79	117	99
6	128	126	e95	e250	386	185	476	212	199	92	239	98
7	120	120	e88	e240	356	163	425	189	194	71	362	90
8	107	120	e80	e220	323	156	356	166	176	65	170	80
9	101	347	e82	e230	301	160	298	152	822	66	138	74
10	95	316	e83	e280	471	163	282	844	427	63	281	81
11	104	250	e84	e370	399	159	349	1150	330	67	564	73
12	92	220	e85	e290	385	151	272	614	273	203	372	68
13	84	193	e85	214	348	142	238	511	232	730	313	67
14	78	178	e84	208	322	134	225	461	210	312	503	64
15	75	172	e78	165	304	127	366	339	199	274	307	99
16	75	386	e75	157	317	125	305	325	181	226	255	74
17	203	351	e74	184	277	279	289	718	161	174	213	70
18	224	284	e73	248	237	409	266	442	211	150	183	60
19	1100	250	e72	245	236	271	237	347	309	133	171	59
20	2100	235	e71	219	216	304	221	292	201	120	228	76
21	1750	214	e70	325	199	263	263	279	167	114	206	62
22	869	182	e70	367	227	231	225	254	150	112	302	187
23	557	186	e69	318	338	215	196	216	138	105	293	138
24	411	166	e69	303	594	199	179	195	128	94	253	83
25	332	154	e68	404	503	190	172	176	117	84	227	69
26	282	164	e68	1640	402	178	165	197	111	75	202	62
27	245	157	e67	1170	344	165	151	188	102	70	175	61
28	219	168	e66	760	322	156	142	156	96	66	157	55
29	197	146	e64	758	---	151	144	392	95	64	152	52
30	181	129	e62	2800	---	178	157	1100	127	63	138	51
31	172	---	e225	1310	---	190	---	602	---	67	119	---
TOTAL	10767	5973	2664	15265	10772	6249	8764	11411	6941	4069	6881	2570
MEAN	347	199	85.9	492	385	202	292	368	231	131	222	85.7
MAX	2100	386	225	2800	834	409	751	1150	822	730	564	187
MIN	75	120	62	157	199	125	142	122	95	63	52	51
CFSM	2.18	1.25	.54	3.10	2.42	1.27	1.84	2.32	1.46	.83	1.40	.54
IN.	2.52	1.40	.62	3.57	2.52	1.46	2.05	2.67	1.62	.95	1.61	.60

CAL YR 1989 TOTAL 107144 MEAN 294 MAX 7010 MIN 39 CFSM 1.85 IN. 25.07  
WTR YR 1990 TOTAL 92326 MEAN 253 MAX 2800 MIN 51 CFSM 1.59 IN. 21.60

e Estimated.

## SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA

LOCATION.--Lat 40°24'48", long 76°10'19", Berks County, Hydrologic Unit 02040203, on left bank 30 ft downstream from Kricks Mill Bridge, 0.4 mi upstream from Mill Creek, and 3.5 mi west of Bernville.

DRAINAGE AREA.--66.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 311.26 ft above Pennsylvania Department of Transportation Datum.

REMARKS.--Records good, except periods of estimated daily discharge which are poor.

AVERAGE DISCHARGE.--15 years, 107 ft<sup>3</sup>/s, 21.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft<sup>3</sup>/s, Jan. 24, 1979, gage height, 10.16 ft, from rating curve extended above 740 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow; minimum daily, 25 ft<sup>3</sup>/s, Oct. 14, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of about 9.5 ft, from information by local resident, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 16	1600	*1890	*6.72	Jan. 30	0500	999	5.25

Minimum daily discharge, 46 ft<sup>3</sup>/s, Sept. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	110	106	193	248	128	107	99	153	69	58	54
2	86	98	105	112	215	124	115	95	140	75	56	64
3	75	97	103	94	205	122	202	94	132	75	54	62
4	69	94	94	93	210	120	160	98	125	75	53	63
5	66	91	96	100	188	114	166	143	117	74	70	63
6	66	91	97	92	175	99	145	105	113	71	78	64
7	63	88	95	87	167	99	150	99	109	72	73	63
8	63	89	92	87	156	110	142	95	108	72	61	52
9	63	110	90	85	153	111	133	94	163	73	59	61
10	62	100	90	93	186	115	132	220	116	69	75	62
11	62	91	90	129	162	110	146	204	110	73	71	59
12	58	90	89	105	154	107	130	145	102	85	62	58
13	60	88	88	85	146	105	122	145	99	143	61	58
14	59	86	86	80	140	101	120	158	98	84	61	58
15	59	88	84	80	136	99	149	130	96	92	58	58
16	58	774	94	83	150	98	129	130	92	81	58	47
17	81	876	124	87	140	132	123	128	91	75	55	51
18	88	454	96	92	132	139	119	111	99	75	52	46
19	252	223	91	94	133	115	117	116	102	75	52	54
20	333	173	75	94	124	145	114	114	91	65	64	60
21	221	157	86	119	117	128	118	116	89	75	65	56
22	160	144	86	115	127	120	114	110	82	78	104	73
23	141	142	109	104	136	116	110	109	79	78	91	63
24	128	132	113	102	186	115	108	107	86	75	76	57
25	121	128	119	118	140	114	106	105	87	73	68	55
26	115	117	113	300	112	110	104	121	78	71	64	53
27	111	111	113	211	113	108	100	112	82	70	62	54
28	106	120	114	184	130	105	85	104	83	69	57	51
29	103	113	110	227	---	103	91	194	70	68	54	49
30	107	94	79	583	---	108	96	313	70	68	58	48
31	110	---	98	307	---	110	---	171	---	61	55	---
TOTAL	3212	5169	3025	4335	4381	3530	3753	4085	3062	2359	1985	1716
MEAN	104	172	97.6	140	156	114	125	132	102	76.1	64.0	57.2
MAX	333	876	124	583	248	145	202	313	163	143	104	73
MIN	58	86	75	80	112	98	85	94	70	61	52	46
CFSM	1.56	2.59	1.47	2.10	2.35	1.71	1.88	1.98	1.53	1.14	.96	.86
IN.	1.80	2.89	1.69	2.42	2.45	1.97	2.10	2.29	1.71	1.32	1.11	.96

CAL YR 1989 TOTAL 45539 MEAN 125 MAX 1020 MIN 46 CFSM 1.88 IN. 25.47  
WTR YR 1990 TOTAL 40612 MEAN 111 MAX 876 MIN 46 CFSM 1.67 IN. 22.72

## SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1977 to current year.

INSTRUMENTATION.--Temperature record since October 1977.

REMARKS.--Interruptions in the daily record were due to malfunctions of the instrument.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27° C, July 21, 1985, July 22, 1987; minimum 0.0° C, on several days during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 22.0° C, July 5; minimum, 0.5°C, Dec. 23, 25.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	13.5	14.0	14.0	11.0	12.5	6.0	6.0	6.0	6.0	2.5	3.5
2	15.5	14.5	15.0	11.0	9.5	10.5	6.0	5.5	5.5	5.5	3.5	4.0
3	16.5	15.5	16.0	10.5	9.0	10.0	5.5	4.5	5.5	4.0	3.5	3.5
4	15.0	12.0	13.0	8.5	7.0	8.0	4.5	2.5	3.5	4.5	4.0	4.5
5	13.0	11.5	12.0	9.5	7.5	8.5	4.5	3.5	4.0	5.0	4.5	5.0
6	15.0	12.5	13.5	11.5	9.5	10.5	6.0	4.5	5.0	5.5	5.0	5.0
7	15.0	13.0	14.0	11.5	9.5	10.5	6.0	5.5	6.0	5.0	4.5	4.5
8	13.0	11.0	11.5	12.5	11.5	12.0	5.0	4.0	4.5	4.5	4.0	4.5
9	11.5	9.5	10.5	12.5	11.0	12.5	4.0	3.0	3.0	4.5	3.5	3.5
10	11.0	8.5	9.5	11.0	9.0	9.5	3.0	2.0	2.5	5.5	4.5	5.0
11	12.0	10.5	11.5	9.0	7.5	8.0	4.5	3.0	4.0	6.5	5.0	6.0
12	12.5	10.5	11.5	9.5	8.5	9.0	4.5	4.5	4.5	6.5	5.5	6.0
13	14.5	12.5	13.5	9.0	7.0	8.0	5.0	4.5	4.5	5.0	4.0	4.5
14	14.0	13.0	13.5	11.5	8.0	9.5	4.5	3.5	4.0	4.0	3.0	3.5
15	15.5	13.5	14.5	14.5	11.5	13.0	4.5	2.5	3.0	5.0	4.0	4.5
16	17.0	15.5	16.0	14.5	12.5	13.5	2.5	1.0	2.0	6.0	5.0	5.0
17	16.5	16.5	16.5	13.0	12.5	13.0	6.5	1.5	3.0	7.0	6.0	6.5
18	16.0	12.5	15.0	12.5	12.5	12.5	6.5	1.0	3.0	8.0	7.0	7.5
19	13.0	10.5	11.5	12.0	11.0	11.5	5.5	1.5	3.0	7.5	6.5	7.0
20	13.5	10.5	12.0	11.0	9.5	10.0	5.0	1.5	2.5	6.5	5.0	5.5
21	13.0	11.5	12.0	10.0	8.0	9.0	4.0	1.0	1.5	6.5	5.0	5.5
22	11.5	10.0	11.0	8.0	7.0	7.5	6.0	1.0	3.5	7.0	6.5	6.5
23	11.5	9.5	11.0	7.5	7.0	7.0	6.0	.5	2.0	6.5	6.0	6.5
24	11.5	9.5	11.0	7.5	6.5	7.0	---	---	---	7.0	6.5	6.5
25	12.5	10.0	11.5	7.0	6.0	6.5	3.0	.5	1.0	7.5	7.0	7.0
26	12.5	10.5	12.0	8.0	7.0	7.5	1.0	1.0	1.0	9.0	8.0	8.5
27	13.0	11.0	12.0	8.0	8.0	8.0	3.5	1.0	1.5	9.0	9.0	9.0
28	13.5	11.5	13.0	9.0	8.0	8.5	1.0	1.0	1.0	9.0	8.5	9.0
29	13.5	12.0	13.0	9.0	7.0	8.0	1.0	1.0	1.0	9.0	7.5	8.0
30	14.0	12.0	13.0	7.0	6.0	6.5	2.0	1.0	1.5	9.0	8.5	9.0
31	14.0	13.5	14.0	---	---	---	2.0	2.0	2.0	9.0	8.5	8.5
MONTH	17.0	8.5	12.8	14.5	6.0	9.6	6.5	.5	3.2	9.0	2.5	5.9

## SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	8.5	8.5	8.5	6.5	5.0	6.0	8.5	8.5	8.5	---	---	---
2	8.5	8.5	8.5	6.5	5.5	6.0	10.0	8.5	9.0	---	---	---
3	8.5	7.5	8.5	8.0	6.0	7.0	10.0	9.0	9.5	---	---	---
4	7.5	7.0	7.0	8.0	6.0	6.5	9.5	8.0	9.0	---	---	---
5	6.5	5.5	6.0	7.0	6.0	6.5	10.0	7.5	9.0	---	---	---
6	7.5	6.0	6.5	7.0	6.0	6.5	10.5	9.0	9.5	---	---	---
7	8.0	7.0	7.5	6.5	4.5	5.5	9.0	7.5	8.5	---	---	---
8	8.0	7.0	7.5	6.5	4.5	5.5	9.5	7.5	8.5	---	---	---
9	8.5	7.5	8.0	7.5	6.0	6.5	11.0	8.0	9.0	---	---	---
10	9.0	8.5	8.5	8.5	7.5	8.0	11.0	10.0	10.5	---	---	---
11	8.0	6.0	7.0	10.0	8.5	9.0	10.5	10.0	10.5	---	---	---
12	7.5	6.5	7.0	11.5	10.0	10.5	10.0	8.0	9.0	---	---	---
13	8.0	6.0	7.0	13.5	11.5	12.5	10.0	7.0	8.5	---	---	---
14	8.5	8.0	8.0	13.5	12.5	13.0	10.0	8.5	9.5	---	---	---
15	8.0	7.0	7.5	13.5	12.5	13.0	11.0	10.0	10.0	---	---	---
16	8.0	7.0	7.5	14.5	13.5	14.0	13.0	10.5	11.5	---	---	---
17	8.0	6.5	7.5	14.5	11.0	14.0	13.0	10.5	12.0	---	---	---
18	6.5	5.0	6.0	12.0	11.0	11.5	10.0	8.0	9.5	---	---	---
19	7.5	6.0	6.5	11.5	9.5	10.0	10.0	9.5	9.5	---	---	---
20	7.0	5.5	6.0	9.5	7.5	9.0	10.0	10.0	10.0	---	---	---
21	6.5	4.5	5.5	9.0	6.5	8.0	10.5	10.0	10.0	---	---	---
22	8.0	6.0	6.5	11.0	8.0	9.5	10.5	10.0	10.5	---	---	---
23	10.0	8.0	9.0	11.0	10.0	10.5	---	---	---	---	---	---
24	10.0	7.5	8.5	10.5	7.5	8.5	---	---	---	---	---	---
25	7.5	5.0	6.0	9.0	7.0	8.0	---	---	---	---	---	---
26	4.5	2.5	3.5	9.0	7.5	8.5	---	---	---	---	---	---
27	4.0	3.5	4.0	9.0	7.0	8.0	---	---	---	---	---	---
28	6.5	4.5	5.5	9.0	7.0	8.0	---	---	---	---	---	---
29	---	---	---	9.0	8.5	9.0	---	---	---	---	---	---
30	---	---	---	9.0	8.0	8.0	---	---	---	---	---	---
31	---	---	---	8.5	7.0	7.5	---	---	---	---	---	---
MONTH	10.0	2.5	7.0	14.5	4.5	8.8	13.0	7.0	9.6	---	---	---
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	21.5	21.0	21.0	18.0	17.5	18.0	20.0	19.0	19.5
2	---	---	---	21.0	19.5	20.0	18.0	17.0	17.5	20.5	20.0	20.0
3	---	---	---	20.5	19.0	19.5	18.0	17.0	17.5	20.5	17.0	19.0
4	---	---	---	21.5	20.0	20.5	18.0	17.0	17.5	19.5	19.0	19.0
5	---	---	---	22.0	21.0	21.5	18.5	17.5	18.0	19.0	18.5	18.5
6	---	---	---	21.5	18.5	20.5	18.5	17.5	18.0	19.5	18.5	19.0
7	---	---	---	21.0	18.0	20.0	18.0	17.5	17.5	20.5	18.0	20.0
8	---	---	---	20.0	19.5	20.0	18.0	17.5	17.5	19.5	18.5	19.0
9	---	---	---	21.5	20.0	20.5	18.5	17.5	18.0	18.5	17.0	17.5
10	---	---	---	21.5	18.0	20.5	18.5	16.5	17.5	18.5	17.0	17.5
11	---	---	---	21.0	18.5	20.0	17.5	16.5	17.0	19.0	18.0	18.5
12	15.0	14.0	14.5	18.5	16.5	17.5	17.5	17.5	17.5	19.0	19.0	19.0
13	15.0	14.5	14.5	16.5	14.0	15.5	18.5	17.5	18.0	19.5	19.0	19.0
14	15.0	14.5	14.5	16.5	16.0	16.0	18.5	17.5	18.0	19.0	18.5	19.0
15	15.5	15.0	15.5	18.5	15.5	16.5	18.5	18.0	18.5	19.0	17.5	18.5
16	16.0	15.0	15.5	18.5	16.5	18.0	18.5	18.5	18.5	18.0	17.0	17.5
17	17.0	16.0	16.5	19.5	16.0	17.5	19.0	18.5	19.0	17.0	15.0	16.5
18	19.0	15.0	17.5	16.0	16.0	16.0	---	---	---	15.0	14.0	14.5
19	17.5	14.5	16.5	16.5	16.0	16.0	20.5	19.5	20.0	14.0	13.5	14.0
20	18.5	17.0	17.5	17.5	16.0	16.5	19.5	17.5	18.5	15.5	14.0	14.5
21	18.5	17.5	18.0	17.0	16.5	17.0	17.5	16.5	17.0	15.5	14.5	15.0
22	19.0	16.5	18.0	17.0	17.0	17.0	17.0	16.5	16.5	15.5	15.0	15.5
23	19.5	18.5	19.0	17.0	17.0	17.0	17.0	16.0	16.5	15.0	13.5	14.5
24	19.5	18.0	18.5	17.5	17.0	17.0	17.5	17.0	17.0	14.0	13.0	13.5
25	18.0	17.0	17.5	17.5	16.5	17.0	19.0	17.5	18.5	14.0	13.0	13.5
26	19.0	15.5	17.0	17.5	16.5	17.0	20.0	18.5	19.5	14.0	13.5	14.0
27	20.0	18.5	19.0	17.5	17.0	17.0	21.0	20.0	20.5	14.5	13.5	14.0
28	20.0	18.5	19.5	17.5	17.0	17.0	21.5	19.0	20.5	15.5	14.5	15.0
29	20.5	17.0	19.0	17.5	17.0	17.5	22.0	19.5	20.5	16.5	15.5	16.0
30	21.5	20.0	20.5	17.5	17.0	17.5	21.0	19.5	20.0	17.0	16.0	16.5
31	---	---	---	17.5	17.0	17.5	20.0	19.5	19.5	---	---	---
MONTH	21.5	14.0	17.3	22.0	14.0	18.1	22.0	16.0	18.3	20.5	13.0	16.9

## SCHUYLKILL RIVER BASIN

01470853 FURNACE CREEK AT ROBESONIA, PA.

LOCATION.--Lat 40°20'24", long 76°08'37", Berks County, Hydrologic Unit 02040202, left bank 500 ft upstream of Furnace Street in Robesonia

DRAINAGE AREA.--4.18 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1982 to current year.

REVISED RECORDS.--WDR PA-87-1: 1986 (P).

GAGE.--Water-stage recorder. Altitude of gage is 510 ft, from topographic map.

REMARKS.--Records poor. Diversion above station for municipal supply. Gage moved 700 ft. upstream on Mar. 27, 1986 at datum 19.5 feet higher. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 7.42 ft<sup>3</sup>/s, 24.12 in/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 478 ft<sup>3</sup>/s, May 6, 1989, gage height, 4.16 ft, from rating extended above slope-area measurement; minimum, 0.05 ft<sup>3</sup>/s, Sept. 11, 20, 1983, gage height, 2.71 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1230	93	2.03	May 10	1345	216	2.70
Nov. 16	1115	*303	*3.10	May 29	2230	119	2.19
Jan. 1	0245	130	2.22	July 13	0115	73	1.87
Jan. 29	2330	207	2.66				

Minimum daily discharge, 0.42 ft<sup>3</sup>/s, Sept. 25, 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	7.1	3.5	68	17	8.3	5.7	6.8	12	3.5	1.3	.99
2	7.0	5.4	3.4	4.3	15	8.3	8.4	5.8	10	3.2	1.1	1.0
3	3.8	7.9	3.3	3.7	14	8.3	21	5.5	9.4	3.0	.96	1.4
4	2.5	6.6	e3.2	4.2	15	7.7	14	7.0	8.6	2.7	.90	.89
5	2.2	6.0	e3.1	7.4	12	7.3	13	16	7.9	2.5	4.6	.96
6	2.3	5.9	e3.1	4.9	11	7.3	11	7.6	7.4	2.7	5.8	1.0
7	2.2	5.7	e3.1	3.9	11	6.7	12	6.7	7.1	2.7	4.0	1.1
8	2.1	7.4	e3.0	4.9	9.9	6.5	11	6.2	8.0	2.7	1.6	.81
9	2.3	17	e3.1	4.4	9.8	7.1	9.3	5.9	11	3.3	2.0	.94
10	1.9	6.1	e3.2	5.9	16	7.7	9.5	49	7.1	3.1	5.1	1.0
11	2.8	4.4	e3.2	5.0	11	6.9	11	23	6.6	3.3	3.6	.89
12	1.9	3.9	e3.2	4.6	10	6.3	9.0	15	6.2	6.4	2.1	.70
13	1.7	3.7	e3.1	4.1	9.7	6.0	8.4	20	6.0	16	1.6	.84
14	1.7	3.7	e3.1	3.8	9.5	5.8	8.2	19	5.7	4.9	1.8	.74
15	2.4	3.8	e3.0	4.0	9.9	5.7	14	13	6.1	5.3	1.4	1.3
16	2.0	61	e2.9	5.0	10	5.7	9.7	13	5.7	3.4	1.1	.90
17	6.2	12	e2.8	6.4	9.1	10	9.3	12	5.3	2.6	1.1	2.3
18	9.3	7.0	e2.8	6.8	8.6	9.1	8.7	10	9.0	2.2	1.1	.88
19	34	5.6	e2.7	5.5	8.5	6.8	8.1	9.0	6.9	1.9	1.3	.99
20	33	5.1	e2.6	6.1	8.0	10	8.0	8.4	5.2	2.3	3.4	1.4
21	13	6.1	e2.6	9.3	7.8	7.7	9.0	9.0	4.9	3.1	2.6	.98
22	10	5.4	e2.5	7.8	9.2	7.0	7.9	8.0	4.6	2.3	13	5.4
23	8.3	5.8	e2.4	6.6	11	6.6	7.4	7.3	4.4	2.0	5.2	1.6
24	7.1	4.6	e2.3	6.7	13	6.6	7.1	6.9	4.2	1.7	3.6	.85
25	6.4	4.5	e2.2	14	9.3	6.6	6.8	6.5	4.0	1.6	2.5	.42
26	5.7	6.2	e2.1	29	8.3	5.9	6.5	13	3.8	1.5	1.9	.42
27	5.1	5.1	e2.1	13	8.6	5.4	6.2	8.6	3.6	1.4	1.5	.59
28	5.0	6.2	e2.0	10	8.9	5.0	5.8	6.9	3.4	1.5	1.3	.48
29	4.6	4.0	e1.9	37	---	4.8	6.7	40	3.6	1.5	1.3	.92
30	3.7	3.7	2.1	50	---	5.8	7.5	31	4.3	1.4	1.3	.55
31	5.6	---	49	22	---	6.0	---	15	---	2.0	1.1	---
TOTAL	197.9	236.9	132.6	368.3	301.1	214.9	280.2	411.1	192.0	97.7	81.16	33.24
MEAN	6.38	7.90	4.28	11.9	10.8	6.93	9.34	13.3	6.40	3.15	2.62	1.11
MAX	34	61	49	68	17	10	21	49	12	16	13	5.4
MIN	1.7	3.7	1.9	3.7	7.8	4.8	5.7	5.5	3.4	1.4	.90	.42
MEAN#	7.21	8.70	5.03	12.7	11.5	7.63	10.0	14.0	7.19	3.92	3.35	1.83
CFSM#	1.72	2.08	1.20	3.04	2.75	1.83	2.39	3.35	1.72	.94	.80	.44
IN.#	1.99	2.32	1.39	3.50	2.87	2.11	2.67	3.86	1.92	1.08	.92	.49
†	.83	.80	.75	.79	.72	.70	.71	.70	.79	.77	.73	.72

CAL YR 1989 TOTAL 2812.17 MEAN 7.70 MAX 134 MIN .97 MEAN# 8.50 CFSM# 2.03 IN.# 27.61  
WTR YR 1990 TOTAL 2547.10 MEAN 6.98 MAX 68 MIN .42 MEAN# 7.75 CFSM# 1.85 IN.# 25.19

† Diversion, equivalent in cubic feet per second, furnished by Womelsdorf-Roesonia Joint Water Authority.  
# Adjusted for diversion.  
e Estimated.

## SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA

LOCATION.--Lat 40°22'14", long 76°01'32", Berks County, Hydrologic Unit 02040203, on right bank 1 mi upstream from Rebers Bridge and Plum Creek, 1 mi east of Blue Marsh, 3 mi north of Sinking Spring, and 5.5 mi northeast of Reading. Water-quality sampling site at Rebers bridge 1.0 mi downstream.

DRAINAGE AREA.--175 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORD.--WDR PA-72-1: 1969-1971 (M).

GAGE.--Water-stage recorder. Datum of gage is 230.06 ft above Western Berks Water Authority datum. Prior to Nov. 25, 1974, water-stage recorder at site 0.3 mi downstream at same datum.

REMARKS.--Records fair. Flow regulated since April 1979 by Blue Marsh Reservoir (station 01470870) 0.8 mi upstream.

AVERAGE DISCHARGE.--25 years, 272 ft<sup>3</sup>/s, 21.12 in/yr, adjusted for storage since April 1979.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft<sup>3</sup>/s, June 22, 1972, gage height, 18.7ft, from floodmarks, from rating curve extended above 3,000 ft<sup>3</sup>/s, on basis of runoff comparison with downstream station; minimum since construction of dam, 5.8 ft<sup>3</sup>/s, Nov. 17, 1977; minimum gage height, 1.45 ft July 29, 30, 31, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,930 ft<sup>3</sup>/s, Nov. 17, 18, July 13, gage height, 5.61 ft; minimum daily discharge, 66 ft<sup>3</sup>/s, Sept. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	258	166	137	1650	359	208	202	376	127	120	96
2	165	206	157	339	954	340	202	202	376	127	113	93
3	237	171	157	466	760	306	207	202	376	129	96	66
4	194	171	193	346	754	306	208	202	376	130	85	137
5	108	171	329	174	502	241	208	233	253	129	86	159
6	95	221	267	154	351	195	208	381	193	127	258	115
7	109	207	161	155	351	190	209	381	213	127	245	79
8	109	168	132	265	317	186	215	379	171	127	161	84
9	110	189	113	363	328	196	215	373	303	114	98	85
10	95	218	113	301	353	205	215	631	428	123	124	84
11	100	218	146	264	357	205	215	1070	329	152	163	76
12	109	218	223	292	450	302	218	757	208	178	163	67
13	109	218	191	239	502	304	256	372	212	547	164	69
14	109	237	134	239	440	202	302	676	214	416	160	70
15	109	202	141	239	440	194	302	538	236	291	130	72
16	109	466	149	191	408	180	356	370	223	222	99	71
17	172	1490	152	193	357	237	384	372	225	152	100	103
18	284	1720	146	285	355	365	378	352	202	129	100	121
19	781	820	146	279	267	367	343	314	298	144	100	100
20	1060	431	148	247	195	618	296	314	261	164	123	100
21	859	460	143	247	246	537	319	274	170	158	150	102
22	858	360	133	315	303	359	319	214	152	160	243	102
23	852	293	129	363	359	296	272	173	164	130	331	102
24	495	293	130	363	359	187	209	202	174	101	299	104
25	333	292	130	360	359	189	189	221	174	95	172	104
26	347	289	99	831	603	293	214	296	174	89	102	104
27	270	249	83	1220	423	363	239	276	149	80	117	106
28	215	259	120	826	337	268	239	202	122	81	130	106
29	215	247	141	491	---	206	239	294	127	81	137	106
30	215	194	142	841	---	208	217	922	127	104	196	107
31	240	---	140	1630	---	208	---	894	---	120	154	---
TOTAL	9186	10936	4754	12655	13080	8612	7601	12289	7006	4854	4719	2890
MEAN	296	365	153	408	467	278	253	396	234	157	152	96.3
MAX	1060	1720	329	1630	1650	618	384	1070	428	547	331	159
MIN	95	168	83	137	195	180	189	173	122	80	85	66
MEAN*	298	363	156	434	436	277	338	400	2.34	157	149	95.6
CFSM*	1.70	2.07	.89	2.48	2.49	1.58	1.93	2.29	1.33	.89	.85	.55
IN.*	1.96	2.32	1.03	2.86	2.59	1.83	2.16	2.64	1.49	1.03	.98	.61

CAL YR 1989 TOTAL 125311 MEAN 343 MAX 3310 MIN 69 MEAN\* 343 CFSM\* 1.96 IN.\* 26.64  
WTR YR 1990 TOTAL 98582 MEAN 270 MAX 1720 MIN 66 MEAN\* 277 CFSM\* 1.58 IN.\* 21.50

\* Adjusted for change in contents of Blue Marsh Reservoir.



## SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1968 to current year.

INSTRUMENTATION.--Temperature recorder since October 1968.

REMARKS.--Temperature recorder located at gaging station 1.0 mi upstream from former sampling site. Missing record is due to malfunction.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 34.0°C, Oct. 2, 1968; minimum, freezing point on several days during Dec. 1970, Jan. and Mar. 1971, Feb. 1979.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C, Aug. 15; minimum, 2.0°C, Dec. 26, 27.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.0	17.0	17.5	13.0	11.5	12.5	5.5	5.0	5.0	3.5	3.0	3.0
2	18.0	17.5	17.5	12.5	12.0	12.0	5.0	4.5	5.0	3.5	3.0	3.0
3	18.5	17.5	18.0	12.5	11.5	12.0	4.5	3.5	4.5	3.5	3.5	3.5
4	18.0	17.5	18.0	12.0	11.5	12.0	3.5	3.5	3.5	3.5	3.5	3.5
5	18.0	17.0	17.5	12.0	11.5	12.0	3.5	3.5	3.5	3.5	3.5	3.5
6	18.0	17.0	17.5	12.0	11.5	12.0	3.5	3.5	3.5	3.5	3.5	3.5
7	18.0	17.0	17.5	12.0	11.5	11.5	3.5	3.0	3.0	3.5	3.5	3.5
8	17.5	16.5	17.0	11.5	11.0	11.5	3.0	3.0	3.0	3.5	3.0	3.5
9	16.5	16.0	16.5	12.0	11.0	11.5	3.5	3.0	3.0	3.5	3.5	3.5
10	16.5	16.0	16.0	11.5	11.5	11.5	3.0	2.5	3.0	3.5	3.5	3.5
11	16.5	15.5	16.0	11.5	11.0	11.0	3.0	2.5	3.0	3.5	3.0	3.5
12	16.0	14.5	15.5	11.0	11.0	11.0	2.5	2.5	2.5	3.5	3.0	3.0
13	15.5	14.5	14.5	11.0	10.5	11.0	3.0	2.5	2.5	3.5	3.0	3.0
14	15.0	14.0	14.5	11.0	11.0	11.0	3.0	2.5	2.5	3.5	3.0	3.0
15	15.0	14.0	14.5	11.5	11.0	11.0	3.0	2.5	2.5	3.0	3.0	3.0
16	15.0	14.0	14.5	12.0	11.0	11.5	2.5	2.5	2.5	3.5	3.0	3.0
17	15.5	14.0	14.5	11.5	10.5	11.0	3.0	2.5	2.5	3.5	3.0	3.0
18	15.0	14.5	15.0	10.5	10.0	10.5	3.0	2.5	2.5	3.5	3.0	3.0
19	15.0	14.5	14.5	10.0	9.5	9.5	3.0	2.5	2.5	3.0	3.0	3.0
20	15.0	14.5	14.5	10.0	9.5	9.5	3.0	2.5	2.5	3.5	3.0	3.0
21	14.5	13.5	14.5	9.5	8.0	9.0	3.0	2.5	2.5	3.5	3.0	3.0
22	14.0	13.5	13.5	8.0	8.0	8.0	2.5	2.5	2.5	3.0	3.0	3.0
23	13.5	13.0	13.0	8.0	7.5	7.5	3.0	2.5	2.5	3.5	3.0	3.0
24	12.5	12.0	12.0	7.5	7.0	7.5	3.0	2.5	2.5	3.5	3.0	3.0
25	12.0	11.5	11.5	7.0	7.0	7.0	3.0	2.5	3.0	3.5	3.0	3.5
26	12.0	11.5	11.5	7.0	6.5	7.0	3.0	2.0	2.5	3.5	3.0	3.0
27	11.5	11.0	11.5	6.5	6.5	6.5	3.0	2.0	2.5	3.5	3.0	3.5
28	11.5	11.0	11.5	6.5	6.0	6.5	3.0	2.5	3.0	3.5	3.5	3.5
29	11.5	11.5	11.5	6.5	5.5	6.0	3.0	3.0	3.0	4.0	3.5	4.0
30	12.0	11.5	11.5	5.5	5.5	5.5	3.0	3.0	3.0	4.0	4.0	4.0
31	12.5	11.5	11.5	---	---	---	3.0	3.0	3.0	4.0	4.0	4.0
MONTH	18.5	11.0	14.7	13.0	5.5	9.9	5.5	2.0	3.0	4.0	3.0	3.3

## SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	4.0	4.0	4.0	4.0	3.5	4.0	8.5	8.5	8.5	14.5	13.0	13.5
2	4.5	4.0	4.5	4.5	4.0	4.0	8.5	8.5	8.5	14.5	13.0	13.5
3	4.5	4.0	4.5	4.5	4.0	4.5	8.5	8.5	8.5	14.0	13.0	13.5
4	4.5	4.0	4.5	4.5	4.0	4.0	8.5	8.0	8.5	13.5	12.5	13.0
5	4.5	4.0	4.5	4.5	4.0	4.0	9.0	8.0	8.5	15.0	12.5	13.5
6	4.5	4.5	4.5	4.5	3.5	4.0	8.5	8.5	8.5	14.5	13.0	14.0
7	5.0	4.5	4.5	4.0	3.5	4.0	8.5	8.0	8.5	14.5	13.0	14.0
8	5.0	4.5	4.5	4.5	3.5	4.0	9.0	8.0	8.5	15.0	13.5	14.0
9	5.0	4.5	4.5	4.5	4.0	4.0	9.0	8.0	8.5	14.5	13.5	14.0
10	5.0	4.5	5.0	4.5	4.5	4.5	9.0	8.5	8.5	15.0	12.0	14.0
11	5.0	4.5	5.0	5.0	4.5	4.5	9.0	8.5	9.0	15.0	14.0	14.5
12	5.0	4.5	5.0	6.0	4.5	5.0	9.5	8.5	9.0	14.5	14.0	14.0
13	5.0	4.5	5.0	7.5	5.0	6.0	9.5	8.5	9.0	15.0	14.0	14.5
14	5.5	5.0	5.0	7.5	6.0	6.5	9.0	8.5	8.5	14.5	14.0	14.5
15	5.0	5.0	5.0	8.0	5.0	6.5	9.5	9.0	9.0	15.5	13.5	14.5
16	5.0	5.0	5.0	8.5	7.0	8.0	10.0	9.0	9.5	15.0	14.5	14.5
17	5.5	5.0	5.0	9.5	7.0	8.0	10.5	9.5	10.0	16.5	15.0	15.5
18	5.0	5.0	5.0	10.0	7.0	8.5	10.0	9.0	9.5	16.5	15.0	15.5
19	5.5	5.0	5.0	9.0	8.0	9.0	10.5	9.5	10.0	16.5	15.5	16.0
20	5.0	4.5	5.0	9.0	8.0	8.5	10.5	10.0	10.5	16.0	15.5	15.5
21	5.0	4.5	5.0	9.0	8.0	8.5	10.5	10.0	10.0	15.5	15.0	15.5
22	5.0	5.0	5.0	9.0	8.0	8.5	11.5	10.0	10.5	16.0	15.0	15.5
23	5.5	5.0	5.5	9.5	9.0	9.0	12.0	10.5	11.0	16.5	15.5	16.0
24	6.0	5.5	5.5	9.0	8.5	9.0	11.5	11.0	11.5	16.5	15.5	16.0
25	5.5	4.5	5.0	9.5	8.5	9.0	12.5	10.5	11.0	16.5	15.5	16.0
26	4.5	4.0	4.5	9.5	8.5	9.0	13.5	11.5	12.5	16.0	15.0	15.5
27	4.0	4.0	4.0	9.5	8.5	9.0	13.5	12.0	13.0	16.5	15.0	16.0
28	4.0	4.0	4.0	9.5	8.5	9.0	15.0	11.5	13.0	17.0	16.0	16.5
29	---	---	---	9.0	8.5	8.5	13.0	11.5	12.0	16.0	15.0	15.5
30	---	---	---	8.5	8.5	8.5	13.5	11.5	12.5	16.5	15.5	16.0
31	---	---	---	8.5	8.5	8.5	---	---	---	17.0	16.0	16.5
MONTH	6.0	4.0	4.8	10.0	3.5	6.7	15.0	8.0	9.9	17.0	12.0	14.9
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.5	16.5	17.0	19.5	17.5	18.5	20.0	18.0	19.0	22.5	20.5	21.0
2	17.5	16.5	17.0	19.0	18.0	18.5	20.5	18.0	19.0	22.5	20.5	21.0
3	18.0	16.5	17.5	20.0	18.0	18.5	20.0	18.0	19.0	22.5	20.5	21.0
4	18.0	17.0	17.5	20.5	18.0	19.0	20.5	18.5	19.0	22.0	20.5	21.0
5	18.0	17.5	17.5	20.0	18.5	19.0	19.0	18.5	18.5	22.0	21.0	21.5
6	18.5	17.0	17.5	20.0	18.5	19.0	21.5	18.5	20.0	22.0	21.0	21.5
7	18.5	17.0	18.0	20.0	18.5	19.0	21.0	20.0	20.5	22.0	21.0	21.5
8	18.0	17.0	17.5	20.0	18.5	19.0	21.0	19.0	20.0	22.0	20.5	21.0
9	18.0	17.5	18.0	20.5	18.5	19.5	20.0	19.0	19.5	21.5	20.5	21.0
10	19.0	17.5	18.0	20.5	19.0	19.0	20.0	19.5	19.5	22.5	21.0	21.5
11	19.0	18.0	18.5	19.0	18.0	18.5	21.0	19.5	20.0	22.5	21.0	21.5
12	19.0	18.0	18.5	18.0	18.0	18.0	21.0	20.0	20.5	22.0	21.0	21.0
13	18.5	18.0	18.5	20.5	18.0	19.5	21.5	20.0	20.5	22.0	20.5	21.5
14	18.5	17.5	18.0	20.0	19.0	19.5	21.0	20.5	20.5	22.0	21.0	21.0
15	18.5	17.5	18.0	19.5	19.0	19.0	23.5	20.0	21.0	22.5	21.0	21.5
16	19.5	18.0	18.5	19.5	18.5	19.0	22.0	20.5	20.5	22.0	20.5	21.0
17	19.5	18.0	19.0	20.5	18.5	19.5	22.0	20.5	21.0	22.0	20.5	21.0
18	20.0	18.0	19.0	21.0	19.5	20.0	---	---	---	22.0	21.0	21.5
19	19.5	18.5	19.0	21.0	19.0	20.0	22.0	20.5	21.0	21.5	21.0	21.0
20	20.0	18.5	19.5	20.0	19.0	19.5	21.5	20.5	21.0	22.0	20.5	21.0
21	20.0	19.0	19.5	20.0	19.0	19.5	21.5	21.0	21.0	21.5	20.0	20.5
22	20.5	19.0	19.5	20.5	19.5	19.5	22.5	21.0	22.0	20.0	19.5	19.5
23	21.0	18.5	20.0	21.0	19.5	20.0	22.5	22.0	22.0	20.0	19.0	19.5
24	20.5	19.5	20.0	20.5	18.5	19.5	22.0	22.0	22.0	20.0	19.0	19.0
25	20.5	19.5	20.0	20.5	18.5	19.0	22.5	21.0	21.5	20.0	19.0	19.0
26	20.5	19.5	20.0	20.5	18.0	19.0	22.5	20.5	21.5	19.5	18.5	19.0
27	21.0	19.5	20.0	20.0	17.5	18.5	22.0	20.5	21.5	19.5	18.0	19.0
28	20.5	19.5	20.0	20.0	18.0	18.5	22.5	21.0	21.5	19.0	17.5	18.0
29	20.0	17.5	19.0	19.5	18.0	18.5	22.0	21.0	21.5	18.5	17.5	18.0
30	19.5	17.5	18.5	19.5	18.0	18.5	22.0	21.0	21.5	18.5	17.5	18.0
31	---	---	---	19.5	18.5	18.5	22.5	20.5	21.5	---	---	---
MONTH	21.0	16.5	18.6	21.0	17.5	18.9	23.5	18.0	20.6	22.5	17.5	20.4

## SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA

LOCATION.--Lat 40°22'08", long 75°58'46", Berks County, Hydrologic Unit 02040203, on right bank 15 ft. upstream from covered bridge, 1 mi downstream from Cacoosing Creek, 2.5 mi upstream from mouth, and 3.5 mi northwest of square at Reading. Water-quality sampling site ast covered bridge 15 ft downstream.

DRAINAGE AREA.--211 mi<sup>2</sup>.

PERIOD OF RECORD>--October 1950 to current year. Monthly discharge only for October, November 1950, published in WSP 1722.

REVISED RECORDS.--WSP 1382: 1951-53, 1954 (M). WSP 2102: 1965 (M). WDR PA-72-1: 1971 (M).

GAGE.--Water-stage recorder. Datum of gage is 216.60 ft above Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except periods of estimated daily discharge which are fair. Flow regulated since April 1979 by Blue Marsh Reservoir (station 01470870) 3.9 mi upstream. Several observations of water temperature were during the year.

AVERAGE DISCHARGE.--40 years, 311 ft<sup>3</sup>/s, 20.00 in/yr, adjusted for storage since April 1979.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s, June 23, 1972, gage height, 15.65 ft, from flood-mark in gage shelter, from rating curve extended above 3,600 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow; minimum, 23 ft<sup>3</sup>/s, Dec. 1, 1964, gage height, 0.94 ft, result of upstream shutoff.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft<sup>3</sup>/s, Jan. 31, gage height, 3.99 ft; minimum daily discharge, 88 ft<sup>3</sup>/s, July 27, 28, Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	338	213	e184	1840	435	244	237	445	146	132	99
2	206	287	201	e380	1070	418	249	230	431	146	123	101
3	264	244	200	e500	811	385	332	235	421	145	99	112
4	234	241	230	e380	798	377	313	237	419	142	89	170
5	147	242	352	e210	603	322	314	317	383	143	123	210
6	116	286	314	e190	460	275	296	420	317	144	278	160
7	141	283	200	e190	458	269	297	415	329	140	299	113
8	140	223	173	e290	428	260	291	410	290	141	190	e92
9	136	268	144	e380	427	267	281	402	387	140	113	e110
10	123	311	142	e330	485	277	279	717	440	142	149	e105
11	127	303	172	e300	466	278	289	1140	358	165	208	104
12	141	300	250	e320	524	354	277	817	234	203	186	90
13	141	297	228	e280	573	371	302	446	232	586	184	88
14	140	300	164	e280	520	269	348	706	231	435	187	89
15	140	284	168	e280	511	265	372	580	254	318	154	92
16	138	579	175	e230	492	246	399	426	242	252	113	92
17	204	1540	175	e240	448	307	426	421	237	182	111	121
18	337	1810	173	338	443	446	422	399	287	147	112	148
19	872	913	172	e320	368	431	393	355	456	157	110	121
20	1330	479	e172	e300	293	618	335	352	333	178	131	121
21	991	513	166	e290	330	560	364	318	214	176	168	120
22	927	417	153	e330	387	389	359	261	195	174	293	148
23	894	345	146	406	450	342	316	218	201	148	357	128
24	603	341	146	401	464	232	253	236	208	113	320	123
25	406	337	146	e420	454	232	232	262	207	104	204	121
26	417	339	133	986	629	315	251	332	205	99	115	120
27	348	303	112	1340	492	387	275	326	182	88	125	121
28	293	306	136	939	413	306	275	241	146	88	139	121
29	289	296	160	653	---	236	279	430	151	89	146	121
30	284	244	160	1190	---	246	261	1040	150	107	e200	121
31	317	---	e180	1850	---	248	---	1020	---	137	e170	---
TOTAL	11002	12969	5656	14727	15637	10363	9324	13946	8585	5375	5328	3582
MEAN	355	432	182	475	558	334	311	450	286	173	172	119
MAX	1330	1810	352	1850	1840	618	426	1140	456	586	357	210
MIN	116	223	112	184	293	232	232	218	146	88	89	88
MEAN*	356	430	185	501	527	333	396	454	286	173	169	118
CFSM*	1.69	2.04	.88	2.37	2.50	1.58	1.88	2.15	1.36	.82	.80	.56
IN.*	1.95	2.27	1.01	2.74	2.60	1.82	2.09	2.48	1.51	.95	.92	.62

CAL YR 1989 TOTAL 147391 MEAN 404 MAX 3460 MIN 90 MEAN\* 404 CFSM\* 1.91 IN.\* 25.99  
WTR YR 1990 TOTAL 116494 MEAN 319 MAX 1850 MIN 88 MEAN\* 326 CFSM\* 1.55 IN.\* 20.98

\* Adjusted for change in contents in Blue Marsh Reservoir.  
e Estimated.

## SCHUYLKILL RIVER BASIN

01471510 SCHUYLKILL RIVER AT READING, PA

LOCATION.--Lat 40°20'10", long 75°56'15", Berks County, Hydrologic Unit 02040203, on Penn Avenue Bridge at West Reading, 0.8 mi downstream from Tulpehocken Creek.

DRAINAGE AREA>--880 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1914 to September 1915, October 1919 to September 1930 and June 30, 1977 to current year. Monthly discharge only prior to current year published in WSP 1302. Diversion by Schuylkill Navigation Canal included during the navigation seasons of 1914-15.

REVISED RECORDS>--WDR PA-78-1: 1977.

GAGE.--Nonrecording gage. Datum of gage is 185.50 ft above Pennsylvania Railroad Datum. May 7, 1914 to Spet. 30, 1930, nonrecording gage. June 30, 1977 to July 5, 1979, water-stage recorder at site 1,500 ft downstream at same datum.

REMARKS.--Records fair, except for periods of estimated record which are poor. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Reservoir (station 01470870) since April 1979 and to some extent by Lake Ontelaunee, capacity 518,600,000 ft. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1915, 1920-30, 1978-90), 1,547 ft<sup>3</sup>/s, 23.87 in/yr, 1914-15 adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,500 ft<sup>3</sup>/s, Jan. 25, 1979, gage height, 17.36 ft, at site 1,500 ft downstream, from rating curve extended above 16,000 ft<sup>3</sup>/s; minimum observed, 82 ft<sup>3</sup>/s, Aug. 12, 1930, gage height, -1.19 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972, reached a stage of about 31.3 ft at site 1,500 ft downstream, present datum, from floodmarks, discharge, about 90,000 ft<sup>3</sup>/s

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,500 ft<sup>3</sup>/s, Nov. 16, gage height, 8.89 ft; minimum daily, 405 ft<sup>3</sup>/s, Dec. 27, 28, 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	707	1350	1160	1480	5640	2060	e1400	1300	e2700	807	638	636
2	980	1170	1100	1520	4320	1900	e1500	1150	e2300	798	e650	658
3	1240	1090	1070	1540	3590	1790	e2000	956	e2200	782	488	e900
4	895	1050	941	1420	3490	1700	e3000	1160	e2100	772	454	e800
5	710	962	1180	1290	3190	1510	e2900	2040	e2000	710	792	e1000
6	604	963	1200	1180	2690	1450	e2600	2030	e1700	896	1340	e600
7	623	955	997	1120	2550	1340	2480	1770	e1600	672	e1800	e500
8	625	921	907	1170	2390	1250	2370	1630	e1650	651	1100	e480
9	568	1440	790	1400	2290	1260	2140	1570	e2000	727	931	e500
10	533	1780	758	1340	2580	1300	1920	2520	e2500	740	1210	510
11	621	1250	832	1780	2520	1340	2340	5980	e1950	653	1590	510
12	582	1260	931	1610	2450	1340	2040	4520	e1700	1020	1490	510
13	528	1120	921	1380	2410	1350	1930	3480	e1650	e1600	e1200	501
14	568	e1040	790	1170	2280	1140	1870	3540	e1600	e2800	e1500	459
15	475	e1140	723	1240	2250	1140	2180	2950	1450	e2000	e1400	e630
16	560	3820	655	1130	2230	1080	2210	2590	1310	1720	e1000	e800
17	768	6930	651	1150	2030	1280	2030	3560	1330	1300	e800	e710
18	1510	5170	e770	1410	1820	2380	1960	3420	1540	1170	e700	e630
19	3070	3570	e620	1510	1780	1970	1810	3010	2050	993	e730	e600
20	6400	2720	e550	1400	1600	2380	1640	2690	1790	817	e800	557
21	7140	2570	e500	1690	1560	2410	1820	2350	1480	793	e900	768
22	4710	2080	e480	2080	1610	e2000	1790	1980	1210	793	e1050	775
23	3630	1960	e470	2020	2000	e1800	1580	1880	1270	846	e1350	803
24	2810	1760	e450	1900	3050	e1700	1460	1530	1160	903	e1300	696
25	2210	1660	e430	2010	2940	e1600	1370	1490	1090	592	e1100	547
26	1970	1610	e410	4770	2660	e1500	1380	1630	1060	561	e900	513
27	1860	1570	e405	5620	2350	e1600	1390	1670	1030	539	e950	520
28	1570	1470	e405	4340	2140	e1700	1370	1390	942	524	e900	523
29	1410	1480	e405	3650	---	e1300	1290	e2300	880	521	e900	588
30	1340	1250	e500	8660	---	e1400	1390	e6000	991	523	e830	614
31	1350	---	767	7190	---	e1500	---	e4000	---	576	e730	---
TOTAL	52567	57111	22768	71170	72410	49470	57160	78086	48233	28799	31523	18838
MEAN	1696	1904	734	2296	2586	1596	1905	2519	1608	929	1017	628
MAX	7140	6930	1200	8660	5640	2410	3000	6000	2700	2800	1800	1000
MIN	475	921	405	1120	1560	1080	1290	956	880	521	454	459

CAL YR 1989 TOTAL 675849 MEAN 1852 MAX 18900 MIN 405  
WTR YR 1990 TOTAL 588135 MEAN 1611 MAX 8660 MIN 405

e Estimated.

## SCHUYLKILL RIVER BASIN

01471980 MANATAWNY CREEK NEAR POTTSTOWN, PA

LOCATION.--Lat 40°16'22", long 75°40'49", Berks County, Hydrologic Unit 02040203, on left bank about 180 ft upstream from bridge on Manatawny Street, 0.7 mi downstream from Ironstone Creek, 2.4 mi northwest of Pottstown, 3.1 mi upstream from mouth, and 4.7 southwest of Boyertown.

DRAINAGE AREA.--85.5 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except for periods of estimated record, which are poor. Several observations of water Temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 133 ft<sup>3</sup>/s, 21.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,550 ft<sup>3</sup>/s, Sept. 9, 1987, gage height, 11.46 ft; minimum, 13 ft<sup>3</sup>/s, Aug. 26, 1981, gage height, 1.65 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a stage of 17.1 ft, from floodmarks, discharge, about 9,600 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1900	1260	4.69	June 19	0230	1260	4.69
Jan 30	0545	2290	6.07	Aug. 6	2315	*3340	*2.21
May 29	2215	3270	7.14	Aug. 10	1545	1900	5.59

Minimum daily discharge, 34 ft<sup>3</sup>/s, Sept. 12, 13, 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	71	60	697	227	116	106	86	191	65	109	41
2	162	65	57	369	199	113	154	78	159	61	73	38
3	109	70	e57	303	184	115	395	72	142	58	64	41
4	66	71	e57	262	278	110	288	80	132	54	61	38
5	56	64	e56	264	220	103	202	359	118	52	115	36
6	54	62	55	253	176	104	151	138	108	60	499	38
7	52	61	56	219	162	95	160	104	104	52	543	39
8	50	62	53	218	148	93	157	91	98	49	95	37
9	50	129	81	284	142	98	124	83	238	48	74	35
10	49	126	e54	359	281	107	117	314	127	47	532	38
11	52	75	e54	376	211	105	150	360	104	46	479	36
12	51	66	e53	138	171	101	123	153	94	67	149	34
13	49	61	e50	108	152	95	106	199	85	241	101	34
14	48	60	e49	121	144	90	101	219	84	84	116	35
15	47	62	e47	69	148	87	196	138	92	75	76	38
16	47	99	e45	67	160	86	141	123	89	75	55	38
17	69	110	e45	85	142	121	119	162	89	84	50	37
18	102	72	e45	114	125	211	112	116	137	76	47	35
19	329	65	e45	104	124	122	100	104	474	72	46	35
20	614	63	e45	109	117	126	95	95	163	72	74	40
21	283	61	e45	202	110	117	112	98	114	76	84	37
22	146	58	e45	184	116	104	110	96	100	76	199	135
23	106	63	e45	116	162	98	96	86	90	73	163	74
24	91	76	e43	113	237	95	91	82	85	68	100	44
25	82	80	e43	231	152	96	88	78	78	63	69	39
26	77	67	e43	676	125	92	88	110	76	61	58	37
27	74	73	e43	258	147	86	84	105	71	59	52	37
28	71	84	e42	181	121	83	78	83	68	62	49	36
29	69	73	e42	341	---	82	83	918	67	63	48	34
30	66	62	e47	1200	---	98	102	1140	75	63	47	34
31	66	---	e60	303	---	111	---	263	---	77	45	---
TOTAL	3237	2211	1562	8324	4681	3260	4029	6133	3652	2179	4272	1250
MEAN	104	73.7	50.4	269	167	105	134	198	122	70.3	138	41.7
MAX	614	129	81	1200	281	211	395	1140	474	241	543	135
MIN	47	58	42	67	110	82	78	72	67	46	45	34
CFSM	1.22	.86	.59	3.14	1.96	1.23	1.57	2.31	1.42	.82	1.61	.49
IN.	1.41	.96	.68	3.62	2.04	1.42	1.75	2.67	1.59	.95	1.86	.54

CAL YR 1989 TOTAL 48235 MEAN 132 MAX 1700 MIN 42 CFSM 1.55 IN. 20.99  
WTR YR 1990 TOTAL 44790 MEAN 123 MAX 1200 MIN 34 CFSM 1.44 IN. 19.54

e Estimated.

## SCHUYLKILL RIVER BASIN

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA

LOCATION.--Lat 40°14'30", long 75°39'07", Montgomery County, Hydrologic Unit 02040203, on right bank 75 ft upstream from Hanover Street Bridge in Pottstown and 0.4 mi downstream from Manatawny Creek.

DRAINAGE.--1,147 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1926 to current year. Monthly discharges only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 117.86 ft above National Geodetic Vertical Datum of 1929. October 1926 to Nov. 22, 1928, nonrecording gage and Nov. 23, 1928, to Dec. 26, 1972, recording gage, at site 100 ft downstream at same datum. Dec. 27, 1972, to May 10, 1974, nonrecording gage 1.0 mi downstream at datum 2.83 ft lower.

REMARKS.--Records good. Flow regulated by Blue Marsh Reservoir (station 01470870) since April 1979 and to some extent by Still Creek Reservoir and Lake Ontelaunee. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--64 years, 1,899 ft<sup>3</sup>/s, 22.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,900 ft<sup>3</sup>/s, June 23, 1972, gage height, 29.97 ft, from floodmark; minimum, 87 ft<sup>3</sup>/s, Aug. 13, 1930, gage height, 0.43 ft; minimum daily, 175 ft<sup>3</sup>/s, Sept. 19, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to October 1926, 21.0 ft Feb. 28, 1902, from floodmarks, discharge, 53,900 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft<sup>3</sup>/s, Jan. 30, gage height, 8.73 ft; minimum daily, 460 ft<sup>3</sup>/s, Dec. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	843	1520	1220	e1700	7390	2350	1540	1500	3390	979	e780	823
2	1200	1430	1170	e3000	5510	2220	1740	1370	2740	861	e680	743
3	1440	1290	1150	e2000	4360	2020	3250	1140	2520	856	677	962
4	1140	1270	1010	e1850	4340	1910	3640	1250	2370	832	590	888
5	936	1180	1100	1700	4100	1720	3630	2580	2290	784	809	1180
6	835	1120	1360	1280	3240	1620	3130	2390	1870	883	1950	1020
7	834	1190	1080	1240	3040	1510	2880	2040	1720	839	2720	774
8	780	1100	1030	1220	2840	1420	2750	1830	1710	725	1350	710
9	700	1470	908	1440	2640	1360	2430	1760	2740	773	1050	677
10	746	2060	910	1650	3260	1510	2240	2630	3040	843	1870	664
11	754	1620	916	2030	3200	1460	2460	7070	2340	746	2820	662
12	721	1390	975	1940	2890	1440	2470	5720	1910	874	1640	626
13	747	1340	1060	1550	2880	1540	2130	4270	1840	3240	1240	600
14	680	1310	905	1370	2670	1350	2060	4360	1730	2470	1720	601
15	680	1290	879	1310	2630	1280	2600	3610	1690	1900	1630	735
16	640	1930	e810	1270	2640	1270	2610	2920	1380	1710	1310	1010
17	827	8610	e760	1290	2410	1340	2360	3770	1410	1470	1020	874
18	1580	5960	e1000	1510	2150	2880	2250	3960	1480	1280	968	781
19	3000	4090	e700	1690	2060	2430	2010	3340	3170	1190	976	723
20	8220	2810	e620	1570	1880	2470	1880	3010	2250	943	1070	707
21	9430	2610	e590	1990	1780	2910	1950	2760	1680	953	1350	858
22	5890	2230	e570	2350	1750	2360	2080	2200	1300	957	2280	1140
23	4220	1990	e530	2270	2190	2100	1780	2190	1300	917	2090	1090
24	3320	1820	e520	2130	3390	1800	1640	1790	1210	1040	1920	848
25	2510	1700	e505	2470	3400	1750	1560	1700	1150	812	1510	807
26	2150	1650	e490	5880	3010	1690	1530	1850	1110	714	1180	700
27	2000	1620	e480	7210	2780	1670	1540	2020	1090	675	1140	693
28	1860	1590	e470	5560	2420	1830	1500	1640	1000	651	1230	707
29	1600	1580	e460	4500	---	1410	1440	4170	979	645	1120	713
30	1480	1340	e600	12300	---	1460	1560	7710	1020	613	1180	712
31	1440	---	e700	9770	---	1720	---	5210	---	754	1040	---
TOTAL	63203	62110	25478	89040	86850	55800	66640	93760	55429	32929	42910	24028
MEAN	2039	2070	822	2872	3102	1800	2221	3025	1848	1062	1384	801
MAX	9430	8610	1360	12300	7390	2910	3640	7710	3390	3240	2820	1180
MIN	640	1100	460	1220	1750	1270	1440	1140	979	613	590	600

CAL YR 1989 TOTAL 826649 MEAN 2265 MAX 21000 MIN 460  
WTR YR 1990 TOTAL 698177 MEAN 1913 MAX 12300 MIN 460

e Estimated.



## SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA

LOCATION.--Lat 40°12'22", long 75°33'57", Montgomery County, Hydrologic Unit 02040203, on left bank 100 ft above Vincent Dam, 0.3 mi south of Linfield.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--January 1986 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1986 to current year.

WATER TEMPERATURE: September 1989 to current year.

DISSOLVED OXYGEN: January 1986 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1986.

REMARKS.--Interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 752 microsiemens, Sept. 15, 1989; minimum, 118 microsiemens, Sept. 15, 1987.

WATER TEMPERATURE: Maximum, 28.0°C, July 5, 1990; minimum, 2.0°C, many days in winter period.

DISSOLVED OXYGEN: Maximum, 19.6 mg/L, Mar. 24, 1988; minimum, 0.8 mg/L, July 26, 1986.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	502	475	489	---	---	---	395	369	378	506	401	450
2	505	384	459	---	---	---	387	368	373	400	381	391
3	462	405	431	421	410	413	377	368	372	400	375	387
4	500	465	480	437	409	427	390	364	372	389	381	386
5	491	468	480	429	415	425	396	383	389	393	378	383
6	494	472	481	447	430	441	399	394	397	397	390	394
7	537	488	517	451	434	443	395	387	391	397	387	392
8	551	521	539	471	447	461	403	393	398	409	397	402
9	537	510	527	474	447	467	410	402	404	435	397	410
10	539	493	517	444	386	413	425	411	418	495	445	466
11	540	498	526	414	395	401	437	409	424	461	397	424
12	567	539	552	423	415	420	430	416	423	404	380	393
13	564	536	549	441	400	432	456	431	440	393	380	387
14	557	541	550	---	---	---	462	446	453	405	389	396
15	569	543	555	507	441	480	463	451	458	407	396	401
16	579	557	568	446	431	440	468	450	461	429	403	413
17	576	556	565	---	---	---	500	457	484	430	419	425
18	563	537	548	---	---	---	502	486	494	427	417	422
19	546	528	537	---	---	---	494	482	488	419	409	413
20	---	---	---	---	---	---	507	483	498	420	401	408
21	---	---	---	---	---	---	506	484	499	441	393	418
22	---	---	---	---	---	---	507	485	499	387	353	366
23	---	---	---	315	299	309	524	495	513	368	356	360
24	---	---	---	349	315	330	---	---	---	371	363	368
25	---	---	---	330	320	326	536	517	528	367	346	360
26	---	---	---	336	327	331	520	494	512	---	---	---
27	---	---	---	351	335	341	501	473	492	---	---	---
28	---	---	---	356	347	350	484	472	479	---	---	---
29	---	---	---	361	356	359	---	---	---	---	---	---
30	---	---	---	370	356	361	503	491	498	---	---	---
31	---	---	---	---	---	---	491	468	484	---	---	---
MONTH	579	384	520	507	299	399	536	364	449	506	346	401

## SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL AT VINCENT DAM AT LINFIELD, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	346	341	344	---	---	---
2	---	---	---	---	---	---	343	333	338	---	---	---
3	---	---	---	---	---	---	331	260	295	---	---	---
4	---	---	---	---	---	---	291	273	285	---	---	---
5	---	---	---	---	---	---	290	274	281	---	---	---
6	---	---	---	---	---	---	277	274	275	---	---	---
7	---	---	---	---	---	---	285	276	281	---	---	---
8	---	---	---	---	---	---	282	271	276	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	313	298	308	---	---	---
12	---	---	---	---	---	---	302	293	296	---	---	---
13	---	---	---	392	371	378	311	302	308	---	---	---
14	---	---	---	398	384	391	314	301	308	---	---	---
15	---	---	---	412	397	405	302	274	291	---	---	---
16	---	---	---	421	406	414	282	267	277	---	---	---
17	---	---	---	425	415	421	306	283	296	---	---	---
18	---	---	---	419	343	372	308	301	306	---	---	---
19	---	---	---	361	306	336	319	302	313	---	---	---
20	---	---	---	330	311	324	332	315	324	---	---	---
21	---	---	---	320	302	308	---	---	---	---	---	---
22	---	---	---	320	304	313	---	---	---	---	---	---
23	---	---	---	330	315	326	---	---	---	---	---	---
24	---	---	---	337	322	330	---	---	---	---	---	---
25	---	---	---	328	318	323	---	---	---	---	---	---
26	---	---	---	321	312	315	---	---	---	---	---	---
27	---	---	---	332	315	321	---	---	---	---	---	---
28	---	---	---	353	333	342	---	---	---	---	---	---
29	---	---	---	350	339	346	---	---	---	---	---	---
30	---	---	---	360	348	354	---	---	---	---	---	---
31	---	---	---	357	343	349	---	---	---	---	---	---
MONTH	---	---	---	425	302	351	346	260	300	---	---	---
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	475	453	463
2	---	---	---	---	---	---	---	---	---	477	459	468
3	---	---	---	---	---	---	600	577	592	493	461	477
4	---	---	---	---	---	---	603	591	596	479	392	432
5	---	---	---	499	471	488	---	---	---	493	463	478
6	---	---	---	---	---	---	495	359	424	491	475	483
7	---	---	---	---	---	---	384	238	315	479	456	466
8	---	---	---	---	---	---	487	364	431	493	454	471
9	---	---	---	---	---	---	514	491	506	500	470	485
10	---	---	---	---	---	---	487	282	435	491	476	484
11	---	---	---	---	---	---	354	280	304	493	477	486
12	---	---	---	---	---	---	418	359	396	514	487	504
13	---	---	---	---	---	---	437	419	428	538	512	530
14	---	---	---	---	---	---	---	---	---	559	537	549
15	351	290	326	---	---	---	---	---	---	572	543	563
16	372	337	348	---	---	---	---	---	---	---	---	---
17	387	372	380	---	---	---	---	---	---	---	---	---
18	402	384	393	---	---	---	---	---	---	545	507	517
19	---	---	---	---	---	---	470	441	454	576	550	567
20	---	---	---	---	---	---	461	390	431	561	512	542
21	---	---	---	---	---	---	420	413	416	528	503	516
22	---	---	---	---	---	---	416	307	370	515	422	471
23	406	384	396	---	---	---	382	303	338	424	343	380
24	427	402	413	---	---	---	410	383	391	410	375	393
25	426	406	412	---	---	---	430	399	414	436	415	425
26	419	405	412	---	---	---	431	408	423	474	437	449
27	---	---	---	---	---	---	442	424	434	504	476	488
28	---	---	---	---	---	---	450	434	441	495	478	488
29	---	---	---	---	---	---	449	439	443	504	483	493
30	---	---	---	---	---	---	438	430	434	515	488	501
31	---	---	---	---	---	---	466	439	447	---	---	---
MONTH	427	290	385	499	471	488	603	238	429	576	343	485

## SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.5	18.0	18.0	---	---	---	6.0	5.5	6.0	2.5	---	2.5
2	18.5	17.5	18.0	---	---	---	5.5	5.0	5.5	2.5	2.0	2.5
3	19.5	18.5	19.0	13.0	12.0	13.0	5.5	4.0	5.0	2.5	2.0	2.5
4	18.0	17.0	17.5	12.0	11.0	11.5	3.5	2.5	3.0	2.5	2.5	2.5
5	17.0	16.0	16.5	11.5	10.5	11.0	4.0	3.0	3.5	3.5	2.5	3.0
6	17.5	16.0	17.0	12.0	11.0	11.5	5.5	4.0	4.5	4.5	3.5	4.0
7	17.5	17.0	17.5	13.0	11.5	12.0	5.5	5.0	5.5	4.5	4.0	4.5
8	17.0	15.5	16.0	14.0	13.0	13.0	5.0	3.5	4.0	---	---	---
9	---	---	---	14.5	13.5	14.0	3.5	2.5	3.0	4.5	3.0	3.5
10	---	---	---	13.5	11.5	12.5	2.5	2.0	2.5	5.0	4.5	5.0
11	15.0	14.0	14.5	12.5	11.0	11.5	3.0	2.5	2.5	---	---	---
12	---	---	---	12.0	11.0	11.5	3.5	3.5	3.5	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	2.5	2.0	2.5	8.5	7.0	7.5
19	---	---	---	---	---	---	2.5	2.0	2.0	8.5	5.5	7.0
20	---	---	---	---	---	---	2.0	2.0	2.0	5.5	4.0	4.5
21	---	---	---	---	---	---	2.5	2.0	2.5	5.0	4.0	4.5
22	---	---	---	---	---	---	2.5	2.0	2.0	5.5	4.0	5.0
23	---	---	---	6.5	5.5	6.0	2.5	2.0	2.0	5.5	4.5	5.0
24	---	---	---	6.0	5.0	5.5	---	---	---	6.5	5.0	5.5
25	13.5	12.5	13.0	6.0	5.0	5.5	2.5	2.0	2.0	8.0	6.0	6.5
26	---	---	---	7.5	6.0	6.5	2.5	2.0	2.0	---	---	---
27	---	---	---	7.5	6.5	7.0	2.5	2.0	2.0	---	---	---
28	---	---	---	9.0	7.5	8.0	---	---	---	---	---	---
29	---	---	---	8.5	7.0	8.0	---	---	---	---	---	---
30	---	---	---	6.5	6.0	6.5	2.0	2.0	2.0	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	19.5	12.5	16.7	14.5	5.0	9.7	6.0	2.0	3.2	8.5	2.0	4.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	26.0	24.0	25.0
2	---	---	---	---	---	---	---	---	---	27.0	24.5	25.5
3	---	---	---	---	---	---	---	---	---	26.5	25.0	25.5
4	---	---	---	---	---	---	---	---	---	---	---	---
5	18.5	16.5	17.5	28.0	26.0	26.5	---	---	---	24.0	23.5	23.5
6	---	---	---	---	---	---	23.5	21.5	22.0	25.0	23.0	24.0
7	---	---	---	---	---	---	24.0	21.5	22.5	26.0	24.5	25.0
8	---	---	---	---	---	---	25.0	22.5	24.0	---	---	---
9	---	---	---	---	---	---	24.5	22.5	23.5	21.5	21.5	21.5
10	---	---	---	---	---	---	22.5	20.5	21.5	23.5	20.5	21.5
11	---	---	---	---	---	---	23.5	20.0	21.0	24.5	22.0	23.0
12	---	---	---	---	---	---	24.5	22.5	23.5	25.0	23.5	24.0
13	---	---	---	---	---	---	26.5	23.5	25.0	24.5	23.5	24.0
14	---	---	---	---	---	---	---	---	---	24.5	23.0	23.5
15	19.5	17.0	18.5	---	---	---	---	---	---	24.5	23.0	23.5
16	21.5	18.5	19.5	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	19.0	17.5	18.0
19	---	---	---	---	---	---	27.5	26.0	27.0	18.5	17.0	17.5
20	---	---	---	---	---	---	25.5	22.0	23.5	19.0	17.0	17.5
21	---	---	---	---	---	---	---	---	---	19.5	17.5	18.5
22	23.5	21.5	22.0	---	---	---	20.0	19.0	19.5	19.0	17.5	18.0
23	23.5	22.5	23.0	---	---	---	19.5	19.0	19.0	18.0	16.5	17.0
24	23.0	21.5	22.0	---	---	---	20.0	19.0	19.5	17.0	16.0	16.5
25	21.5	20.5	21.0	---	---	---	23.5	20.0	21.0	17.5	15.5	16.5
26	22.5	20.0	21.0	---	---	---	25.5	22.0	24.0	17.0	16.0	16.5
27	---	---	---	---	---	---	27.0	24.0	25.5	18.5	16.0	17.0
28	---	---	---	---	---	---	27.5	25.0	26.0	19.5	17.5	18.0
29	---	---	---	---	---	---	27.0	25.5	26.5	20.5	18.0	19.0
30	---	---	---	---	---	---	26.5	24.5	25.5	20.5	19.0	19.5
31	---	---	---	---	---	---	25.5	24.0	25.0	---	---	---
MONTH	23.5	16.5	20.6	28.0	26.0	26.5	27.5	19.0	23.2	27.0	15.5	20.7

## SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.2	6.5	7.4	---	---	---	12.7	12.1	12.3	12.9	12.4	12.6
2	7.7	5.0	6.6	---	---	---	12.9	12.3	12.5	13.6	12.5	13.1
3	8.2	6.3	7.1	10.9	9.7	10.0	12.9	12.2	12.5	13.8	13.3	13.6
4	9.2	7.6	8.2	12.4	10.5	11.2	13.3	12.7	12.9	13.6	13.0	13.4
5	9.6	7.8	8.6	12.6	11.6	12.0	13.3	12.9	13.1	13.6	13.0	13.2
6	10.0	8.2	9.0	12.3	11.2	11.6	12.9	12.4	12.7	13.9	13.1	13.5
7	9.5	7.9	8.7	11.8	8.4	10.2	13.1	12.4	12.6	14.4	13.2	13.7
8	---	---	---	9.0	7.4	8.3	13.1	12.7	12.9	14.2	13.3	13.6
9	11.0	9.7	10.2	8.1	6.7	7.2	13.7	12.9	13.1	14.7	12.9	13.6
10	10.9	10.1	10.5	8.2	6.9	7.5	13.7	13.4	13.5	14.3	13.5	13.8
11	11.4	8.9	10.3	8.4	7.2	7.8	13.9	13.5	13.6	13.6	12.8	13.3
12	11.0	9.3	10.2	8.3	7.2	7.6	13.8	13.0	13.3	13.5	13.1	13.3
13	---	---	---	9.1	7.8	8.3	13.3	12.6	12.9	14.9	13.2	13.8
14	---	---	---	---	---	---	14.8	12.9	13.8	15.6	14.1	14.6
15	---	---	---	---	---	---	15.0	14.4	14.7	15.2	14.2	14.7
16	---	---	---	8.8	7.2	8.2	14.9	14.3	14.6	15.5	13.8	14.4
17	---	---	---	---	---	---	15.0	14.6	14.8	15.3	13.6	14.4
18	---	---	---	---	---	---	15.3	14.8	15.0	14.8	12.8	13.7
19	---	---	---	---	---	---	15.3	14.8	15.0	14.6	12.0	13.1
20	---	---	---	---	---	---	15.0	14.4	14.6	13.9	12.6	13.2
21	---	---	---	---	---	---	15.1	13.7	14.6	12.9	12.1	12.4
22	---	---	---	---	---	---	15.2	14.7	14.9	13.5	12.1	12.7
23	---	---	---	12.1	11.5	11.7	15.4	14.9	15.2	14.0	12.3	13.1
24	---	---	---	12.3	11.9	12.1	---	---	---	14.0	12.5	13.2
25	9.3	8.8	9.1	12.3	12.0	12.1	15.2	14.6	14.9	13.2	11.6	12.2
26	9.3	8.6	8.7	12.0	11.5	11.7	15.0	14.1	14.5	---	---	---
27	---	---	---	11.8	11.3	11.5	14.6	14.3	14.5	---	---	---
28	---	---	---	11.5	10.6	11.2	14.7	14.1	14.4	---	---	---
29	---	---	---	12.0	11.0	11.4	---	---	---	---	---	---
30	---	---	---	12.6	11.8	12.1	14.4	13.5	13.9	---	---	---
31	---	---	---	---	---	---	13.7	12.8	13.1	---	---	---
MONTH	11.4	5.0	8.8	12.6	6.7	10.2	15.4	12.1	13.8	15.6	11.6	13.4
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	9.5	8.6	9.1	---	---	---
2	---	---	---	---	---	---	9.8	8.5	9.0	---	---	---
3	---	---	---	---	---	---	9.1	8.4	8.6	---	---	---
4	---	---	---	---	---	---	9.4	8.6	9.0	---	---	---
5	---	---	---	---	---	---	10.7	9.3	9.9	---	---	---
6	---	---	---	---	---	---	9.9	8.7	9.3	---	---	---
7	---	---	---	---	---	---	10.5	9.0	9.7	---	---	---
8	---	---	---	---	---	---	11.5	9.5	10.4	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	9.0	8.0	8.5	---	---	---
12	---	---	---	---	---	---	10.2	8.5	9.2	---	---	---
13	---	---	---	---	---	---	10.1	8.2	9.1	---	---	---
14	---	---	---	13.2	9.5	11.3	9.4	7.9	8.7	---	---	---
15	---	---	---	11.3	7.4	8.7	10.0	6.8	8.4	---	---	---
16	---	---	---	12.8	4.6	9.1	10.8	8.6	9.5	---	---	---
17	---	---	---	10.3	7.0	8.1	9.4	8.1	8.7	---	---	---
18	---	---	---	7.0	5.9	6.5	12.1	8.5	10.1	---	---	---
19	---	---	---	8.4	6.2	6.9	11.8	9.3	10.5	---	---	---
20	---	---	---	9.2	7.4	8.0	11.1	8.8	9.9	---	---	---
21	---	---	---	9.7	8.2	8.9	---	---	---	---	---	---
22	---	---	---	9.4	8.2	8.7	---	---	---	---	---	---
23	---	---	---	9.4	7.3	8.5	---	---	---	---	---	---
24	---	---	---	9.4	7.8	8.5	---	---	---	---	---	---
25	---	---	---	12.0	8.1	10.0	---	---	---	---	---	---
26	---	---	---	11.9	9.8	10.8	---	---	---	---	---	---
27	---	---	---	11.6	9.4	10.5	---	---	---	---	---	---
28	---	---	---	11.5	9.0	10.6	---	---	---	---	---	---
29	---	---	---	11.9	9.3	10.5	---	---	---	---	---	---
30	---	---	---	10.9	8.8	9.6	---	---	---	---	---	---
31	---	---	---	10.0	8.5	9.2	---	---	---	---	---	---
MONTH	---	---	---	13.2	4.6	9.1	12.1	6.8	9.3	---	---	---

## SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	7.7	5.6	6.8
2	---	---	---	---	---	---	---	---	---	7.6	5.7	6.7
3	---	---	---	---	---	---	11.5	8.4	10.2	6.6	5.3	6.0
4	---	---	---	---	---	---	15.9	8.4	11.7	6.0	4.5	5.3
5	9.3	8.3	8.7	---	---	---	---	---	---	5.8	4.6	5.2
6	---	---	---	---	---	---	7.7	7.0	7.2	5.6	3.8	4.7
7	---	---	---	---	---	---	7.2	6.9	7.2	5.2	3.6	4.4
8	---	---	---	---	---	---	8.4	6.9	7.4	6.3	3.6	5.0
9	---	---	---	---	---	---	7.6	6.8	7.1	5.5	3.7	4.4
10	---	---	---	---	---	---	7.0	6.3	6.6	4.0	2.7	3.4
11	---	---	---	---	---	---	6.7	5.9	6.3	3.5	2.3	2.9
12	---	---	---	---	---	---	7.4	6.3	6.7	4.0	2.0	2.6
13	---	---	---	---	---	---	8.6	6.4	7.2	9.8	2.3	5.0
14	---	---	---	---	---	---	---	---	---	9.5	7.0	8.1
15	---	---	---	---	---	---	---	---	---	9.5	6.5	7.9
16	8.9	7.5	8.1	---	---	---	---	---	---	---	---	---
17	8.3	7.3	7.9	---	---	---	---	---	---	---	---	---
18	8.9	7.4	7.8	---	---	---	---	---	---	11.1	8.8	9.7
19	---	---	---	---	---	---	9.3	6.0	7.7	10.6	9.5	10.0
20	---	---	---	---	---	---	8.2	6.9	7.2	13.6	9.3	11.2
21	---	---	---	---	---	---	7.8	7.6	7.7	14.8	9.7	12.0
22	---	---	---	---	---	---	7.6	7.2	7.4	12.7	8.8	10.1
23	8.8	6.8	7.6	---	---	---	7.1	6.6	6.9	10.2	8.5	9.2
24	9.7	6.8	8.0	---	---	---	6.7	6.1	6.4	11.3	9.2	10.0
25	8.3	7.1	7.8	---	---	---	7.0	5.8	6.2	11.5	9.6	10.4
26	9.2	7.2	8.2	---	---	---	8.0	6.4	7.1	11.4	9.3	10.2
27	---	---	---	---	---	---	8.0	6.3	7.1	12.9	9.5	10.9
28	---	---	---	---	---	---	8.2	6.2	7.1	13.5	9.6	11.3
29	---	---	---	---	---	---	10.0	6.5	8.0	13.3	9.8	11.4
30	---	---	---	---	---	---	8.8	5.6	7.1	11.1	8.9	9.9
31	---	---	---	---	---	---	9.2	6.1	7.5	---	---	---
MONTH	9.7	6.8	8.0	---	---	---	15.9	5.6	7.4	14.8	2.0	7.7

## SCHUYLKILL RIVER BASIN

01472119 SCHUYLKILL RIVER AT BLACK ROCK DAM AT MONT CLARE, PA

LOCATION.--Lat 40°08'52", long 75°30'21", Montgomery County, Hydrologic Unit 02040203, on left bank 100 feet upstream of Black Rock Dam, 0.7 mi north of Mont Clare.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--January 1986 to May 1990 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1986 to May 1990 (discontinued).

DISSOLVED OXYGEN: January 1986 to May 1990 (discontinued).

INSTRUMENTATION.--Water-quality monitor since January 1986.

REMARKS.--Interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 706 microsiemens, Sept. 16, 1989; minimum, 122 microsiemens, Sept. 9, 1987.

DISSOLVED OXYGEN: Maximum, 18.7 mg/L, Feb. 7, 1989; minimum 0.8 mg/L, Sept. 9, 1987.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	410	384	399	379	369	374	506	446	476
2	---	---	---	406	394	402	389	375	385	453	402	422
3	---	---	---	418	394	405	384	379	381	422	408	414
4	461	405	437	418	393	405	397	379	389	414	403	406
5	488	463	480	426	415	419	416	386	400	408	397	403
6	489	468	476	426	416	420	409	400	405	403	399	402
7	506	477	489	428	406	420	409	395	404	405	399	402
8	528	502	513	436	420	431	410	393	400	416	397	408
9	531	507	520	450	439	445	423	406	413	428	411	419
10	538	507	522	455	374	421	438	421	426	470	435	453
11	535	510	520	405	368	392	451	435	444	492	435	461
12	560	515	539	420	407	414	454	423	438	434	410	420
13	565	553	559	440	417	426	446	434	439	411	393	400
14	569	559	565	441	438	440	471	446	457	407	401	404
15	592	559	579	444	425	434	479	460	467	416	409	413
16	584	570	576	444	426	435	492	478	483	420	410	415
17	589	581	584	---	---	---	506	486	493	441	414	432
18	579	463	529	---	---	---	530	502	515	439	427	432
19	544	383	486	---	---	---	539	515	530	442	424	432
20	396	289	347	---	---	---	539	511	528	424	412	420
21	291	238	263	---	---	---	552	534	546	455	412	424
22	257	240	247	---	---	---	553	546	549	456	385	409
23	265	242	254	327	312	317	566	555	561	385	375	378
24	288	260	275	349	324	328	573	558	565	388	381	385
25	307	280	294	362	330	344	573	562	568	388	358	380
26	309	286	299	338	334	336	574	553	566	342	290	303
27	345	307	324	342	336	338	553	537	543	303	285	293
28	352	335	344	351	343	348	537	515	526	284	270	276
29	361	350	356	362	352	357	528	502	512	275	249	267
30	370	360	363	373	361	366	541	526	534	238	194	207
31	393	373	388	---	---	---	529	505	519	---	---	---
MONTH	592	238	433	455	312	393	574	369	476	506	194	392



## SCHUYLKILL RIVER BASIN

01472119 SCHUYLKILL RIVER AT BLACK ROCK DAM AT MONT CLARE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	325	312	318	366	356	361	378	365	371
2	---	---	---	330	320	324	366	341	356	391	367	383
3	---	---	---	335	328	331	345	297	324	395	381	391
4	---	---	---	337	328	332	302	277	293	409	395	402
5	---	---	---	348	328	335	300	284	294	---	---	---
6	---	---	---	352	345	348	284	280	281	---	---	---
7	---	---	---	369	350	362	288	280	284	---	---	---
8	299	289	292	370	360	366	287	278	284	---	---	---
9	303	289	296	373	360	368	283	276	279	---	---	---
10	306	294	302	374	363	369	294	281	286	---	---	---
11	293	274	283	380	371	377	313	294	302	---	---	---
12	299	284	290	378	360	371	313	293	300	---	---	---
13	303	298	301	378	363	371	308	293	301	---	---	---
14	307	300	303	391	384	388	309	306	308	---	---	---
15	313	304	309	401	385	396	304	282	293	---	---	---
16	321	313	317	409	394	404	---	---	---	---	---	---
17	325	318	322	417	397	410	---	---	---	---	---	---
18	325	318	322	415	346	390	---	---	---	---	---	---
19	331	321	325	371	340	362	---	---	---	---	---	---
20	327	320	322	340	307	323	321	306	309	---	---	---
21	355	328	339	333	318	327	323	312	318	---	---	---
22	359	351	353	325	315	319	330	322	325	---	---	---
23	368	356	362	326	316	320	326	316	322	---	---	---
24	361	329	347	329	318	324	331	320	324	---	---	---
25	327	296	314	333	318	325	353	333	347	---	---	---
26	299	288	294	328	312	320	360	350	356	---	---	---
27	299	288	293	320	315	318	365	354	358	---	---	---
28	318	294	303	364	321	345	371	364	366	---	---	---
29	---	---	---	365	355	359	382	367	376	---	---	---
30	---	---	---	375	363	366	384	369	375	---	---	---
31	---	---	---	384	361	371	---	---	---	---	---	---
MONTH	368	274	314	417	307	353	384	276	320	409	365	387

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	9.4	7.3	8.1	13.3	12.2	12.5	13.9	12.8	13.2
2	---	---	---	10.1	8.3	8.8	13.6	12.4	12.7	13.8	12.6	13.0
3	---	---	---	9.6	8.5	8.9	13.6	12.6	12.9	14.4	13.4	13.7
4	10.7	8.4	9.1	11.2	8.9	9.4	14.0	12.8	13.2	14.0	13.4	13.6
5	11.3	8.9	9.8	11.8	9.7	10.2	14.3	13.3	13.7	13.9	12.4	12.9
6	12.5	9.0	10.2	11.8	9.8	10.3	14.1	13.0	13.4	14.0	12.6	12.8
7	12.3	8.8	10.1	11.4	9.2	9.9	13.9	12.6	12.9	14.3	12.5	13.1
8	13.2	8.8	10.4	11.4	8.7	9.4	14.2	12.7	13.4	14.6	12.6	13.2
9	14.9	9.3	10.9	10.8	8.4	8.9	14.4	13.5	13.8	14.6	12.4	13.0
10	15.1	9.8	11.8	9.2	8.2	8.6	15.0	13.5	14.2	14.5	12.7	13.2
11	16.1	9.9	12.4	10.9	8.7	9.6	15.4	14.0	14.5	13.1	12.2	12.5
12	15.6	9.6	11.5	12.1	9.5	10.2	15.4	13.9	14.4	13.9	12.1	12.7
13	14.4	9.2	11.1	12.2	9.9	10.6	14.8	13.5	14.0	15.0	12.3	13.0
14	13.6	9.2	10.7	12.1	10.2	10.6	15.0	13.1	13.9	16.1	13.3	14.1
15	16.1	9.0	11.4	11.8	9.6	10.3	15.5	13.9	14.5	16.0	13.7	14.4
16	12.7	9.0	10.5	11.0	8.6	9.2	15.4	13.2	14.2	16.2	13.4	14.2
17	9.3	7.4	8.5	---	---	---	14.7	13.2	14.0	16.4	13.4	14.4
18	8.6	6.6	7.4	---	---	---	15.1	13.3	14.2	16.3	12.5	13.8
19	9.0	7.6	8.2	---	---	---	15.1	13.4	14.2	15.6	11.9	13.2
20	9.6	9.0	9.3	---	---	---	15.4	13.7	14.3	14.3	12.7	13.3
21	10.1	8.1	9.7	---	---	---	15.0	13.6	14.1	14.1	12.1	12.8
22	11.1	8.3	8.7	---	---	---	15.3	13.3	14.2	13.5	12.1	12.6
23	8.3	7.5	8.0	13.1	12.5	12.7	14.8	13.3	13.8	14.6	12.6	13.2
24	8.0	7.5	7.8	13.5	12.7	13.0	15.5	13.3	14.3	14.7	12.8	13.4
25	8.2	7.7	7.9	13.6	12.9	13.2	15.7	13.8	14.6	13.2	11.5	12.5
26	7.9	7.5	7.8	13.3	12.7	12.9	15.9	13.8	14.7	11.7	11.1	11.3
27	8.1	7.5	7.8	13.0	12.1	12.5	15.4	13.5	14.2	12.9	11.8	12.5
28	9.2	8.0	8.2	12.7	11.8	12.1	15.4	13.5	14.3	12.9	12.7	12.8
29	9.1	7.8	8.0	12.6	11.4	11.7	15.7	14.1	14.6	12.7	12.1	12.6
30	10.4	7.7	8.7	13.2	11.8	12.2	15.5	13.7	14.4	---	---	---
31	10.1	8.7	9.2	---	---	---	15.1	13.4	14.1	---	---	---
MONTH	16.1	6.6	9.5	13.6	7.3	10.6	15.9	12.2	13.9	16.4	11.1	13.1

## SCHUYLKILL RIVER BASIN

01472119 SCHUYLKILL RIVER AT BLACK ROCK DAM AT MONT CLARE, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	15.8	14.1	14.8	12.3	10.7	1.4	10.8	7.1	8.2
2	---	---	---	15.3	13.8	14.5	12.6	10.8	11.5	11.1	7.1	8.5
3	---	---	---	16.0	13.5	14.3	11.9	9.9	10.6	11.1	7.6	8.7
4	---	---	---	16.4	13.2	14.3	10.7	9.8	10.3	10.8	7.7	8.9
5	---	---	---	16.9	13.7	14.8	11.8	10.6	11.1	---	---	---
6	---	---	---	15.8	13.2	14.2	12.0	10.5	11.2	---	---	---
7	---	---	---	17.1	13.2	14.4	12.5	10.6	11.4	---	---	---
8	13.4	12.2	12.8	17.9	14.1	15.3	13.8	11.3	12.2	---	---	---
9	13.2	12.1	12.5	17.9	14.1	15.3	14.5	11.7	12.8	---	---	---
10	12.2	11.3	11.7	16.9	13.2	14.4	13.7	11.2	12.2	---	---	---
11	12.6	11.2	11.7	16.0	12.5	13.8	11.3	10.0	10.6	---	---	---
12	13.3	12.0	12.4	16.6	12.4	13.9	12.5	10.0	10.9	---	---	---
13	14.2	12.4	13.1	16.4	11.6	13.5	14.0	11.2	12.2	---	---	---
14	13.5	12.4	12.9	15.9	10.9	12.6	13.7	11.4	12.5	---	---	---
15	12.7	12.1	12.4	15.7	10.7	12.4	13.4	10.7	11.5	---	---	---
16	12.7	12.1	12.3	15.1	10.3	12.0	---	---	---	---	---	---
17	14.1	12.0	12.7	13.9	8.8	9.9	---	---	---	---	---	---
18	15.2	13.0	13.7	9.5	7.6	8.5	---	---	---	---	---	---
19	15.3	13.3	14.1	11.0	8.6	9.6	---	---	---	---	---	---
20	15.7	13.1	14.0	10.5	9.5	9.8	13.9	10.9	12.1	---	---	---
21	16.3	13.5	14.5	13.0	10.2	11.4	13.1	9.8	10.8	---	---	---
22	15.8	13.6	14.4	13.8	11.7	12.5	12.6	9.1	10.5	---	---	---
23	15.0	12.5	13.5	13.6	11.2	12.1	13.4	10.0	11.2	---	---	---
24	12.8	11.7	12.0	13.3	11.0	11.8	13.2	9.1	10.6	---	---	---
25	13.0	11.8	12.4	15.0	11.6	12.7	12.5	8.4	9.7	---	---	---
26	15.1	12.9	13.9	15.7	12.3	13.5	12.2	7.9	9.6	---	---	---
27	14.8	14.2	14.5	16.2	12.3	13.7	12.1	7.5	9.1	---	---	---
28	15.9	14.0	14.7	15.6	11.7	13.3	10.8	6.9	8.5	---	---	---
29	---	---	---	15.2	11.3	12.5	10.5	6.2	7.3	---	---	---
30	---	---	---	15.0	11.1	12.1	8.8	6.0	6.9	---	---	---
31	---	---	---	12.7	10.6	11.5	---	---	---	---	---	---
MONTH	16.3	11.2	13.2	17.9	7.6	12.9	14.5	6.0	10.3	11.1	7.1	8.6

## SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA

LOCATION.--40°09'05", long 75°36'06", Chester County, Hydrologic Unit 02040203, on right bank 70 ft downstream from two-span county bridge on French Creek Road, 4.5 mi northwest of Phoenixville, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--59.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 160 ft, from topographic map. Prior to Nov. 7, 1968, nonrecording gage at site 70 ft upstream at same datum.

Remarks.--Records good except for periods of estimated recorded, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 90.4 ft<sup>3</sup>/s, 20.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s June 22, 1972, gage height, 13.66 ft, from rating curve extended above 2,500 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum daily, 8.9 ft<sup>3</sup>/s Aug. 25-29, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1500	951	7.08	Jan. 30	0030	1500	7.85
Jan. 26	0015	800	6.84	May 30	0015	*1840	*8.25

Minimum daily discharge, 24 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e40	e62	e52	370	e180	76	73	69	119	38	32	33
2	154	e60	e52	252	e160	75	130	62	96	36	27	31
3	e105	e64	e52	197	e150	78	305	56	84	35	25	32
4	e70	e66	e52	175	e190	73	198	70	77	34	24	30
5	e48	e60	e51	185	e150	67	143	151	68	33	29	28
6	e45	e59	e51	173	e130	68	108	85	63	33	79	29
7	e41	e58	e51	146	e110	63	129	67	62	32	95	28
8	e40	e56	e50	121	e100	61	132	59	60	31	43	27
9	e39	115	e50	153	99	65	98	52	82	32	37	26
10	e38	125	e50	213	176	83	91	219	64	36	126	27
11	e39	e70	e48	215	150	73	103	249	55	34	138	26
12	e42	e62	e48	e80	115	70	90	101	52	38	54	25
13	e40	e56	e46	e69	102	67	81	98	47	131	43	25
14	e36	e52	e45	e72	98	64	77	137	47	60	90	26
15	e36	e56	e42	e47	93	62	169	86	73	49	43	31
16	e36	90	e41	e46	102	62	114	77	57	42	34	26
17	e60	104	e40	e57	95	76	94	78	48	37	32	33
18	e100	e69	e40	e72	83	153	88	68	98	34	30	28
19	270	e60	e40	e69	84	85	79	62	181	32	44	25
20	472	e56	e39	e73	78	88	77	57	76	30	49	28
21	254	e52	e39	e110	74	81	78	61	63	36	41	26
22	e140	e50	e39	e110	81	69	78	60	58	53	244	68
23	e110	e57	e38	e73	98	65	72	54	54	36	143	53
24	e90	e70	e38	e69	141	64	68	52	50	32	81	33
25	e80	73	e38	e150	94	67	66	50	47	29	61	28
26	e72	e62	e38	e370	72	64	67	80	46	28	53	26
27	e70	e69	e38	e180	74	59	63	90	44	27	44	26
28	e66	e80	e38	e120	76	57	61	60	43	26	38	26
29	e64	e68	e38	e190	---	56	66	517	42	26	38	25
30	e62	e55	e38	711	---	74	83	854	39	27	49	25
31	e60	---	e50	e200	---	85	---	181	---	31	36	---
TOTAL	2819	2036	1372	5068	3155	2250	3081	3962	1995	1178	1902	900
MEAN	90.9	67.9	44.3	163	113	72.6	103	128	66.5	38.0	61.4	30.0
MAX	472	125	52	711	190	153	305	854	181	131	244	68
MIN	36	50	38	46	72	56	61	50	39	26	24	25
CFSM	1.54	1.15	.75	2.77	1.91	1.23	1.74	2.16	1.13	.64	1.04	.51
IN.	1.77	1.28	.86	3.19	1.99	1.42	1.94	2.49	1.26	.74	1.20	.57

CAL YR 1989 TOTAL 37390 MEAN 102 MAX 847 MIN 25 CFSM 1.73 IN. 23.53  
WTR YR 1990 TOTAL 29718 MEAN 81.4 MAX 854 MIN 24 CFSM 1.38 IN. 18.71

e Estimated.

## SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

PERIOD OF RECORD.--February to current year.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
OCT 23...	1730	121	153	7.3	13.5	10.5	1.2	11.5	51	18	13	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 23...	4.6	7.4	0.4	23	2.0	33	14	9.4	16	94	<0.010	
DATE		NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
OCT 23...	1.80	0.010	0.40	0.40	0.040	0.020	0.030	20	120	12		

## SCHUYLKILL RIVER BASIN

01472198 PERKIOMEN CREEK AT EAST GREENVILLE, PA

Location.--Lat 40°23'38", long 75°30'57", Montgomery County, Hydrologic Unit 02040203, on right bank 100 ft upstream from Church Road Bridge, 0.9 mi upstream of Molasses Creek, and 1 mi southwest of East Greenville.

DRAINAGE AREA.--38.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 288.50 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 59.7 ft<sup>3</sup>/s, 21.34 in./yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft<sup>3</sup>/s, June 25, 1984, gage height, 7.07 ft; minimum, 3.8 ft<sup>3</sup>/s, Sept. 5, 1985, gage height, 1.20 ft; minimum daily, 4.2 ft<sup>3</sup>/s, Aug. 21, 23, 24, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 30	0145	2230	4.18	Aug. 7	1440	1440	3.84
May 29	2300	*10200	*5.75				

Minimum daily discharge, 12 ft<sup>3</sup>/s, Dec. 24-29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	38	29	182	115	52	51	39	106	30	20	23
2	90	33	28	46	101	52	61	35	90	e28	15	22
3	61	38	e27	e31	90	53	217	32	79	e27	14	22
4	44	37	e24	e27	148	49	125	35	73	27	17	21
5	34	32	e23	e25	103	45	95	198	65	35	37	21
6	33	31	e22	e23	86	46	75	65	60	36	60	22
7	30	31	e22	e23	79	41	82	51	58	27	347	21
8	29	31	e21	e26	70	40	72	47	54	26	46	20
9	27	54	e21	31	68	42	61	43	136	26	36	20
10	26	46	e20	60	140	46	59	256	68	26	77	21
11	30	37	e19	70	96	46	84	171	55	26	85	20
12	27	34	e18	51	85	45	61	84	50	34	45	19
13	27	30	e18	39	75	43	54	96	47	151	37	19
14	26	30	e17	33	69	40	52	89	56	49	62	20
15	25	35	e17	32	71	38	98	67	113	40	35	21
16	24	59	e16	34	77	37	70	67	68	36	31	19
17	37	49	e16	43	65	65	62	64	46	29	26	20
18	40	39	e15	56	56	91	57	54	e100	27	25	18
19	150	35	e15	49	58	56	51	49	e140	26	35	18
20	295	34	e14	44	52	63	49	45	e68	25	58	21
21	128	32	e14	95	49	54	60	46	e57	24	46	19
22	80	29	e13	77	60	47	54	42	e47	25	84	49
23	63	32	e13	60	80	44	48	40	e43	25	60	28
24	55	30	e12	58	107	42	44	39	e40	22	46	21
25	47	30	e12	199	70	42	44	37	e37	21	40	20
26	46	36	e12	452	52	40	43	48	36	20	33	20
27	43	34	e12	136	52	37	40	45	33	18	28	20
28	40	45	e12	99	56	36	37	37	31	18	27	19
29	35	37	e12	268	---	35	37	1520	37	18	25	19
30	36	31	e13	681	---	51	42	932	36	16	24	19
31	38	---	e35	151	---	58	---	141	---	19	23	---
TOTAL	1697	1089	562	3201	2230	1476	1985	4514	1929	957	1544	642
MEAN	54.7	36.3	18.1	103	79.6	47.6	66.2	146	64.3	30.9	49.8	21.4
MAX	295	59	35	681	148	91	217	1520	140	151	347	49
MIN	24	29	12	23	49	35	37	32	31	16	14	18
CFSM	1.44	.96	.48	2.72	2.10	1.25	1.74	3.83	1.69	.81	1.31	.56
IN.	1.66	1.07	.55	3.13	2.18	1.44	1.94	4.42	1.89	.94	1.51	.63

CAL YR 1989 TOTAL 21528 MEAN 59.0 MAX 857 MIN 12 CFSM 1.55 IN. 21.07  
WTR YR 1990 TOTAL 21826 MEAN 59.8 MAX 1520 MIN 12 CFSM 1.57 IN. 21.37

e Estimated.

## SCHUYLKILL RIVER BASIN

01472199 NORTHWEST BRANCH PERKIOMEN CREEK AT HILLEGASS, PA

Location.--Lat 40°22'26", long 75°31'22", Montgomery County, Hydrologic Unit 02040203, on left bank 0.3 mi downstream of bridge on private road, and 0.5 mi north of Hillegass.

DRAINAGE AREA.--23.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 290.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--9 years, 37.5 ft<sup>3</sup>/s, 22.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 2,690 ft<sup>3</sup>/s, Dec. 28, 1983, gage height, 5.52 ft; minimum, 4.2 ft<sup>3</sup>/s, Sept. 21, 1983, gage height, 1.38 ft; minimum daily, 4.4 ft<sup>3</sup>/s, Sept. 20, 1983.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 30	0030	1230	4.59	Aug. 7	0130	1100	4.47
May 29	2345	*2110	*4.47				

Minimum daily discharge, 6.3 ft<sup>3</sup>/s, Dec. 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	23	18	124	68	30	31	25	67	18	13	12
2	66	20	17	32	59	30	39	23	54	15	9.2	12
3	37	22	17	24	52	31	149	21	47	15	8.7	12
4	25	22	e16	e22	100	29	86	23	43	14	8.6	11
5	21	19	e15	e21	65	27	65	140	37	14	20	11
6	20	19	e14	e20	50	27	45	41	34	18	45	12
7	18	18	e13	e20	46	25	51	31	33	14	237	12
8	16	19	e12	20	41	24	47	28	31	13	28	11
9	16	35	e11	22	38	25	36	26	96	13	24	10
10	15	31	e9.5	51	99	27	34	159	41	13	79	11
11	17	23	e9.1	59	61	27	50	117	34	13	97	11
12	15	21	e8.9	35	49	27	36	52	31	18	32	10
13	15	19	e8.8	24	43	25	32	75	28	82	26	10
14	14	19	e8.4	20	40	24	31	68	28	25	37	11
15	13	21	e8.1	21	41	24	72	44	32	22	23	12
16	13	38	e8.1	24	47	23	43	41	28	21	23	10
17	19	31	e7.9	30	38	37	37	43	26	16	26	10
18	26	23	e7.8	40	32	67	34	34	68	14	15	9.3
19	119	21	e7.4	31	33	32	31	31	89	13	16	9.7
20	207	21	e7.1	29	30	37	30	29	34	13	23	12
21	90	19	e6.9	69	29	33	36	29	30	12	25	9.7
22	51	17	e6.8	52	33	28	33	28	27	13	55	33
23	37	19	e6.7	35	51	27	29	26	25	15	34	19
24	32	18	e6.5	34	79	26	27	25	23	28	27	12
25	29	18	e6.5	133	40	26	27	24	22	18	24	11
26	27	21	e6.3	232	31	25	27	29	21	9.7	20	11
27	26	23	e6.4	84	31	24	24	30	20	8.6	17	11
28	25	28	e6.4	58	32	23	23	24	18	18	16	10
29	23	23	e6.4	172	---	22	24	509	18	37	14	9.8
30	22	19	e6.6	350	---	29	28	454	23	18	14	9.7
31	22	---	e30	91	---	35	---	94	---	12	12	---
TOTAL	1093	670	319.6	1979	1358	896	1257	2323	1108	573.3	1048.5	355.2
MEAN	35.3	22.3	10.3	63.8	48.5	28.9	41.9	74.9	36.9	18.5	33.8	11.8
MAX	207	38	30	350	100	67	149	509	96	82	237	33
MIN	13	17	6.3	20	29	22	23	21	18	8.6	8.6	9.3
CFSM	1.53	.97	.45	2.78	2.11	1.26	1.82	3.26	1.61	.80	1.47	.51
IN.	1.77	1.08	.52	3.20	2.20	1.45	2.03	3.76	1.79	.93	1.70	.57

CAL YR 1989 TOTAL 14335.3 MEAN 39.3 MAX 545 MIN 6.3 CFSM 1.71 IN. 23.19  
WTR YR 1990 TOTAL 12980.6 MEAN 35.6 MAX 509 MIN 6.3 CFSM 1.55 IN. 20.99

e Estimated.



01472620 EAST BRANCH PERKIOMEN CREEK NEAR DUBLIN, PA

LOCATION.--Lat 40°24'14", long 75°14'05", Bucks County, Hydrologic Unit 02040203, on right bank 40 ft downstream of bridge on Bucks Road, 4.5 miles northeast of Perkasie, and 5 miles southeast of Quakertown.

DRAINAGE AREA.--4.05 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 334.124 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for periods of estimated record, which are poor. Several observations of water temperature were made during the year. Regulation by releases from Bradshaw Reservoir since August 1989. Peak flows are unregulated.

AVERAGE DISCHARGE.--7 years, 6.19 ft<sup>3</sup>/s, 20.76 in/yr, adjusted for regulation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2270 ft<sup>3</sup>/s, July 7, 1984, gage height 8.41 ft, from slope-area measurement; minimum, no flow many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft<sup>3</sup>/s and maximum (\*): ft;

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1215	593	4.48	May 29	1745	689	4.86
Jan. 29	2330	593	4.48	June 18	1900	*897	*5.52
May 5	0215	474	4.10	June 19	2130	532	4.29
May 13	1500	422	3.88				

Minimum daily discharge, 1.4 ft<sup>3</sup>/s, March 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	20	31	32	13	27	38	35	26	34	50	62
2	35	26	30	14	13	45	39	33	35	32	55	62
3	23	28	29	11	12	45	48	32	30	32	61	62
4	17	27	29	9.7	35	45	38	33	34	28	56	62
5	16	27	29	9.9	16	45	42	89	35	16	50	61
6	17	26	24	9.0	12	44	38	39	33	28	61	60
7	16	26	21	8.6	12	45	42	36	18	45	45	61
8	16	26	22	8.2	11	45	40	35	23	45	61	61
9	16	33	26	8.4	9.9	45	24	35	41	31	56	59
10	16	31	26	31	41	34	9.8	68	32	25	60	60
11	14	28	23	22	17	1.4	6.7	45	24	36	62	60
12	16	28	30	12	14	21	3.1	37	33	54	62	60
13	16	27	21	9.7	13	38	2.1	83	30	67	51	60
14	16	27	21	9.0	11	45	1.8	48	24	63	58	60
15	16	23	21	9.0	13	45	30	38	44	57	61	59
16	16	34	21	11	12	41	7.0	36	38	35	61	58
17	28	25	21	12	11	46	4.0	33	37	47	62	58
18	25	28	22	16	9.9	51	3.1	35	138	54	62	58
19	76	28	22	12	9.9	44	2.2	21	288	37	66	58
20	125	21	20	14	9.0	66	1.8	21	225	37	62	58
21	30	9.9	16	33	15	72	2.8	21	42	46	58	58
22	25	31	20	18	9.9	70	2.2	23	41	47	62	60
23	17	29	20	13	31	64	1.6	22	39	36	62	60
24	16	29	22	14	30	35	6.6	20	39	52	62	59
25	12	29	20	87	12	34	23	20	34	55	59	58
26	15	31	21	75	9.6	34	33	21	29	58	59	46
27	16	30	21	20	9.0	35	34	21	29	55	64	34
28	18	37	21	15	9.1	35	33	20	29	55	64	42
29	e18	32	21	77	---	35	32	184	28	58	62	43
30	17	32	15	68	---	37	33	47	34	58	62	43
31	17	---	15	17	---	40	---	14	---	58	62	---
MEAN	23.8	27.6	22.6	22.8	15.0	42.2	20.7	40.2	51.1	44.5	59.3	56.7
MAX	125	37	31	87	41	72	48	184	288	67	66	62
MIN	12	9.9	15	8.2	9.0	1.4	1.6	14	18	16	45	34
MEAN	6.6	2.3	0	13.4	5.1	0.2	4.4	12.2	14.8	0	0	0
CFSM <sup>†</sup>	1.63	.57	0	3.31	1.26	.05	1.09	3.01	3.65	0	0	0
IN. <sup>‡</sup>	1.88	.63	0	3.82	1.31	.06	1.21	3.47	4.08	0	0	0
†	-17.2	-25.3	-23.3	-9.4	-9.9	-42.0	-16.3	-28.0	-36.3	-46.2	-60.2	-59.5

WTR YR 1990 MEAN 35.7 MAX 288 MIN 1.4 MEAN<sup>‡</sup> 4.56 CFSM<sup>‡</sup> 1.13 IN.<sup>‡</sup> 15.31

\* Adjusted for releases from Bradshaw Reservoir.

† Release from Bradshaw Reservoir, furnished by Philadelphia Electric Company.

e Estimated.

## SCHUYLKILL RIVER BASIN

01473000 PERKIOMEN CREEK AT GRATERFORD, PA

LOCATION.--Lat 40°13'46", long 75°27'07", Montgomery County, Hydrologic Unit 02040203, on left bank 1,650 ft upstream from highway bridge at Graterford, 0.5 mi upstream from Landis Brook and 2.5 mi north of Collegeville.

DRAINAGE AREA.--279 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1914 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1950, published as "at Graters Ford."

REVISED RECORDS.--WSP 756: Drainage area. WSP 1171: 1935(M). WSP 1302: 1915-16, 1927-29. WSP 1382: 1932-33, 1935, 1937, 1942, 1947, 1948(M), 1949(P), 1950(M), 1951-52(P).

GAGE.--Water-stage recorder. Datum of gage is 112.66 ft above National Geodetic Vertical Datum of 1929. June 1914 to Sept. 6, 1921, nonrecording gage at site 1,650 ft downstream at datum 3.29 ft lower. Sept. 7, 1921, to Sept. 13, 1927, nonrecording gage at present site and datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Some regulation by Green Lane Reservoir (station 01472200) 10.5 mi upstream since December 21, 1956.

AVERAGE DISCHARGE.--76 years, 393 ft<sup>3</sup>/s, 19.12 in/yr, adjusted for storage since December 1956.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,900 ft<sup>3</sup>/s, July 9, 1935, gage height, 18.26 ft, from rating curve extended above 12,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 16.23 ft; minimum, 4.7 ft<sup>3</sup>/s, Oct. 5, 1941; minimum daily, 5.6 ft<sup>3</sup>/s, Oct. 5, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,600 ft<sup>3</sup>/s, May 30, gage height, 13.00 ft; minimum daily, 97 ft<sup>3</sup>/s, Sept. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	243	230	873	796	264	342	212	661	153	129	134
2	1200	213	202	999	640	267	468	194	535	139	109	125
3	746	213	206	1450	559	281	2060	174	404	127	116	129
4	419	225	198	1390	1000	282	1290	175	352	123	117	126
5	298	200	175	798	949	247	864	1300	302	117	122	121
6	255	188	166	350	584	243	569	574	260	126	256	122
7	238	182	172	218	501	238	571	342	250	117	1410	122
8	184	183	152	195	426	216	668	269	217	122	389	117
9	160	379	182	214	380	216	453	232	674	123	242	116
10	143	527	209	483	1120	230	362	903	441	121	286	113
11	160	314	216	1030	982	228	451	1980	300	104	719	113
12	155	260	151	649	617	217	410	692	235	115	355	113
13	142	220	158	342	504	216	304	1100	214	735	255	114
14	134	202	161	260	435	203	266	1640	199	358	261	117
15	123	209	163	233	397	189	1000	646	992	258	233	114
16	128	302	145	225	428	190	683	484	502	223	190	112
17	478	459	145	291	404	212	441	963	308	161	165	119
18	743	285	145	462	307	677	389	510	816	159	152	110
19	2250	238	145	494	287	414	295	375	3110	145	134	108
20	4000	223	142	360	284	416	262	281	707	126	397	113
21	2000	238	135	942	243	480	281	264	420	141	334	112
22	838	166	132	956	246	363	321	253	336	161	460	212
23	547	187	139	576	391	330	258	230	278	139	477	245
24	418	192	139	467	1120	280	224	206	241	140	315	158
25	349	181	139	1740	562	253	212	180	207	128	273	130
26	299	209	134	5890	313	246	228	191	185	126	205	121
27	268	254	135	1510	275	228	217	237	172	124	185	112
28	241	342	135	841	282	213	202	188	161	119	265	99
29	232	345	135	1100	---	196	193	5000	149	119	186	97
30	226	256	180	6820	---	220	218	8750	155	119	165	99
31	212	---	208	1280	---	341	---	1170	---	119	144	---
TOTAL	17767	7635	5074	33438	15032	8596	14502	29715	13783	5087	9046	3743
MEAN	573	254	164	1079	537	277	483	959	459	164	292	125
MAX	4000	527	230	6820	1120	677	2060	8750	3110	735	1410	245
MIN	123	166	132	195	243	189	193	174	149	104	109	97
MEAN*	574	253	162	1086	532	277	482	964	454	158	297	124
CFSM*	2.06	.91	.58	3.89	1.91	.99	1.73	3.46	1.63	.57	1.06	.44
IN.*	2.37	1.01	.67	4.49	1.99	1.15	1.93	3.99	1.82	.65	1.23	.50

CAL YR 1989 TOTAL 184328 MEAN 505 MAX 7150 MIN 58 MEAN\* 505 CFSM\* 1.81 IN.\* 24.58  
WTR YR 1990 TOTAL 163418 MEAN 448 MAX 8750 MIN 97 MEAN\* 448 CFSM\* 1.60 IN.\* 21.79

\* Adjusted for change in contents in Green Lane Reservoir.

## SCHUYLKILL RIVER BASIN

01473120 SKIPPACK CREEK NEAR COLLEGEVILLE, PA

LOCATION.--Lat 40°09'52", long 75°26'01", Montgomery County, Hydrologic Unit 02040203, on right bank 60 ft downstream from two-span highway bridge, 1.5 mi upstream from mouth, and 2 mi southeast of Collegeville.

DRAINAGE AREA.--53.7 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 99.03 ft above National Geodetic Vertical Datum of 1929. Prior to June 15, 1967, nonrecording gage at site 60 ft upstream at same datum.

REMARKS.--Records fair except for periods of missing record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 78.0 ft<sup>3</sup>/s, 19.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,400 ft<sup>3</sup>/s, Sept. 13, 1971, gage height, 22.5 ft, from floodmark, from rating curve extended above 8,400 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 0.1 ft<sup>3</sup>/s, Sept. 12, 13, 1966; minimum gage height, 0.79 ft Oct. 3, 1968, July 31, 1977.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1430	2760	7.38	May 29	2015	*6060	*10.58
Jan. 25	2400	3100	7.79	June 15	0800	2190	6.61
Jan. 30	0215	4160	8.91	June 18	2300	5410	10.04

Minimum daily discharge, 3.3 ft<sup>3</sup>/s, July 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	33	37	e220	132	45	40	28	106	3.3	6.8	6.9
2	222	28	33	e48	109	42	47	24	75	9.1	6.2	5.6
3	111	30	32	e31	89	42	360	21	61	15	5.8	4.9
4	67	30	e30	e29	159	36	178	23	51	15	5.8	4.2
5	52	26	e28	e29	129	31	125	102	42	13	6.7	4.6
6	44	26	e27	e29	93	31	89	37	35	12	54	5.0
7	37	25	e25	e29	81	28	140	26	33	12	72	5.4
8	30	26	e23	e41	70	26	129	23	28	11	17	4.7
9	27	160	e22	e110	64	27	89	20	79	9.7	12	4.2
10	25	90	e22	e300	220	30	78	137	35	10	75	4.1
11	31	58	e22	e90	140	28	83	161	25	10	70	4.1
12	25	47	e21	e55	104	27	66	56	23	10	22	4.4
13	22	39	e21	e40	85	26	55	62	20	10	17	4.4
14	20	37	e20	e34	75	24	50	200	19	10	28	5.3
15	19	36	e20	e30	65	24	268	67	616	10	13	17
16	17	99	e20	e29	70	23	122	126	110	10	11	8.7
17	69	72	e20	e29	61	25	91	270	64	10	10	25
18	96	50	e20	e28	48	83	77	92	768	10	8.7	10
19	473	42	e20	e28	48	42	63	62	506	10	7.3	7.2
20	809	40	e20	e50	42	111	58	45	122	9.1	8.0	6.9
21	262	37	e20	e240	37	89	62	38	81	8.3	17	6.5
22	131	33	e20	e150	39	66	56	34	61	8.2	32	64
23	91	36	e20	e89	62	57	48	28	52	8.2	25	28
24	73	33	e20	e79	186	49	44	25	40	8.2	15	12
25	61	32	e20	671	79	47	41	21	33	7.9	12	9.1
26	52	38	e19	1140	56	41	40	29	29	7.6	9.6	8.0
27	45	40	e19	240	58	37	36	29	26	7.5	8.5	7.4
28	40	58	e19	145	51	34	32	19	23	7.2	16	6.9
29	35	47	e19	307	---	31	29	1760	20	6.9	11	6.3
30	32	39	e18	1120	---	40	29	923	14	6.2	13	6.2
31	33	---	e40	191	---	51	---	173	---	7.6	8.8	---
TOTAL	3082	1387	717	5651	2452	1293	2625	4661	3197	293.0	624.2	297.0
MEAN	99.4	46.2	23.1	182	87.6	41.7	87.5	150	107	9.45	20.1	9.90
MAX	809	160	40	1140	220	111	360	1760	768	15	75	64
MIN	17	25	18	28	37	23	29	19	14	3.3	5.8	4.1
CFSM	1.85	.86	.43	3.39	1.63	.78	1.63	2.80	1.98	.18	.37	.18
IN.	2.14	.96	.50	3.91	1.70	.90	1.82	3.23	2.21	.20	.43	.21

CAL YR 1989 TOTAL 34898.7 MEAN 95.6 MAX 2090 MIN 7.8 CFSM 1.78 IN. 24.18  
WTR YR 1990 TOTAL 26279.2 MEAN 72.0 MAX 1760 MIN 3.3 CFSM 1.34 IN. 18.20

e Estimated.

## SCHUYLKILL RIVER BASIN

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA.

LOCATION.--Lat 40°04'45", long 75°27'40", Chester County, Hydrologic Unit 02040202, on right bank, 100 ft. upstream of Pennsylvania turnpike bridge, 0.9 miles downstream of confluence with Little Valley Creek, near Valley Forge.

DRAINAGE AREA.--20.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 108.62 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--8 years, 33.0 ft<sup>3</sup>/s, 21.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft<sup>3</sup>/s, Sept. 20, 1989, gage height, 9.02 ft; minimum daily, 12 ft<sup>3</sup>/s, Oct. 5, 6, 10, 11, 17, 18, 1983, Sept. 14, 1985, Sept. 13-16, 29, 30, 1986, Oct. 1, 10, 11, 1986, Jan. 18, 1988.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	2000	*924	*7.53	June 18	2045	857	7.36

Minimum daily discharge, 17 ft<sup>3</sup>/s, Dec. 28, 29, 30, Sept. 21, 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	27	25	65	42	30	26	27	39	26	20	20
2	79	27	25	27	40	30	29	26	37	25	19	20
3	34	29	25	26	39	30	77	26	36	25	19	19
4	30	26	24	26	45	29	38	31	36	24	19	19
5	28	26	23	26	39	29	33	43	34	25	34	19
6	28	26	23	25	37	29	31	27	33	25	46	19
7	27	26	23	24	36	28	42	26	32	24	40	19
8	27	33	23	27	33	28	33	25	32	23	22	18
9	26	53	23	34	35	28	30	25	68	46	23	19
10	26	29	22	42	67	29	30	76	32	29	31	18
11	29	27	22	33	40	26	42	39	31	25	26	18
12	26	26	22	29	37	28	31	29	30	28	21	18
13	26	25	23	27	35	29	29	38	29	66	68	18
14	25	25	22	26	34	28	29	31	29	29	53	22
15	25	25	22	28	34	27	63	28	187	33	24	20
16	24	37	22	27	35	26	34	27	36	26	22	18
17	27	26	21	26	33	34	33	27	32	24	21	29
18	33	25	21	27	32	39	31	26	136	23	21	18
19	73	24	21	26	32	28	30	26	75	23	20	18
20	129	25	21	37	31	31	30	25	37	23	22	18
21	43	24	20	34	31	28	31	26	35	23	21	17
22	32	23	e20	29	33	27	29	25	33	27	89	54
23	30	25	e19	27	37	26	29	25	33	22	29	21
24	28	23	e19	27	42	29	28	24	31	21	25	19
25	28	23	e18	83	31	27	28	24	29	21	24	18
26	28	25	e18	127	30	26	28	35	29	20	22	18
27	28	24	e18	45	30	26	27	26	29	20	21	18
28	28	28	e17	38	30	25	27	24	26	20	20	18
29	28	26	e17	67	---	25	29	344	27	20	29	17
30	27	25	e17	126	---	32	29	121	27	20	25	17
31	27	---	23	47	---	28	---	45	---	23	22	---
TOTAL	1076	813	659	1258	1020	885	1006	1347	1300	809	898	604
MEAN	34.7	27.1	21.3	40.6	36.4	28.5	33.5	43.5	43.3	26.1	29.0	20.1
MAX	129	53	25	127	67	39	77	344	187	66	89	54
MIN	24	23	17	24	30	25	26	24	26	20	19	17
CFSM	1.67	1.30	1.02	1.95	1.75	1.37	1.61	2.09	2.08	1.25	1.39	.97
IN.	1.92	1.45	1.18	2.25	1.82	1.58	1.80	2.41	2.32	1.45	1.61	1.08

CAL YR 1989 TOTAL 13005 MEAN 35.6 MAX 603 MIN 16 CFSM 1.71 IN. 23.26  
WTR YR 1990 TOTAL 11675 MEAN 32.0 MAX 344 MIN 17 CFSM 1.54 IN. 20.88

e Estimated.

## SCHUYLKILL RIVER BASIN

01473499 SCHUYLKILL RIVER AT NORRISTOWN DAM AT BRIDGEPORT, PA

LOCATION.--Lat 40°06'33", long 75°20'52", Montgomery County, Hydrologic Unit 02040203, on right bank,  
100 ft above Norristown Dam, in Bridgeport.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to August 1990 (discontinued).

DISSOLVED OXYGEN: December 1985 to August 1990 (discontinued).

INSTRUMENTATION.--Water-quality monitor since December 1985.

REMARKS.--Interruptions in daily record due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 725 microsiemens, July 10, 1986, minimum, 132 microsiemens, Dec. 25, 1986.

DISSOLVED OXYGEN: Maximum, 16.8 mg/L, March 11, 1989; minimum, 1.3 mg/L, June 13, 1986.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	445	416	432	390	382	386	384	375	380	562	429	515
2	445	349	416	403	385	397	391	383	388	445	431	438
3	377	337	355	408	400	404	400	389	395	431	407	414
4	393	366	381	405	394	401	393	389	391	420	410	415
5	412	370	396	414	395	404	409	391	402	409	405	407
6	439	409	429	417	411	414	416	398	407	407	397	402
7	438	428	432	417	410	414	415	412	413	404	398	401
8	449	429	438	419	407	414	416	408	413	405	397	402
9	463	451	458	414	364	398	422	406	411	541	405	448
10	471	463	469	417	384	403	437	423	430	528	476	490
11	473	457	464	412	375	396	454	438	446	497	432	460
12	479	458	470	395	381	387	469	448	459	452	410	429
13	488	460	472	410	395	404	474	455	464	419	406	414
14	501	490	497	418	407	414	488	464	477	415	401	406
15	511	502	507	427	418	424	497	482	491	416	405	410
16	522	506	512	426	398	418	490	480	486	431	419	427
17	524	507	515	420	274	369	493	482	487	432	421	427
18	531	446	488	286	228	251	501	493	498	439	427	434
19	461	343	413	282	249	263	510	499	504	430	417	423
20	354	259	324	296	283	288	531	512	525	---	---	---
21	285	250	266	303	289	295	531	518	524	---	---	---
22	262	249	257	312	295	304	549	528	539	---	---	---
23	269	254	259	339	312	321	561	550	556	377	369	373
24	283	269	275	356	345	350	549	540	542	380	369	373
25	302	283	292	370	346	354	551	548	550	379	335	372
26	312	303	308	370	345	354	555	550	553	---	---	---
27	328	308	315	359	346	352	562	556	559	---	---	---
28	352	329	341	362	353	358	564	539	554	---	---	---
29	355	350	353	366	360	362	532	515	525	---	---	---
30	364	356	360	374	367	370	522	505	513	---	---	---
31	380	365	368	---	---	---	531	509	519	---	---	---
MONTH	531	249	396	427	228	369	564	375	477	562	335	422

## SCHUYLKILL RIVER BASIN

01473499 SCHUYLKILL RIVER AT NORRISTOWN DAM AT BRIDGEPORT, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	304	290	299	376	363	369	400	392	395
2	---	---	---	309	300	306	362	359	361	403	399	401
3	---	---	---	315	308	312	358	282	315	422	404	416
4	---	---	---	319	313	316	293	272	282	429	418	425
5	---	---	---	320	312	314	303	294	300	427	402	415
6	262	247	253	336	321	325	297	287	291	404	319	368
7	279	263	271	339	332	334	287	281	284	374	323	356
8	285	279	281	352	340	348	286	279	282	367	349	361
9	287	283	285	355	352	353	286	279	283	379	363	369
10	293	275	288	359	351	354	290	280	288	384	317	370
11	280	261	268	357	353	355	311	288	299	313	262	293
12	277	266	273	359	354	356	320	307	314	295	263	283
13	290	281	287	357	353	355	312	307	310	260	246	250
14	295	290	292	361	355	357	320	310	317	252	224	233
15	299	295	297	366	358	363	318	281	298	262	235	246
16	305	298	303	375	366	372	285	273	282	291	265	279
17	310	306	308	381	373	378	289	272	283	295	283	292
18	314	309	311	378	362	371	305	289	298	291	281	287
19	320	309	315	361	330	341	311	304	308	289	277	281
20	318	310	313	343	299	322	320	308	316	279	268	272
21	320	312	315	325	302	317	326	318	321	285	281	283
22	335	321	330	323	310	315	331	325	328	293	286	291
23	340	327	332	320	311	317	329	322	326	322	300	310
24	339	312	326	333	315	325	331	320	325	338	322	332
25	313	291	301	334	327	330	346	330	335	342	335	339
26	296	277	284	334	327	329	361	348	355	351	343	346
27	288	279	283	331	325	328	367	360	363	359	347	352
28	291	283	287	337	329	332	378	367	371	350	337	342
29	---	---	---	363	338	355	387	375	379	346	151	295
30	---	---	---	366	354	360	391	383	387	---	---	---
31	---	---	---	376	364	368	---	---	---	---	---	---
MONTH	340	247	296	381	290	339	391	272	319	429	151	327
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	425	419	421	---	---	---	---	---	---
2	---	---	---	422	413	416	---	---	---	---	---	---
3	---	---	---	414	399	406	---	---	---	---	---	---
4	---	---	---	420	411	416	---	---	---	---	---	---
5	---	---	---	426	416	423	---	---	---	---	---	---
6	---	---	---	421	413	416	---	---	---	---	---	---
7	---	---	---	434	423	430	---	---	---	---	---	---
8	---	---	---	437	418	430	---	---	---	---	---	---
9	---	---	---	420	363	411	---	---	---	---	---	---
10	---	---	---	404	394	397	---	---	---	---	---	---
11	---	---	---	404	398	400	---	---	---	---	---	---
12	---	---	---	416	403	407	---	---	---	---	---	---
13	---	---	---	415	369	393	---	---	---	---	---	---
14	---	---	---	360	309	330	---	---	---	---	---	---
15	331	231	274	332	304	316	---	---	---	---	---	---
16	319	280	301	347	313	331	---	---	---	---	---	---
17	328	319	322	347	345	346	---	---	---	---	---	---
18	347	263	333	354	344	349	---	---	---	---	---	---
19	---	---	---	353	346	350	---	---	---	---	---	---
20	---	---	---	373	346	361	---	---	---	---	---	---
21	---	---	---	381	368	375	---	---	---	---	---	---
22	341	328	333	398	381	386	---	---	---	---	---	---
23	354	341	347	398	379	389	---	---	---	---	---	---
24	364	353	356	406	392	394	---	---	---	---	---	---
25	369	365	367	430	402	412	---	---	---	---	---	---
26	384	368	379	436	428	431	---	---	---	---	---	---
27	386	383	384	441	431	436	---	---	---	---	---	---
28	412	383	394	471	438	460	---	---	---	---	---	---
29	419	409	414	465	460	462	---	---	---	---	---	---
30	422	414	416	461	454	459	---	---	---	---	---	---
31	---	---	---	474	454	463	---	---	---	---	---	---
MONTH	422	231	355	474	304	401	---	---	---	---	---	---



## SCHUYLKILL RIVER BASIN

01473499 SCHUYLKILL RIVER AT NORRISTOWN DAM AT BRIDGEPORT, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.4	7.8	8.1	8.8	8.3	8.5	12.7	11.9	12.2	15.6	14.8	15.1
2	9.2	7.9	8.4	9.2	8.5	8.9	12.7	12.1	12.4	15.4	12.8	13.9
3	8.4	7.9	8.1	9.6	8.9	9.2	12.7	12.0	12.3	13.9	12.8	13.4
4	8.3	7.7	8.0	9.9	9.1	9.4	13.0	12.4	12.8	14.2	13.4	13.7
5	8.7	8.3	8.5	10.5	10.0	10.3	13.3	12.4	12.9	14.0	13.4	13.7
6	9.1	8.2	8.7	11.0	10.3	10.6	13.1	12.4	12.7	14.7	13.6	14.0
7	9.0	8.0	8.6	10.5	9.6	10.2	13.3	12.2	12.7	14.3	13.5	13.8
8	8.9	7.9	8.4	10.4	9.2	9.8	13.8	12.4	13.0	14.5	13.2	14.0
9	9.4	8.1	8.7	9.5	8.7	9.1	13.5	12.9	13.3	14.3	13.5	13.9
10	10.0	8.5	9.3	9.9	9.1	9.4	14.1	12.9	13.6	15.5	13.5	14.3
11	10.2	9.1	9.5	10.3	9.6	9.8	14.2	13.2	13.8	14.5	13.4	13.8
12	10.3	9.1	9.5	10.7	10.1	10.3	14.1	13.4	13.8	14.3	13.1	13.5
13	10.0	9.0	9.5	11.4	10.4	10.6	13.8	13.1	13.5	14.3	13.4	13.7
14	9.8	8.6	9.1	11.2	10.3	10.6	14.1	13.0	13.6	14.8	13.8	14.2
15	9.4	8.1	8.7	10.8	9.3	10.1	14.2	13.0	13.6	15.8	14.2	14.8
16	9.6	8.0	8.7	10.0	8.5	9.2	13.8	13.1	13.5	15.2	13.7	14.3
17	9.0	7.4	8.3	9.8	8.4	9.1	14.5	13.2	13.8	15.1	13.3	14.1
18	7.2	6.5	6.8	10.5	9.7	10.2	14.4	13.2	13.8	15.2	12.5	13.6
19	9.3	7.0	8.1	11.0	10.4	10.6	14.5	13.1	13.7	13.7	11.6	12.7
20	9.3	9.2	9.3	11.5	10.6	11.1	14.2	13.3	13.7	---	---	---
21	9.5	8.9	9.2	11.5	10.6	11.2	14.8	12.7	13.9	---	---	---
22	9.5	9.1	9.3	12.2	11.1	11.5	15.3	13.7	14.5	---	---	---
23	10.4	9.3	9.7	12.2	11.5	11.8	15.5	13.9	14.5	14.4	12.5	13.2
24	10.4	9.9	10.1	12.4	11.8	12.1	15.4	13.3	14.1	14.3	12.7	13.2
25	10.3	9.6	9.8	12.5	12.0	12.2	14.8	12.9	13.8	14.2	11.7	12.6
26	10.2	9.2	9.7	12.5	11.5	12.0	14.7	13.1	13.8	---	---	---
27	10.2	9.2	9.6	12.3	11.2	11.7	15.0	13.1	13.9	---	---	---
28	10.1	9.0	9.4	12.5	11.2	11.7	15.8	13.7	14.7	---	---	---
29	9.7	9.1	9.3	11.6	10.9	11.3	15.6	13.7	14.5	---	---	---
30	9.5	8.9	9.1	12.1	11.4	11.7	16.0	13.9	14.8	---	---	---
31	9.4	8.5	8.9	---	---	---	16.0	14.0	14.9	---	---	---
MONTH	10.4	6.5	8.9	12.5	8.3	10.5	16.0	11.9	13.6	15.8	11.6	13.8
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	15.3	13.4	14.1	12.0	10.6	11.1	6.9	6.1	6.4
2	---	---	---	15.3	13.0	13.8	11.5	10.2	10.8	7.8	6.0	6.8
3	---	---	---	14.8	12.7	13.5	12.1	9.8	10.6	7.8	6.0	6.9
4	---	---	---	15.0	12.5	13.5	10.3	9.8	10.0	7.4	6.2	6.7
5	---	---	---	15.1	13.0	13.8	11.7	10.0	10.7	8.2	6.5	7.4
6	13.6	12.5	12.8	15.5	12.4	13.5	11.8	10.5	11.0	8.0	7.6	7.8
7	13.1	12.6	12.8	14.4	12.5	13.4	12.3	10.6	11.2	8.0	7.3	7.6
8	13.1	12.2	12.6	15.8	13.3	14.3	13.3	11.1	11.9	8.0	7.1	7.5
9	12.9	12.1	12.4	16.2	13.1	14.4	14.1	11.3	12.3	8.3	6.4	7.2
10	12.2	11.2	11.6	15.4	11.9	13.4	14.0	10.7	11.9	7.3	6.1	6.5
11	11.9	11.3	11.6	14.6	12.1	13.1	12.8	9.4	10.4	7.3	6.7	7.1
12	12.7	11.8	12.0	14.4	11.7	12.8	12.1	9.9	10.6	7.9	7.2	7.5
13	13.3	12.2	12.5	14.8	10.8	12.5	13.0	10.7	11.4	7.9	7.5	7.7
14	13.1	12.1	12.4	13.9	10.0	11.5	13.2	10.8	11.7	7.9	7.1	7.6
15	12.5	11.7	11.9	13.1	9.6	11.2	13.0	10.0	11.2	7.1	6.6	6.8
16	12.3	11.7	11.9	12.8	8.8	10.6	11.8	9.7	10.4	7.7	6.5	7.2
17	13.3	11.7	12.1	11.6	7.1	9.2	11.6	9.3	10.0	7.5	7.0	7.3
18	14.1	12.2	12.8	9.9	6.7	8.2	12.0	8.8	9.8	7.5	6.9	7.2
19	14.3	12.8	13.3	10.4	8.3	9.1	12.3	9.0	10.6	7.8	7.4	7.6
20	14.2	12.6	13.2	10.3	9.0	9.5	12.6	9.4	10.7	7.7	7.4	7.5
21	14.5	13.0	13.6	12.5	9.8	10.8	11.9	8.3	9.6	7.5	7.3	7.4
22	14.8	12.9	13.6	13.1	10.8	11.6	10.5	8.3	8.9	7.7	7.5	7.6
23	14.0	11.8	12.6	13.1	10.5	11.4	10.6	7.7	8.9	8.1	7.3	7.8
24	13.3	10.9	11.8	12.6	9.9	10.8	10.5	6.9	8.3	8.1	7.8	7.9
25	13.1	11.2	12.0	12.8	10.7	11.5	9.5	6.1	8.0	8.0	7.4	7.6
26	14.7	12.4	13.1	13.5	11.5	12.4	9.8	7.2	8.2	7.6	6.9	7.2
27	14.6	13.3	13.8	14.0	11.1	12.4	9.4	5.2	7.2	7.6	6.9	7.3
28	15.2	13.4	14.0	14.3	11.4	12.7	8.7	4.8	6.6	7.6	7.0	7.3
29	---	---	---	14.0	11.3	12.3	6.8	4.4	5.5	7.9	7.0	7.3
30	---	---	---	13.9	10.6	11.9	6.1	5.2	5.5	---	---	---
31	---	---	---	11.8	10.2	10.9	---	---	---	---	---	---
MONTH	15.2	10.9	12.6	16.2	6.7	12.1	14.1	4.4	9.8	8.3	6.0	7.3

## SCHUYLKILL RIVER BASIN

01473499 SCHUYLKILL RIVER AT NORRISTOWN DAM AT BRIDGEPORT, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	6.2	5.1	5.7	---	---	---	---	---	---
2	---	---	---	6.6	5.1	6.0	---	---	---	---	---	---
3	---	---	---	7.2	4.1	5.9	---	---	---	---	---	---
4	---	---	---	6.9	5.3	6.2	---	---	---	---	---	---
5	---	---	---	6.1	3.7	5.2	---	---	---	---	---	---
6	---	---	---	5.3	2.8	4.1	---	---	---	---	---	---
7	---	---	---	3.0	1.6	2.4	---	---	---	---	---	---
8	---	---	---	4.4	1.6	2.5	---	---	---	---	---	---
9	---	---	---	7.5	1.9	5.0	---	---	---	---	---	---
10	---	---	---	7.1	4.9	5.9	---	---	---	---	---	---
11	---	---	---	6.0	3.4	5.2	---	---	---	---	---	---
12	---	---	---	3.1	2.3	2.7	---	---	---	---	---	---
13	---	---	---	6.5	3.1	5.0	---	---	---	---	---	---
14	---	---	---	6.5	6.3	6.4	---	---	---	---	---	---
15	8.1	7.4	7.9	6.4	6.2	6.3	---	---	---	---	---	---
16	7.7	7.2	7.4	6.2	5.7	5.9	---	---	---	---	---	---
17	7.5	6.7	7.0	6.0	5.2	5.6	---	---	---	---	---	---
18	7.1	5.9	6.5	5.8	5.1	5.5	---	---	---	---	---	---
19	---	---	---	5.5	4.8	5.2	---	---	---	---	---	---
20	---	---	---	5.3	4.5	4.9	---	---	---	---	---	---
21	---	---	---	5.2	4.4	4.8	---	---	---	---	---	---
22	6.8	6.3	6.5	5.1	4.4	4.8	---	---	---	---	---	---
23	6.9	4.7	6.0	5.6	4.5	4.8	---	---	---	---	---	---
24	6.3	5.0	5.8	4.9	4.0	4.5	---	---	---	---	---	---
25	6.8	5.1	6.1	5.0	3.8	4.4	---	---	---	---	---	---
26	6.9	6.3	6.6	4.7	3.9	4.3	---	---	---	---	---	---
27	6.7	5.7	6.3	4.6	3.8	4.3	---	---	---	---	---	---
28	6.2	5.3	5.8	4.4	3.5	3.9	---	---	---	---	---	---
29	5.8	4.9	5.4	4.5	3.5	4.0	---	---	---	---	---	---
30	6.1	4.8	5.4	4.4	3.6	4.0	---	---	---	---	---	---
31	---	---	---	4.4	3.5	4.0	---	---	---	---	---	---
MONTH	8.1	4.7	6.4	7.5	1.6	4.8	---	---	---	---	---	---

## SCHUYLKILL RIVER BASIN

01473675 SCHUYLKILL RIVER AT PLYMOUTH DAM, PA

LOCATION.--Lat 40°04'28", long 75°19'01", Montgomery County, Hydrological Unit 02040203, on right bank, 100 feet upstream of Plymouth Dam, 0.5 mi north of West Conchohocken.

DRAINAGE AREA.--Not Determined.

PERIOD OF RECORD.--December 1985 to May 1990 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to May 1990 (discontinued).

DISSOLVED OXYGEN: December 1985 to May 1990 (discontinued).

INSTRUMENTATION.--Water-quality monitor since December 1985.

REMARKS.--Interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 630 microsiemens, Sept. 10, 1986; minimum, 76 microsiemens, June 25, 1986.

DISSOLVED OXYGEN: Maximum, 16.9 mg/L, Jan. 9, 1990; minimum, 1.4 mg/L, July 9, 1988.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	433	410	419	373	368	371	371	356	364	509	422	484
2	444	377	422	388	368	376	380	361	373	409	396	404
3	371	337	351	399	388	393	390	368	376	412	393	401
4	380	359	370	397	378	389	386	370	380	399	394	397
5	399	372	379	392	373	382	387	365	375	395	384	388
6	424	404	414	404	384	391	394	373	383	388	377	383
7	449	415	429	399	386	394	399	391	395	389	375	380
8	426	415	421	415	389	399	401	386	396	415	376	386
9	444	428	436	411	375	386	405	389	398	468	408	435
10	456	442	448	394	354	375	416	395	401	504	466	480
11	466	441	451	395	361	385	434	406	416	488	416	448
12	461	445	455	375	358	365	440	410	426	452	404	422
13	450	437	442	386	364	377	467	429	446	409	393	402
14	---	---	---	406	379	391	469	435	451	406	386	393
15	---	---	---	414	395	404	475	448	456	411	391	400
16	---	---	---	412	394	403	472	444	455	419	395	408
17	---	---	---	404	265	357	456	438	444	417	398	408
18	---	---	---	266	225	240	471	450	454	425	397	409
19	---	---	---	269	239	250	471	454	459	412	393	401
20	325	249	304	294	268	277	523	455	489	406	387	396
21	270	246	256	294	283	288	518	495	508	396	374	387
22	253	241	249	309	283	292	509	491	498	391	369	381
23	264	242	250	332	302	316	519	503	510	378	353	361
24	279	260	267	358	321	338	523	504	516	361	346	352
25	301	275	284	348	337	342	502	496	498	376	339	358
26	311	298	302	353	341	345	496	461	489	334	233	259
27	319	300	308	352	334	340	---	---	---	281	251	271
28	340	320	329	353	338	347	---	---	---	277	266	271
29	347	339	342	373	343	356	---	---	---	270	263	265
30	346	340	343	364	348	354	487	467	475	253	168	196
31	---	---	---	---	---	---	485	461	470	251	198	226
MONTH	466	241	361	415	225	354	523	356	439	509	168	373

## SCHUYLKILL RIVER BASIN

01473675 SCHUYLKILL RIVER AT PLYMOUTH DAM, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	259	244	251	300	284	293	351	325	337	375	365	370
2	278	258	266	309	293	300	354	320	330	390	365	372
3	291	275	282	315	299	307	355	259	298	---	---	---
4	291	281	285	322	306	313	273	254	260	410	394	405
5	290	278	284	312	302	307	295	272	281	---	---	---
6	297	275	283	314	301	306	289	276	281	---	---	---
7	294	280	287	330	313	322	291	279	284	---	---	---
8	298	291	295	342	325	335	293	280	285	---	---	---
9	307	293	300	---	---	---	297	280	289	---	---	---
10	308	290	301	---	---	---	316	288	298	---	---	---
11	290	276	281	---	---	---	321	298	313	---	---	---
12	293	273	284	351	336	342	332	317	324	---	---	---
13	301	283	293	349	332	337	334	317	325	---	---	---
14	321	293	305	353	338	344	339	329	335	---	---	---
15	311	297	303	348	337	340	334	298	314	---	---	---
16	315	301	306	364	345	352	303	290	297	---	---	---
17	320	310	316	369	358	362	308	285	298	---	---	---
18	320	308	314	366	346	355	326	297	311	---	---	---
19	322	301	309	343	312	326	336	319	327	---	---	---
20	321	307	313	340	300	320	345	314	328	---	---	---
21	327	312	317	315	287	302	349	331	338	---	---	---
22	349	315	331	307	296	303	351	332	342	---	---	---
23	338	282	327	310	297	302	347	329	336	---	---	---
24	333	306	321	316	296	308	347	328	337	---	---	---
25	303	284	298	326	302	314	358	338	349	---	---	---
26	289	274	282	328	300	314	367	353	360	---	---	---
27	291	277	282	325	294	304	370	356	362	---	---	---
28	295	277	285	316	301	308	366	354	359	---	---	---
29	---	---	---	331	312	321	365	353	359	---	---	---
30	---	---	---	334	314	324	371	356	364	---	---	---
31	---	---	---	349	321	331	---	---	---	---	---	---
MONTH	349	244	296	369	284	321	371	254	321	410	365	382

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.4	7.9	8.1	9.2	8.7	8.9	12.3	11.4	11.8	13.1	12.6	12.9
2	8.1	7.6	7.9	9.5	8.9	9.2	12.5	11.6	11.9	13.2	12.9	13.0
3	8.2	7.9	8.1	9.4	8.9	9.2	12.1	11.5	11.8	13.3	12.8	13.0
4	8.5	7.9	8.2	10.3	9.4	9.8	13.1	11.7	12.3	13.1	12.3	12.8
5	9.0	8.5	8.6	10.8	9.8	10.3	13.8	12.8	13.2	12.7	12.1	12.5
6	8.8	8.3	8.5	10.7	10.3	10.5	13.9	13.2	13.5	12.3	11.7	12.2
7	8.7	7.9	8.3	10.8	10.2	10.5	13.6	12.8	13.3	12.2	11.0	11.7
8	8.7	8.0	8.3	10.2	9.6	9.9	12.8	12.2	12.5	---	---	---
9	9.5	7.9	8.6	9.4	8.9	9.2	12.3	11.7	11.9	16.9	15.0	16.1
10	9.9	8.9	9.3	9.7	8.9	9.4	11.9	11.2	11.5	16.2	14.9	15.4
11	9.8	9.1	9.4	10.2	9.7	10.0	11.6	11.1	11.3	15.6	14.9	15.3
12	9.8	9.1	9.5	10.4	9.9	10.2	11.0	10.2	10.7	15.4	14.8	15.1
13	9.7	9.0	9.2	11.1	10.2	10.6	13.6	12.5	13.0	15.9	15.0	15.4
14	---	---	---	10.8	10.1	10.5	13.8	11.9	12.8	16.4	15.1	15.7
15	---	---	---	10.5	9.6	10.1	14.0	12.6	13.1	---	---	---
16	---	---	---	9.5	9.1	9.3	13.7	12.8	13.1	---	---	---
17	---	---	---	10.1	9.1	9.7	13.8	13.1	13.2	---	---	---
18	---	---	---	11.0	10.1	10.5	13.8	11.6	12.4	---	---	---
19	---	---	---	11.5	11.0	11.4	---	---	---	---	---	---
20	9.5	9.2	9.4	11.6	11.0	11.4	13.0	12.5	12.7	---	---	---
21	10.1	9.0	9.6	11.7	11.0	11.2	13.2	12.16	12.4	---	---	---
22	10.5	10.2	10.4	12.0	11.6	11.8	13.1	12.4	12.7	13.1	12.6	12.8
23	10.7	10.2	10.5	12.1	11.9	12.0	---	---	---	13.5	12.8	13.0
24	10.4	10.2	10.3	12.7	12.0	12.5	---	---	---	13.7	12.5	13.2
25	10.4	10.0	10.1	12.9	12.5	12.7	---	---	---	12.7	11.0	11.8
26	10.2	9.8	10.0	12.5	12.0	12.4	---	---	---	11.3	10.7	11.0
27	10.1	9.5	9.8	12.4	11.8	12.1	---	---	---	12.3	11.3	11.9
28	9.8	9.0	9.5	11.8	11.0	11.6	---	---	---	12.8	12.3	12.5
29	9.6	9.0	9.4	11.6	11.0	11.3	---	---	---	12.7	11.9	12.3
30	9.5	9.2	9.4	11.8	11.3	11.5	15.1	13.6	14.2	12.0	11.6	11.8
31	---	---	---	---	---	---	14.4	13.1	13.7	12.4	12.1	12.2
MONTH	10.7	7.6	9.2	12.9	8.7	10.7	15.1	10.2	12.6	16.9	10.7	13.2

## SCHUYLKILL RIVER BASIN

01473675 SCHUYLKILL RIVER AT PLYMOUTH DAM, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	12.4	12.1	12.3	13.5	12.0	12.9	10.9	10.0	10.4	7.6	6.5	7.0
2	12.3	12.1	12.2	12.5	10.8	11.9	10.9	9.9	10.3	8.2	6.2	7.1
3	12.1	11.6	11.9	---	---	---	10.3	9.8	10.0	---	---	---
4	11.8	11.5	11.7	---	---	---	---	---	---	7.5	6.7	7.2
5	12.6	12.1	12.4	---	---	---	11.2	10.3	10.7	---	---	---
6	12.5	12.2	12.4	---	---	---	11.9	11.1	11.5	---	---	---
7	12.5	12.2	12.3	14.0	9.6	11.9	13.1	11.7	12.3	---	---	---
8	12.4	12.1	12.3	13.1	10.5	12.3	14.3	13.2	13.7	---	---	---
9	12.4	11.8	12.1	---	---	---	14.7	13.5	14.2	---	---	---
10	12.0	11.2	11.5	---	---	---	13.7	11.1	12.6	---	---	---
11	12.0	11.6	11.8	---	---	---	11.2	9.6	10.4	---	---	---
12	12.2	11.9	12.0	16.5	14.6	15.9	10.8	9.9	10.2	---	---	---
13	12.2	11.6	12.0	16.3	12.6	15.0	10.7	10.0	10.4	---	---	---
14	11.7	10.8	11.3	14.7	10.5	12.4	---	---	---	---	---	---
15	11.1	10.7	10.9	---	---	---	11.2	10.3	10.8	---	---	---
16	10.9	10.6	10.8	---	---	---	10.8	10.1	10.4	---	---	---
17	11.7	10.5	11.0	---	---	---	10.3	9.4	9.9	---	---	---
18	12.1	11.4	11.9	13.1	9.9	11.2	11.1	9.6	10.2	---	---	---
19	12.6	11.8	12.3	11.7	9.4	10.7	11.1	9.3	10.5	---	---	---
20	12.7	11.3	12.0	10.1	9.6	9.8	9.8	9.2	9.6	---	---	---
21	12.9	12.3	12.7	11.4	10.2	10.8	---	---	---	---	---	---
22	12.7	11.3	12.4	12.5	10.7	11.6	11.6	9.7	10.5	---	---	---
23	11.8	10.7	11.5	11.9	10.0	11.3	11.2	9.2	10.4	---	---	---
24	11.4	10.7	11.0	---	---	---	10.6	8.6	9.7	---	---	---
25	12.1	11.0	11.5	11.1	9.5	10.6	9.3	8.2	8.8	---	---	---
26	13.0	12.1	12.5	10.4	9.0	9.7	9.1	7.6	8.3	---	---	---
27	13.3	12.9	13.1	---	---	---	8.0	6.1	7.2	---	---	---
28	13.6	12.9	13.2	13.3	10.9	12.9	7.4	5.3	6.3	---	---	---
29	---	---	---	13.5	10.7	12.2	6.8	4.9	5.8	---	---	---
30	---	---	---	11.9	10.2	11.2	7.0	5.7	6.3	---	---	---
31	---	---	---	11.0	9.9	10.4	---	---	---	---	---	---
MONTH	13.6	10.5	12.0	16.5	9.0	11.8	14.7	4.9	10.1	8.2	6.2	7.1

## SCHUYLKILL RIVER BASIN

01473780 SCHUYLKILL RIVER AT FLAT ROCK DAM AT WEST MANAYUNK, PA

LOCATION.--Lat 40°02'23", long 75°14'56", Montgomery County, Hydrologic Unit 02040203, on right bank,  
100 ft upstream of Flat Rock Dam, 1 mi northwest of West Manayunk.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--December 1985 to May 1990 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to May 1990 (discontinued).

DISSOLVED OXYGEN: December 1985 to May 1990 (discontinued).

INSTRUMENTATION.--Water-quality monitor since December 1985.

REMARKS.--Interruptions in record due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 616 microsiemens, Sept. 22, 1986; minimum, 99 microsiemens, Feb. 21, 1986,  
DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Dec. 27, 1985, Feb. 27, 1988; minimum, 2.2 mg/L, July 8, 1988.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	418	412	415	386	368	373	376	364	370	551	519	531
2	433	413	421	389	385	386	385	375	381	514	432	460
3	409	321	356	403	391	400	391	383	388	435	411	428
4	363	332	349	438	399	406	398	387	394	417	409	413
5	375	366	373	409	397	404	397	393	395	417	410	414
6	413	375	398	413	397	406	406	392	400	411	408	410
7	437	414	429	416	412	414	414	397	406	411	404	408
8	438	433	435	415	411	412	417	411	414	411	405	408
9	451	435	441	411	391	404	420	414	418	483	405	442
10	468	452	461	402	371	387	426	414	419	525	487	505
11	482	469	477	405	394	400	439	426	433	508	432	473
12	483	467	475	397	373	383	455	439	448	457	418	437
13	486	477	483	391	379	385	483	453	469	418	409	413
14	483	473	478	404	393	400	489	475	485	417	403	412
15	509	483	499	420	402	412	485	472	478	431	403	412
16	515	505	510	425	414	421	493	481	487	434	425	429
17	516	481	510	420	323	400	494	486	491	436	429	433
18	522	494	512	309	232	265	497	492	494	436	425	431
19	485	413	430	267	239	253	504	494	500	440	426	434
20	---	---	---	291	269	282	507	499	503	425	416	421
21	277	240	256	305	291	298	530	508	520	419	408	414
22	262	249	256	302	292	295	535	530	532	414	406	410
23	262	253	256	338	303	317	554	531	544	415	381	395
24	275	263	271	349	338	345	---	---	---	380	372	375
25	295	277	286	357	350	355	570	556	565	379	364	374
26	313	296	304	375	354	363	555	548	551	363	257	286
27	316	311	313	369	357	361	558	550	553	262	254	258
28	340	317	326	358	354	357	565	557	560	261	256	259
29	354	344	351	---	---	---	565	558	562	275	258	266
30	359	354	357	365	360	362	560	535	546	269	168	204
31	368	361	365	---	---	---	533	523	527	229	204	215
MONTH	522	240	393	438	232	367	570	364	474	551	168	393



## SCHUYLKILL RIVER BASIN

01473780 SCHUYLKILL RIVER AT FLAT ROCK DAM AT WEST MANAYUNK, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	239	226	230	310	297	301	375	363	369	374	370	372
2	256	239	245	317	309	312	368	354	363	376	373	374
3	264	256	258	324	317	319	354	285	332	---	---	---
4	267	262	265	330	324	326	280	266	271	---	---	---
5	267	260	263	332	323	328	294	268	286	---	---	---
6	---	---	---	332	323	327	297	284	291	---	---	---
7	285	270	276	343	332	338	286	282	284	---	---	---
8	290	280	285	352	341	345	287	281	284	---	---	---
9	295	289	291	362	353	359	285	280	282	---	---	---
10	295	284	291	367	361	364	289	280	283	---	---	---
11	292	272	281	367	361	364	300	289	293	---	---	---
12	279	267	272	369	363	366	314	299	306	---	---	---
13	294	280	285	371	364	368	316	303	309	---	---	---
14	301	293	297	374	367	370	316	306	310	---	---	---
15	304	299	301	377	369	375	317	291	303	---	---	---
16	310	305	307	385	374	380	296	276	283	---	---	---
17	318	310	315	398	380	389	281	266	274	---	---	---
18	322	316	318	389	378	385	299	281	287	---	---	---
19	323	315	319	379	341	367	311	300	304	---	---	---
20	328	322	325	345	335	340	315	307	311	---	---	---
21	322	320	321	332	309	322	326	317	321	---	---	---
22	334	321	326	334	324	330	328	322	325	---	---	---
23	342	335	339	328	322	324	331	324	327	---	---	---
24	348	335	341	338	327	331	331	324	328	---	---	---
25	332	303	315	344	338	341	337	325	333	---	---	---
26	301	288	297	346	336	341	353	335	343	---	---	---
27	294	287	291	345	331	338	365	354	360	---	---	---
28	302	294	296	339	331	333	366	363	364	---	---	---
29	---	---	---	351	332	340	373	367	371	---	---	---
30	---	---	---	365	352	358	371	367	369	---	---	---
31	---	---	---	365	353	361	---	---	---	---	---	---
MONTH	348	226	294	398	297	347	375	266	316	376	370	373

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.5	6.9	7.2	7.1	6.8	6.9	12.3	11.8	12.0	13.6	13.0	13.3
2	7.1	6.8	7.0	7.3	7.1	7.2	12.4	12.2	12.3	14.2	13.6	13.9
3	7.1	6.7	7.0	7.4	7.2	7.3	12.4	12.3	12.4	14.1	13.0	13.9
4	7.0	6.8	6.9	8.3	7.4	7.8	12.9	9.5	12.4	13.8	12.9	13.6
5	7.3	7.0	7.1	8.5	8.2	8.3	13.3	12.9	13.1	13.2	11.3	12.5
6	9.3	7.2	8.6	8.7	8.4	8.6	13.2	12.9	13.0	13.6	12.1	13.0
7	8.8	8.5	8.7	8.7	8.5	8.6	12.9	12.7	12.8	14.0	11.2	12.8
8	8.6	8.4	8.5	10.0	8.4	8.9	13.1	12.8	13.0	14.4	11.9	13.6
9	8.5	8.4	8.5	9.0	7.8	8.5	13.2	12.9	13.1	---	---	---
10	9.3	8.6	8.9	8.8	8.0	8.3	13.2	13.0	13.1	---	---	---
11	9.4	8.6	9.1	8.8	8.3	8.6	13.4	13.2	13.3	---	---	---
12	8.8	8.3	8.6	8.8	8.4	8.6	13.4	13.1	13.3	---	---	---
13	8.4	8.0	8.2	8.9	8.6	8.7	13.2	13.1	13.2	---	---	---
14	8.1	7.8	8.0	8.9	8.5	8.7	13.2	13.1	13.2	---	---	---
15	7.8	7.5	7.7	8.6	7.7	8.1	13.4	13.2	13.3	---	---	---
16	9.7	7.2	7.5	7.7	7.0	7.3	13.5	13.4	13.4	---	---	---
17	7.2	6.8	7.0	7.9	7.1	7.4	13.8	13.4	13.6	---	---	---
18	7.0	6.6	6.8	9.0	7.9	8.4	14.2	13.7	13.9	13.3	11.5	12.1
19	7.4	6.2	6.9	9.5	9.0	9.3	14.4	14.0	14.2	13.4	12.1	12.8
20	---	---	---	9.5	9.1	9.4	14.4	13.8	14.0	13.0	12.4	12.7
21	7.5	7.0	7.3	9.5	9.0	9.2	13.9	13.6	13.8	13.0	12.5	12.7
22	7.8	7.5	7.7	10.0	9.5	9.9	14.0	13.5	13.6	13.4	12.9	13.2
23	8.6	7.7	8.1	10.9	9.9	10.2	14.3	13.9	14.1	13.0	12.5	12.8
24	8.5	8.2	8.4	10.8	10.2	10.5	---	---	---	12.8	12.4	12.6
25	8.3	7.7	8.0	11.0	10.8	10.9	14.7	14.3	14.4	12.5	11.4	11.9
26	7.9	7.7	7.8	11.0	10.5	10.7	14.4	13.8	14.1	---	---	---
27	7.7	7.4	7.6	10.5	10.4	10.5	14.1	13.8	13.9	---	---	---
28	7.4	7.3	7.4	10.4	10.0	10.1	14.2	13.8	14.0	---	---	---
29	7.3	7.0	7.2	---	---	---	14.2	13.9	14.0	---	---	---
30	7.3	7.2	7.2	---	---	---	14.2	13.8	14.1	12.0	11.7	11.9
31	7.2	6.9	7.0	---	---	---	13.9	13.4	13.6	12.1	12.0	12.0
MONTH	9.7	6.2	7.7	11.0	6.8	8.8	14.7	9.5	13.4	14.4	11.2	12.8

## SCHUYLKILL RIVER BASIN

01473780 SCHUYLKILL RIVER AT FLAT ROCK DAM AT WEST MANAYUNK, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	12.1	12.0	12.0	14.1	13.5	13.8	11.6	11.0	11.3	8.3	7.8	7.9
2	12.0	11.8	11.9	13.7	13.1	13.5	11.8	11.1	11.4	8.5	7.8	8.1
3	11.8	11.1	11.7	13.5	12.7	13.1	11.7	10.7	11.1	---	---	---
4	10.2	9.3	9.5	13.9	12.5	13.2	11.0	10.8	10.9	---	---	---
5	---	---	---	14.2	12.8	13.5	11.3	10.9	11.1	---	---	---
6	---	---	---	14.1	12.8	13.4	11.5	11.2	11.3	---	---	---
7	12.7	12.3	12.6	13.9	11.9	13.0	11.6	11.1	11.3	---	---	---
8	12.5	12.3	12.4	13.5	10.8	12.1	12.2	11.5	11.8	---	---	---
9	12.3	12.1	12.2	15.3	12.6	13.8	12.5	11.8	12.1	---	---	---
10	12.0	11.5	11.7	15.2	13.4	14.4	12.1	11.3	11.7	---	---	---
11	12.0	11.6	11.8	15.3	11.0	13.5	11.1	10.4	10.7	---	---	---
12	12.3	11.9	12.1	14.5	11.0	13.4	11.6	10.4	11.0	---	---	---
13	12.5	12.3	12.4	14.4	11.5	12.3	12.2	11.1	11.6	---	---	---
14	12.3	12.2	12.3	13.0	9.8	11.2	12.1	11.3	11.7	---	---	---
15	12.2	12.1	12.2	11.7	10.0	10.6	12.0	10.7	11.1	---	---	---
16	12.3	12.0	12.1	11.1	9.7	10.3	11.1	10.7	10.8	---	---	---
17	12.5	12.0	12.2	10.5	8.7	9.3	10.6	10.1	10.4	---	---	---
18	12.9	12.4	12.6	9.5	8.3	8.9	11.3	10.0	10.5	---	---	---
19	13.0	12.3	12.6	10.2	9.2	9.8	11.7	10.6	11.1	---	---	---
20	13.2	12.4	12.8	10.3	9.8	10.0	11.5	10.5	11.0	---	---	---
21	13.6	12.8	13.1	11.7	10.3	11.0	11.2	9.7	10.2	---	---	---
22	13.5	12.7	13.1	11.9	11.3	11.6	10.5	9.4	9.9	---	---	---
23	13.0	12.1	12.4	11.6	11.0	11.4	10.4	9.4	9.9	---	---	---
24	12.0	11.4	11.7	11.5	10.7	11.1	10.2	9.0	9.5	---	---	---
25	12.7	11.6	12.2	12.3	10.9	11.4	10.0	8.6	9.1	---	---	---
26	13.6	12.8	13.3	12.7	11.5	12.0	9.5	8.5	8.9	---	---	---
27	13.8	13.5	13.6	12.8	11.6	12.2	9.3	8.0	8.5	---	---	---
28	14.1	13.5	13.8	13.0	11.5	12.2	8.6	7.1	7.7	---	---	---
29	---	---	---	12.8	11.5	12.1	7.9	6.7	7.2	---	---	---
30	---	---	---	12.7	11.2	11.8	7.7	7.2	7.3	---	---	---
31	---	---	---	11.8	11.0	11.4	---	---	---	---	---	---
MONTH	14.1	9.3	12.3	15.3	8.3	12.0	12.5	6.7	10.4	8.5	7.8	8.0

## SCHUYLKILL RIVER BASIN

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA

LOCATION.--Lat 40°00'54", long 75°12'24", Philadelphia County, Hydrologic Unit 02040203, on left bank 100 ft upstream from dam at Ridge Ave., 750 ft upstream from mouth, 1,000 ft northwest of Gustine Lake in Philadelphia.

DRAINAGE AREA.--64.0 mi<sup>2</sup>.

PERIOD OF RECORD> June 1897 to September 1903, January 1905 to July 1906, October 1965 to current year. Records for 1971-74 published in WDR PA-81-1. Prior to October 1965 published as "near Philadelphia".

REVISED RECORDS.--WSP 1302: 1905; WDR PA-89-1: 1988.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 26.41 ft above National Geodetic Vertical Datum of 1929. Prior to October 1965, water-stage recorder at about same site and datum.

REMARKS.--Records good, except for periods of estimated record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 103 ft<sup>3</sup>/s, 21.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,870 ft<sup>3</sup>/s, June 29, 1973, gage height, 7.92 ft; minimum daily observed, 2.0 ft<sup>3</sup>/s, July 18, 19, 1905.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	2000	2170	4.79	May 30	0130	*3780	*6.11
Jan. 30	0600	2130	4.76	June 19	0415	3040	5.53

Minimum daily discharge, 28 ft<sup>3</sup>/s, Aug. 2, 3, 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	65	53	133	131	77	85	129	123	64	30	47
2	223	53	50	64	121	76	87	74	110	57	28	45
3	126	77	50	53	112	77	259	69	113	52	28	43
4	80	71	47	52	152	74	139	82	107	46	28	42
5	73	64	48	51	152	70	109	198	84	46	42	48
6	73	62	49	49	112	70	94	82	81	47	164	48
7	73	64	48	48	107	68	155	69	79	44	546	47
8	64	73	50	63	95	67	140	64	79	40	36	41
9	61	315	47	154	96	69	98	64	195	44	34	39
10	61	122	47	238	395	77	94	425	83	70	108	38
11	64	75	47	134	174	69	144	403	70	48	151	40
12	61	67	47	83	126	66	97	99	65	52	63	40
13	58	61	50	63	112	64	90	163	61	286	118	40
14	58	59	51	57	105	62	86	188	60	93	246	48
15	58	65	48	58	97	61	422	99	387	104	64	93
16	57	73	50	54	97	61	139	134	91	80	58	51
17	124	77	49	53	94	115	121	139	69	52	53	106
18	110	60	47	60	85	217	113	99	335	49	49	48
19	336	56	47	57	86	86	96	80	918	48	47	44
20	914	55	48	95	82	270	92	73	115	46	49	45
21	260	56	48	132	78	141	96	76	92	100	60	42
22	118	54	48	94	88	99	93	71	80	76	75	269
23	93	60	48	66	125	90	87	67	82	33	65	84
24	84	58	48	60	161	86	84	63	68	32	54	48
25	78	54	48	368	96	85	79	60	59	31	49	46
26	72	62	48	786	80	82	81	88	64	30	46	46
27	73	67	48	178	78	78	85	80	65	30	80	46
28	68	85	48	126	82	76	74	61	63	30	155	43
29	65	63	48	157	---	74	72	1040	61	30	98	46
30	62	58	48	855	---	103	138	1280	67	30	108	42
31	67	---	48	165	---	103	---	168	---	30	54	---
TOTAL	3778	2231	1501	4606	3319	2813	3549	5787	3926	1820	2786	1705
MEAN	122	74.4	48.4	149	119	90.7	118	187	131	58.7	89.9	56.8
MAX	914	315	53	855	395	270	422	1280	918	286	546	269
MIN	50	53	47	48	78	61	72	60	59	30	28	38
CFSM	1.90	1.16	.76	2.32	1.85	1.42	1.85	2.92	2.04	.92	1.40	.89
IN.	2.20	1.30	.87	2.68	1.93	1.64	2.06	3.36	2.28	1.06	1.62	.99

CAL YR 1989 TOTAL 47760 MEAN 131 MAX 1820 MIN 33 CFSM 2.04 IN. 27.70  
WTR YR 1990 TOTAL 37821 MEAN 104 MAX 1280 MIN 28 CFSM 1.62 IN. 21.99

## SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA  
(National stream-quality accounting network station)

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from Spring Garden Street Bridge, in Philadelphia, and 8.7 mi upstream from mouth. Water-quality sampling site 1.6 mi upstream. Water-quality monitor intake at gage. DRAINAGE AREA.--1,893 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 214, 261, 301, 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5.74 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft (12 m) upstream from Fairmount Dam at same datum.

REMARKS.--Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Reservoir (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee, capacity 518,600,000. Records of discharge do not include diversion above station by City of Philadelphia for municipal water supply.

AVERAGE DISCHARGE.--59 years, 2,922 ft<sup>3</sup>/s, 20.96 in/yr, adjusted for diversion from October 1931 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft<sup>3</sup>/s June 23, 1972, gage height, 14.65 ft; no flow over dam at times; minimum daily, 0.6 ft<sup>3</sup>/s Sept. 2, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869, reached a stage of 17.0 ft, discharge, 135,000 ft<sup>3</sup>/s, from rating extended above 46,000 ft<sup>3</sup>/s. Flood of Mar. 1, 1902, reached a stage of 14.8 ft, discharge, 98,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,300 ft<sup>3</sup>/s, May 30, gage height, 10.84 ft; minimum daily discharge, 640 ft<sup>3</sup>/s, Dec. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	1920	1660	2780	9740	3090	2280	1960	5720	1280	943	1110
2	2740	1930	1600	3610	7670	2890	2390	1700	4240	1200	835	941
3	3660	1800	1530	2320	6110	2760	5700	1520	3700	1090	859	871
4	2370	1710	1430	2190	5900	2600	6600	1440	3450	930	711	1120
5	1720	1670	1400	2050	6630	2450	5390	3480	3080	1030	809	1020
6	1390	1590	1530	1960	4930	2130	4650	3790	2850	905	2150	1230
7	1290	1500	1570	1720	4280	2050	4270	2840	2350	1030	5570	1020
8	1240	1550	1370	1750	3970	1830	4450	2340	2240	939	2490	800
9	1160	2260	1280	2190	3620	1720	3640	2130	3080	979	1530	785
10	1100	3150	1160	2780	4840	1920	3240	3260	4470	1100	1530	825
11	1120	2740	1220	3880	6160	1880	3300	9240	3300	964	4140	781
12	1120	2110	1220	3460	4460	1870	3670	7610	2730	921	2570	776
13	988	1950	1290	2520	4090	1830	2960	5770	2260	3300	2050	741
14	1020	1750	1290	1910	3790	1800	2770	7450	2230	4120	2670	764
15	980	1720	1110	1720	3590	1540	4480	5180	4890	2780	2080	938
16	970	1900	e1000	1720	3590	1500	4630	4120	3020	2320	1630	926
17	1050	6370	872	1640	3560	1660	3620	4740	2060	1890	1310	1420
18	2490	7350	e1160	1910	3120	3270	3270	5110	2930	1500	1090	1030
19	5770	5540	e810	2370	2840	3620	2960	4210	11100	1360	1060	874
20	12700	3980	e780	2470	2710	3420	2640	3710	4320	1180	1430	853
21	14800	3270	e760	3070	2370	3830	2540	3410	3080	1310	1500	789
22	8810	2960	e730	4250	2350	3370	2860	2960	2310	1270	2530	1760
23	6180	2490	687	3570	2800	2780	2600	2570	1870	1170	3830	1870
24	4820	2420	e680	3190	4580	2580	2240	2350	1840	1070	2530	1280
25	3830	2160	e670	4330	4860	2280	2070	1990	1690	1120	2180	1030
26	3160	2120	e660	15800	3970	2240	1990	2170	1540	868	1700	915
27	2730	2190	e650	10800	3630	2090	1850	2730	1480	757	1460	832
28	2570	2300	e650	8120	3300	2150	1720	2260	1390	699	1580	768
29	2280	2250	e640	6280	---	1990	1730	7680	1250	728	1580	769
30	2150	2050	854	21400	---	1920	1940	27800	1180	770	1680	826
31	1980	---	908	13400	---	2280	---	8850	---	748	1260	---
TOTAL	99508	78700	33171	141160	123460	73340	98450	146370	91650	41328	59287	29664
MEAN	3210	2623	1070	4554	4409	2366	3282	4722	3055	1333	1912	989
MAX	14800	7350	1660	21400	9740	3830	6600	27800	11100	4120	5570	1870
MIN	970	1500	640	1640	2350	1500	1720	1440	1180	699	711	741
CFSM	1.70	1.39	.57	2.41	2.33	1.25	1.73	2.49	1.61	.70	1.01	.52
IN.	1.96	1.55	.65	2.77	2.43	1.44	1.93	2.88	1.80	.81	1.17	.58
†	254	252	257	248	239	244	233	245	279	288	283	272

CAL YR 1989 TOTAL 1269300 MEAN 3478 MAX 28700 MIN 640 CFSM 1.84 IN. 24.94

WTR YR 1990 TOTAL 1016088 MEAN 2784 MAX 27800 MIN 640 CFSM 1.47 IN. 19.97

† Diversion, equivalent in cubic feet per second for municipal supply, furnished by City of Philadelphia.  
e Estimated.

## SCHUYKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA--Continued

PERIOD OF RECORD.--October 1945 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to November 1980, January 1986 to May 1990 (discontinued).

pH: January 1968 to November 1980 (discontinued).

WATER TEMPERATURE: October 1945 to November 1980 (discontinued).

DISSOLVED OXYGEN: January 1966 to November 1980, January 1986 to May 1990 (discontinued)

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 972 microsiemens, June 25, 1965; minimum, 92 microsiemens, Feb. 26, 1979.

DISSOLVED OXYGEN: Maximum, 18.3 mg/L, Jan. 11, 1978; minimum, 0.2 mg/L July 8, 1988.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML) (31616)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC 05...	1200 1650		402	7.45	1.5	3.0	730	4.2	12.2	4700	E27	150
MAR 21...	1140 4200		340	7.20	15.0	11.0	743	6.9	10.8	6000	E50	120
JUN 14...	1040 2500		326	7.20	22.0	21.0	742	7.8	8.7	E1400	1200	120
SEP 12...	1030 927		467	7.70	--	24.0	740	10.0	9.6	6200	E50	160
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER WH IT FIELD (MG/L AS HCO3) (00450)	CAR-BONATE WATER WH IT FIELD (MG/L AS CO3) (00447)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
DEC 05...	37	13	21	0.8	23	3.3	--	0	86	59	34	0.20
MAR 21...	28	11	18	0.7	25	3.0	--	0	64	51	25	0.20
JUN 14...	31	11	16	0.6	22	2.5	71	0	58	52	20	<0.10
SEP 12...	38	16	27	0.9	26	3.6	--	0	85	66	33	0.20
DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC 05...	8.4	238	244	1060	0.32	3.45	0.050	3.50	0.220	0.220	0.38	0.60
MAR 21...	5.8	218	186	2470	0.30	0.860	0.040	0.900	0.380	0.190	0.71	0.90
JUN 14...	8.2	200	191	1350	0.27	2.95	0.050	3.00	0.160	0.160	1.0	1.2
SEP 12...	5.6	281	255	703	0.38	2.96	0.040	3.00	0.150	0.160	0.64	0.80

## SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 05...	0.200	0.170	0.160	10	<1	33	<0.5	<1	<1	<3	4	26
MAR 21...	0.110	0.090	0.110	40	1	34	<0.5	<1.0	<5	<3	<10	60
JUN 14...	0.140	0.120	0.120	40	<1	58	<0.5	<1.0	<1	<3	4	69
SEP 12...	0.250	0.230	0.220	30	1	50	<0.5	<1.0	1	<3	5	54

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC 05...	1	8	82	1.2	<10	5	<1	<1.0	180	<6	18
MAR 21...	<10	7	100	0.2	<10	<10	<1	<1.0	150	<6	15
JUN 14...	1	9	700	<0.1	<10	6	<1	<1.0	160	<6	10
SEP 12...	2	7	440	<0.1	<10	7	<1	<1.0	200	<6	13



## SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	413	395	406	366	356	362	372	364	369	551	516	533
2	414	403	409	379	362	372	377	365	372	528	442	488
3	417	341	394	385	378	382	388	374	381	441	426	435
4	336	314	323	401	386	395	395	382	389	431	406	419
5	360	336	345	408	393	400	404	387	396	419	408	413
6	375	364	369	408	391	400	404	391	397	417	405	411
7	402	367	389	412	391	403	411	392	401	411	404	408
8	432	403	419	417	403	410	418	397	408	415	404	409
9	---	---	---	412	395	406	429	413	421	468	413	431
10	---	---	---	397	361	381	430	419	424	539	473	507
11	456	448	454	398	369	388	428	420	424	544	463	494
12	473	451	463	397	383	392	450	424	439	500	435	456
13	479	463	471	382	371	375	479	444	465	438	408	419
14	479	462	470	388	376	383	495	471	484	411	404	408
15	478	467	473	403	389	397	506	481	495	420	397	406
16	488	467	479	419	399	411	494	482	488	414	401	409
17	503	486	496	423	372	409	499	485	493	418	410	414
18	506	488	496	362	237	292	506	491	500	428	415	421
19	506	373	450	254	233	245	507	496	503	---	---	---
20	384	279	307	282	255	271	516	499	507	---	---	---
21	269	230	247	297	283	291	516	304	497	411	405	408
22	264	246	253	307	295	300	535	502	516	---	---	---
23	258	249	254	321	296	309	545	521	534	398	371	390
24	270	251	262	348	322	335	552	525	539	372	354	363
25	284	268	276	354	347	350	562	545	554	382	369	373
26	299	281	292	363	352	357	565	529	557	373	227	282
27	314	298	308	376	360	371	---	---	---	283	233	261
28	319	306	313	365	355	360	559	545	555	287	281	285
29	342	315	330	363	356	360	---	---	---	---	---	---
30	353	342	349	368	359	365	---	---	---	---	---	---
31	359	351	355	---	---	---	---	---	---	---	---	---
MONTH	506	230	374	423	233	362	565	304	463	551	227	410
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	313	301	308	372	366	369	389	362	374
2	---	---	---	326	308	319	380	367	374	373	365	369
3	---	---	---	332	319	326	368	319	352	377	368	374
4	---	---	---	338	325	332	317	269	281	381	374	378
5	273	264	271	343	332	337	294	268	281	---	---	---
6	270	261	266	341	332	336	302	292	297	---	---	---
7	281	268	275	343	335	340	295	288	292	---	---	---
8	297	280	290	355	342	350	296	288	292	---	---	---
9	303	293	299	362	351	357	295	287	291	---	---	---
10	306	300	303	376	362	370	294	284	290	---	---	---
11	302	281	293	379	367	373	301	285	294	---	---	---
12	282	274	279	375	369	372	310	296	304	---	---	---
13	292	281	288	381	370	376	321	305	315	---	---	---
14	306	293	302	380	369	375	316	308	313	---	---	---
15	312	304	309	381	370	376	324	299	312	---	---	---
16	319	309	314	383	371	378	303	282	294	---	---	---
17	324	313	319	387	375	381	283	270	280	---	---	---
18	330	321	326	393	381	386	291	270	283	---	---	---
19	334	323	329	384	370	379	305	284	297	---	---	---
20	336	323	331	369	343	352	316	303	310	---	---	---
21	338	329	334	344	314	332	326	310	317	---	---	---
22	335	324	330	337	321	332	329	321	325	---	---	---
23	350	323	335	333	324	329	336	321	330	---	---	---
24	354	337	346	335	323	330	333	327	330	---	---	---
25	345	312	329	343	330	336	334	326	331	---	---	---
26	312	302	307	346	339	343	342	330	338	---	---	---
27	302	296	299	351	339	345	358	339	350	---	---	---
28	307	300	303	351	337	344	368	356	363	---	---	---
29	---	---	---	346	336	341	367	361	364	---	---	---
30	---	---	---	358	340	350	375	364	371	---	---	---
31	---	---	---	370	359	365	---	---	---	---	---	---
MONTH	354	261	307	393	301	351	380	268	318	389	362	374

## SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.8	8.6	8.7	9.2	8.9	9.1	11.6	11.3	11.5	10.9	10.3	10.6
2	8.8	8.6	8.7	9.2	9.0	9.1	11.8	11.5	11.6	11.0	10.5	10.7
3	8.8	8.7	8.8	9.3	9.1	9.2	11.9	11.3	11.6	10.9	10.7	10.8
4	9.0	8.6	8.8	9.6	9.1	9.3	11.9	11.4	11.6	10.9	10.5	10.7
5	9.1	9.0	9.1	10.0	9.6	9.8	12.2	11.6	12.0	10.8	10.4	10.5
6	9.3	9.0	9.1	10.8	9.9	10.1	12.3	11.9	12.1	10.8	10.4	10.6
7	9.1	9.0	9.1	10.2	10.0	10.1	12.2	11.8	12.0	10.9	10.6	10.8
8	9.4	7.9	9.0	10.5	9.9	10.2	12.3	11.8	12.0	11.4	10.8	11.0
9	9.4	8.1	9.2	9.9	9.2	9.6	12.3	11.9	12.1	11.4	10.8	11.0
10	---	---	---	9.3	9.1	9.2	12.2	11.9	12.1	11.5	10.7	11.1
11	10.3	9.9	10.0	9.9	9.4	9.6	12.4	11.9	12.1	10.7	10.3	10.5
12	10.3	9.8	10.0	10.0	9.8	9.9	12.5	11.9	12.2	10.6	10.4	10.5
13	10.4	9.8	10.0	10.3	10.0	10.2	12.4	11.8	12.1	10.8	10.5	10.6
14	10.2	9.6	9.9	10.5	10.1	10.3	12.6	12.0	12.3	11.3	10.8	11.0
15	10.2	9.5	9.8	10.3	9.7	10.1	12.4	12.0	12.2	11.4	11.1	11.3
16	9.9	9.4	9.7	9.8	9.1	9.5	12.5	12.0	12.1	11.6	11.3	11.4
17	9.7	9.0	9.3	10.0	9.1	9.6	12.7	12.1	12.3	12.0	11.4	11.7
18	8.9	8.3	8.6	10.8	10.0	10.4	13.1	12.4	12.7	11.8	10.8	11.3
19	10.1	8.9	9.3	11.4	10.8	11.2	13.4	12.7	13.1	11.0	10.5	10.6
20	10.5	10.2	10.4	11.3	11.0	11.3	13.3	12.7	13.0	---	---	---
21	10.4	10.2	10.3	11.3	10.8	11.0	12.6	11.9	12.2	---	---	---
22	10.2	10.0	10.1	11.9	11.3	11.5	12.3	11.9	12.0	---	---	---
23	10.4	10.1	10.3	11.9	11.7	11.8	12.4	11.8	12.2	11.4	11.1	11.3
24	10.5	10.3	10.4	12.1	11.6	11.9	12.5	12.0	12.2	11.3	11.0	11.1
25	10.2	9.9	10.2	12.0	11.8	11.9	12.7	12.1	12.3	11.2	10.2	10.6
26	10.2	9.8	10.0	12.0	11.8	11.9	12.7	11.3	12.2	10.2	8.9	9.3
27	10.2	9.8	9.9	12.1	11.9	11.9	---	---	---	10.2	9.4	9.8
28	10.0	9.2	9.7	11.9	11.5	11.7	11.9	11.4	11.7	11.3	8.6	10.6
29	9.5	9.2	9.4	11.5	11.3	11.4	---	---	---	12.2	10.4	10.9
30	9.4	9.2	9.3	11.6	10.9	11.4	---	---	---	10.4	9.8	10.2
31	9.4	9.0	9.2	---	---	---	---	---	---	---	---	---
MONTH	10.5	7.9	9.5	12.1	8.9	10.5	13.4	11.3	12.1	12.2	8.6	10.8
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	14.3	13.4	13.9	11.7	11.2	11.3	7.9	7.5	7.7
2	---	---	---	14.2	13.4	13.6	11.9	11.2	11.4	8.6	7.9	8.2
3	---	---	---	13.7	13.0	13.2	11.9	11.0	11.3	8.8	7.9	8.3
4	---	---	---	13.6	12.8	13.1	11.3	11.0	11.2	8.6	8.0	8.4
5	13.3	12.9	13.1	13.7	13.0	13.3	11.9	11.2	11.5	---	---	---
6	13.3	13.2	13.3	13.9	12.9	13.3	12.0	11.5	11.7	---	---	---
7	13.2	13.0	13.1	13.8	13.1	13.3	12.2	11.5	11.8	---	---	---
8	13.0	12.8	12.9	14.2	13.3	13.7	12.7	11.8	12.2	---	---	---
9	12.8	12.5	12.6	14.2	13.1	13.6	13.0	12.1	12.4	---	---	---
10	12.5	11.9	12.1	13.7	12.7	13.2	12.9	11.8	12.1	---	---	---
11	12.4	12.0	12.2	13.3	12.4	12.7	12.1	10.7	11.2	---	---	---
12	12.6	12.3	12.4	13.0	12.1	12.5	12.0	10.6	11.1	---	---	---
13	12.8	12.5	12.7	13.1	11.9	12.4	12.5	11.2	11.7	---	---	---
14	12.7	12.5	12.6	12.8	11.1	11.8	12.6	11.5	11.9	---	---	---
15	12.5	12.3	12.4	12.1	10.6	11.4	12.4	11.1	11.5	---	---	---
16	12.5	12.3	12.4	11.8	10.3	11.0	11.4	10.8	11.1	---	---	---
17	12.7	12.2	12.4	11.2	9.3	10.2	11.0	10.4	10.6	---	---	---
18	13.1	12.4	12.7	9.8	8.4	9.1	11.7	10.2	10.7	---	---	---
19	13.1	12.7	12.9	10.7	9.2	9.9	11.9	10.7	11.2	---	---	---
20	13.5	12.7	12.9	10.6	9.8	10.1	12.0	10.8	11.3	---	---	---
21	13.5	13.0	13.2	11.7	10.5	11.0	11.6	10.2	10.7	---	---	---
22	---	---	---	12.1	11.2	11.6	11.0	9.8	10.2	---	---	---
23	12.7	12.5	12.6	11.9	11.0	11.3	11.0	9.7	10.1	---	---	---
24	12.5	11.7	12.0	11.6	10.7	11.0	10.7	9.3	9.9	---	---	---
25	12.6	11.7	12.1	11.7	11.0	11.2	10.3	8.8	9.5	---	---	---
26	13.7	12.6	13.2	12.2	11.5	11.7	9.6	8.9	9.2	---	---	---
27	13.8	13.4	13.6	12.5	11.6	12.1	9.7	8.4	9.0	---	---	---
28	14.1	13.4	13.7	12.8	11.6	12.2	9.3	7.8	8.5	---	---	---
29	---	---	---	12.8	11.4	11.9	8.6	6.7	7.7	---	---	---
30	---	---	---	12.6	11.2	11.8	7.4	6.9	7.1	---	---	---
31	---	---	---	11.8	11.1	11.4	---	---	---	---	---	---
MONTH	14.1	11.7	12.7	14.3	8.4	12.0	13.0	6.7	10.7	8.8	7.5	8.1

## SCHUYLKILL RIVER BASIN

01474505 SCHUYLKILL RIVER ABOVE PASSYUNK AVENUE AT PHILADELPHIA, PA

LOCATION.--Lat 39°55'18", long 75°12'16", Philadelphia County, Hydrologic Unit 02040203, on west face of Philadelphia Fire Department dock in the embayment off the main channel of the Schuylkill River on left bank 1,200 feet upstream from Passyunk Avenue at Philadelphia.

DRAINAGE AREA.--1,900 mi<sup>2</sup>.

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

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

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 8.03 ft, Oct. 25, 1980; minimum, -5.88 ft, Dec. 27, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6.20 ft, Oct. 19; minimum, -5.88 ft, Dec. 27.

Summaries of tide elevations during current year are as follows:

	Maximum elevation	High tide date	Minimum elevation	Low tide date	Mean high tide	Mean water level	Mean low tide
Oct. ....	6.20	19	- 2.60	4	4.63	1.55	- 1.90
Nov. ....	6 09	16	- 3.86	22	4.48	1.23	- 2.22
Dec. ....	5.41	2	- 5.88	27	3.48	.25	- 3.26
Jan. ....	5.33	30	- 3.48	13	3.98	.95	- 2.40
Feb. ....	5.14	4	- 4.66	25	4.16	1.04	- 2.37
Mar. ....	4.94	31	- 3.21	21	3.95	.97	- 2.44
Apr. ....	5.13	26	- 3.47	11	4.30	1.12	- 2.30
May ....	5.94	25	- 2.52	2	4.91	1.70	- 1.88
June ....	5.87	24	- 2.83	5	4.81	1.46	- 2.19
July ....	5.58	23	- 2.63	9	4.79	1.48	- 2.08
Aug. ....	5.66	21	- 2.56	19	4.91	1.66	- 1.86
Sept. ....	5.46	5	- 2.41	8	4.70	1.52	- 1.91

## SCHUYLKILL RIVER BASIN

## LAKES AND RESERVOIRS IN SCHUYLKILL RIVER BASIN

01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30", Schuylkill County, Hydrologic Unit 02040106, at dam on Still Creek, 1 mi upstream from mouth and 2.3 mi north of Hometown, Pa. DRAINAGE AREA, 7.19 mi<sup>2</sup>. PERIOD OF RECORD, January 1933 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Panther Valley Water Co.).

Reservoir formed by earthfill dam, with ungated concrete spillway at elevation 1,182.00 ft. Storage began in February 1933. Capacity at elevation 1,182.00 ft is 8,290 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam. Records furnished by the borough of Tamaqua.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 8,570 acre-ft, Oct. 15, 1955, elevation, 1,182.92 ft, but may have been greater during 1950 or 1951 water years; minimum (after first filling), 588 acre-ft, Dec. 8, 1944, elevation, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 8,290 acre-ft, many days Feb. - May, elevation, 1182.0 ft; minimum, 7,150 acre-ft, Oct. 1, elevation, 1,178.0 ft.

01470870 BLUE MARSH LAKE.--Lat 40°22'45", long 76°01'59", Berks County, Hydrologic Unit 02040203, at dam on Tulpehocken Creek, 0.8 mi upstream from gaging station on Tulpehocken Creek, 1.0 mi northeast of Blue Marsh, 1.9 mi upstream from Reber's Bridge, and 5.1 mi southeast of Bernville. DRAINAGE AREA, 175 mi<sup>2</sup>. PERIOD OF RECORD, April 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by earthfill dam, with concrete ungated spillway at elevation 307.00 ft. Storage began April 23, 1979. Capacity at elevation 307.00 ft is 50,000 acre-ft. Dead storage is 3,000 acre-ft. Reservoir is used for flood control, water supply, and recreation. Figures herein represent total contents. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,480 acre-ft, Apr. 17, 1983, elevation, 301.65 ft; minimum (after first filling), 15,770 acre-ft, Mar. 21, 1986, elevation, 283.00 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 24,280 acre-ft, May 30, elevation, 291.18 ft; minimum, 16,800 acre-ft, Dec. 28, elevation, 284.13 ft.

01472200 GREEN LANE RESERVOIR.--Lat 40°20'30", long 75°28'45", Montgomery County, Hydrologic Unit 02040203, at dam on Perkiomen Creek, 0.4 mi west of Green Lane and 2.1 mi upstream from Unami Creek. DRAINAGE AREA, 70.9 mi<sup>2</sup>. PERIOD OF RECORD, December 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Philadelphia Suburban Water Co.).

Reservoir formed by concrete, gravity-type dam, with ungated spillway at elevation 286.00 ft. Storage began December 21, 1956. Capacity at elevation 286.00 ft is 13,430 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam. Records furnished by Philadelphia Suburban Water Co.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 17,030 acre-ft, June 23, 1972, elevation, 290.05 ft; minimum (after first filling), 1,270 acre-ft, Aug. 25, 1957, elevation, 251.60 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 14,160 acre-ft, Jan. 26, elevation, 286.82 ft; minimum, 13,020 acre-ft, Dec. 29, Aug. 5.

## SCHUYLKILL RIVER BASIN

## LAKES AND RESERVOIRS IN SCHUYLKILL RIVER BASIN--Continued

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

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)
<u>01469200 Still Creek Reservoir</u>				<u>01470870 Blue Marsh Dam</u>		
Sept. 30 .....	1,178.0	7,150	--	285.06	17,680	--
Oct. 31 .....	1,178.2	7,200	+ 0.8	285.15	17,770	+ 1.5
Nov. 30 .....	1,181.1	8,020	+ 13.8	285.05	17,670	- 1.7
Dec. 31 .....	1,180.4	7,820	- 3.3	285.27	17,880	+ 3.4
CAL YR 1989 .....	--	--	+ 2.5	--	--	+ 0.1
Jan. 31 .....	1,181.0	7,990	+ 2.8	286.86	19,480	+ 26.0
Feb. 28 .....	1,182.0	8,290	+ 5.4	285.15	17,770	- 30.8
Mar. 31 .....	1,182.0	8,290	0	285.10	17,720	- 0.8
Apr. 30 .....	1,182.0	8,290	0	289.90	22,780	+ 85.0
May 31 .....	1,182.0	8,290	0	290.12	23,030	+ 4.1
June 30 .....	1,181.9	8,260	- 0.5	290.12	23,030	0
July 31 .....	1,181.1	8,020	- 3.9	290.12	23,030	0
Aug. 31 .....	1,181.8	8,230	+ 3.4	289.97	22,860	- 2.8
Sept. 30 .....	1,182.0	8,290	+ 1.0	289.93	22,820	- 0.7
WTR YR 1990 .....	--	--	+ 1.6	--	--	+ 7.1
<u>01472200 Green Lane Reservoir</u>						
Sept. 30 .....	285.90	13,390	--			
Oct. 31 .....	286.01	13,490	+ 0.8			
Nov. 30 .....	285.95	13,390	- 0.8			
Dec. 31 .....	285.83	13,280	- 1.8			
CAL YR 1989 .....	--	--	0			
Jan. 31 .....	286.35	13,740	+ 7.5			
Feb. 28 .....	286.03	13,460	- 5.0			
Mar. 31 .....	286.03	13,460	0			
Apr. 30 .....	285.97	13,410	- 0.8			
May 31 .....	286.34	13,730	+ 5.2			
June 30 .....	285.98	13,410	- 5.4			
July 31 .....	285.55	13,030	- 6.2			
Aug. 31 .....	285.90	13,340	+ 5.0			
Sept. 30 .....	285.87	13,310	- 0.5			
WTR YR 1990 .....	--	--	- 0.1			

## DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA

LOCATION.--Lat 39°52'45", long 75°12'11", Philadelphia County, Hydrologic Unit 02040202, water-quality recorder on right bank at outer end of L-shaped pier at Fort Mifflin, 0.4 mi downstream from mouth of Schuylkill River, in Philadelphia.

DRAINAGE AREA.--10,000 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--July 1970 to June 1976, February 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1970 to December 1971, February 1981 to current year.

WATER TEMPERATURE: June 1972 to September 1976, February 1981 to current year.

INSTRUMENTATION.--Water-quality monitor July 1970 to June 1976, February 1981 to current year.

REMARKS.--Station not operated Dec. 1 to Feb. 28. Other interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,230 microsiemens Oct. 27, 1981; minimum, 90 microsiemens Apr. 11, 17, 19, 29, 1983, April 29, 1984.

WATER TEMPERATURE: Maximum, 31.0°C Aug. 4-6, 13, 1975; minimum, 0.5°C Feb. 5, 1981.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	217	187	201	278	190	226	---	---	---	---	---	---
2	249	197	210	280	203	234	---	---	---	---	---	---
3	328	209	242	286	196	234	---	---	---	---	---	---
4	326	220	252	316	208	235	---	---	---	---	---	---
5	317	218	255	299	216	244	---	---	---	---	---	---
6	300	235	255	---	---	---	---	---	---	---	---	---
7	317	232	256	---	---	---	---	---	---	---	---	---
8	291	234	248	282	235	243	---	---	---	---	---	---
9	312	241	259	340	238	264	---	---	---	---	---	---
10	294	244	256	318	233	261	---	---	---	---	---	---
11	327	250	274	316	233	266	---	---	---	---	---	---
12	293	257	273	365	240	281	---	---	---	---	---	---
13	319	262	282	286	233	255	---	---	---	---	---	---
14	307	262	275	302	232	255	---	---	---	---	---	---
15	309	257	272	292	231	251	---	---	---	---	---	---
16	295	257	269	351	221	253	---	---	---	---	---	---
17	294	261	269	400	240	303	---	---	---	---	---	---
18	357	256	275	389	259	322	---	---	---	---	---	---
19	463	264	337	319	209	254	---	---	---	---	---	---
20	458	250	334	248	198	227	---	---	---	---	---	---
21	255	214	230	258	198	223	---	---	---	---	---	---
22	253	181	218	238	198	217	---	---	---	---	---	---
23	251	169	210	258	198	229	---	---	---	---	---	---
24	258	169	211	278	208	236	---	---	---	---	---	---
25	260	168	210	258	208	228	---	---	---	---	---	---
26	276	167	214	278	208	236	---	---	---	---	---	---
27	289	173	217	278	218	235	---	---	---	---	---	---
28	---	---	---	318	208	242	---	---	---	---	---	---
29	---	---	---	328	208	257	---	---	---	---	---	---
30	295	177	218	308	218	247	---	---	---	---	---	---
31	292	181	219	---	---	---	---	---	---	---	---	---
MONTH	463	167	250	400	190	248	---	---	---	---	---	---



## DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	300	210	241	347	234	265	320	229	255
2	---	---	---	290	210	238	308	229	255	298	227	254
3	---	---	---	300	220	238	383	242	296	288	239	255
4	---	---	---	330	210	252	378	264	322	288	232	255
5	---	---	---	280	210	233	337	234	276	315	237	263
6	---	---	---	310	200	245	295	227	260	376	244	310
7	---	---	---	310	220	246	322	237	267	405	249	305
8	---	---	---	320	220	246	444	237	305	288	225	264
9	---	---	---	290	220	241	337	247	282	269	229	254
10	---	---	---	320	230	250	305	229	260	281	227	255
11	---	---	---	330	230	258	325	229	261	330	254	297
12	---	---	---	330	230	269	310	207	247	303	222	259
13	---	---	---	352	244	276	308	215	243	254	210	236
14	---	---	---	354	247	284	300	215	238	266	195	225
15	---	---	---	344	249	280	327	205	259	232	193	210
16	---	---	---	320	254	280	320	200	271	237	188	208
17	---	---	---	342	244	280	308	227	264	242	161	200
18	---	---	---	347	242	280	308	217	245	261	154	198
19	---	---	---	371	249	294	305	217	240	249	154	187
20	---	---	---	347	244	289	271	212	234	256	161	193
21	---	---	---	354	249	283	288	207	232	276	171	204
22	---	---	---	361	220	275	300	207	237	271	164	204
23	---	---	---	308	229	260	293	212	240	247	159	188
24	---	---	---	308	237	254	295	215	243	261	159	194
25	---	---	---	290	229	247	290	225	244	259	164	201
26	---	---	---	312	225	254	290	217	243	283	166	205
27	---	---	---	320	229	257	298	222	244	273	171	206
28	---	---	---	295	222	244	293	220	246	269	176	209
29	---	---	---	325	225	258	298	225	249	334	186	233
30	---	---	---	327	227	260	312	229	250	310	149	190
31	---	---	---	352	237	267	---	---	---	186	149	163
MONTH	---	---	---	371	200	261	444	200	257	405	149	228
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	237	171	199	337	261	284	310	271	289	320	247	277
2	259	193	216	342	264	287	317	273	294	317	249	271
3	266	195	230	325	271	291	317	283	298	308	249	264
4	264	193	224	337	273	295	310	280	295	312	249	264
5	247	195	217	317	276	294	300	280	289	303	251	268
6	254	200	227	334	271	296	400	280	315	327	256	276
7	251	205	229	337	278	302	470	290	371	327	254	280
8	286	215	241	352	283	301	410	250	318	334	264	282
9	293	222	247	339	286	305	317	254	294	308	259	274
10	317	227	262	342	290	311	339	269	289	322	256	279
11	330	227	259	344	293	309	352	259	291	339	266	288
12	332	234	273	366	288	333	276	249	262	317	269	283
13	327	237	265	430	290	334	266	244	258	339	264	289
14	322	239	259	432	315	352	303	244	267	349	269	292
15	332	234	277	334	288	308	283	249	261	403	269	305
16	298	229	262	305	278	294	295	247	257	393	278	310
17	290	239	255	295	269	286	298	237	253	474	276	325
18	256	229	243	288	266	280	281	237	246	417	278	319
19	300	227	263	293	264	280	295	234	252	334	276	295
20	244	212	226	288	264	279	305	229	251	374	281	307
21	237	210	225	305	276	283	376	239	263	339	264	297
22	249	225	237	334	278	294	378	242	283	398	281	305
23	261	234	243	322	283	292	383	244	293	342	283	309
24	283	234	248	325	281	293	315	254	269	327	283	299
25	300	239	256	310	278	289	293	232	255	317	283	298
26	300	244	262	303	266	284	256	232	242	315	276	298
27	320	249	267	300	273	282	249	225	240	310	288	300
28	327	251	273	300	266	281	259	232	247	310	290	300
29	322	259	276	293	269	280	266	239	249	310	286	301
30	327	261	282	305	271	281	330	247	268	310	283	300
31	---	---	---	317	276	289	339	247	279	---	---	---
MONTH	332	171	248	432	261	296	470	225	275	474	247	292

## DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	19.5	18.5	19.0	14.0	13.0	13.5	---	---	---	---	---	---
2	19.5	18.5	19.0	14.0	13.0	13.5	---	---	---	---	---	---
3	19.5	18.5	19.0	14.0	13.0	13.5	---	---	---	---	---	---
4	18.5	18.0	18.5	14.0	12.5	13.0	---	---	---	---	---	---
5	18.0	17.5	18.0	14.0	12.5	13.0	---	---	---	---	---	---
6	18.0	17.5	17.5	13.5	12.5	13.0	---	---	---	---	---	---
7	17.5	17.0	17.5	13.5	12.5	13.0	---	---	---	---	---	---
8	17.5	17.0	17.0	13.0	12.5	13.0	---	---	---	---	---	---
9	17.0	16.5	17.0	13.5	13.0	13.0	---	---	---	---	---	---
10	16.5	16.5	16.5	13.0	12.5	12.5	---	---	---	---	---	---
11	16.5	16.0	16.0	12.5	12.0	12.5	---	---	---	---	---	---
12	16.5	16.0	16.0	12.5	12.0	12.5	---	---	---	---	---	---
13	16.5	16.0	16.0	12.5	12.0	12.0	---	---	---	---	---	---
14	16.5	16.0	16.5	12.5	12.0	12.0	---	---	---	---	---	---
15	16.5	16.0	16.5	12.5	12.0	12.0	---	---	---	---	---	---
16	17.0	16.5	16.5	13.0	12.0	12.5	---	---	---	---	---	---
17	17.5	17.0	17.0	12.5	11.5	12.0	---	---	---	---	---	---
18	17.0	16.5	17.0	12.0	10.5	11.5	---	---	---	---	---	---
19	17.0	16.0	16.5	11.0	10.0	10.5	---	---	---	---	---	---
20	16.5	13.5	16.0	10.5	9.0	10.0	---	---	---	---	---	---
21	15.0	12.5	14.0	9.5	8.0	9.0	---	---	---	---	---	---
22	14.0	12.0	13.0	9.0	8.0	8.5	---	---	---	---	---	---
23	12.5	12.0	12.0	8.5	7.5	8.0	---	---	---	---	---	---
24	12.5	11.5	12.0	8.0	6.5	7.5	---	---	---	---	---	---
25	12.5	11.5	12.0	7.5	6.5	7.0	---	---	---	---	---	---
26	12.5	11.5	12.0	7.5	6.0	7.0	---	---	---	---	---	---
27	13.0	12.0	12.0	7.5	6.0	7.0	---	---	---	---	---	---
28	13.0	12.0	12.5	7.5	5.5	7.0	---	---	---	---	---	---
29	13.0	12.5	12.5	7.0	5.5	6.5	---	---	---	---	---	---
30	13.5	12.5	13.0	7.0	5.5	6.0	---	---	---	---	---	---
31	14.0	12.5	13.0	---	---	---	---	---	---	---	---	---
MONTH	19.5	11.5	15.5	14.0	5.5	10.7	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	4.5	3.5	4.0	9.5	8.5	9.0	19.0	16.5	17.5
2	---	---	---	4.5	4.0	4.0	9.0	8.5	9.0	19.0	17.0	17.5
3	---	---	---	4.5	4.0	4.5	9.0	8.5	9.0	18.5	17.0	17.5
4	---	---	---	4.5	4.0	4.5	9.0	8.5	9.0	18.0	17.0	17.5
5	---	---	---	5.0	4.0	4.5	9.5	8.5	9.0	18.5	17.0	17.5
6	---	---	---	4.5	4.0	4.0	9.5	8.5	9.0	18.0	17.0	17.5
7	---	---	---	4.5	3.5	4.0	9.5	8.5	9.0	18.0	17.0	17.5
8	---	---	---	5.0	4.0	4.0	10.0	8.5	9.0	18.5	17.0	17.5
9	---	---	---	4.5	3.5	4.0	10.0	9.0	9.5	18.5	17.5	18.0
10	---	---	---	5.5	4.0	4.5	10.0	9.0	9.5	18.5	18.0	18.0
11	---	---	---	6.0	4.5	5.0	10.5	9.5	10.0	18.5	18.0	18.0
12	---	---	---	6.5	4.5	5.5	11.0	9.5	10.0	18.0	17.0	17.5
13	---	---	---	7.5	5.0	6.0	11.5	9.5	10.5	17.5	16.5	17.0
14	---	---	---	8.0	6.0	6.5	11.5	10.0	10.5	18.5	16.0	17.0
15	---	---	---	9.0	6.5	7.5	12.0	10.0	11.0	18.0	16.5	17.5
16	---	---	---	9.5	7.0	8.5	12.0	10.5	11.5	17.5	17.0	17.0
17	---	---	---	11.5	8.5	9.5	12.0	11.5	11.5	19.0	17.0	17.5
18	---	---	---	13.5	9.0	10.5	13.5	11.0	11.5	18.5	17.0	17.5
19	---	---	---	15.0	10.0	11.5	13.5	11.5	12.0	19.0	17.0	17.5
20	---	---	---	13.0	10.5	11.5	14.5	11.5	12.5	19.0	17.0	17.5
21	---	---	---	13.0	10.5	12.0	13.0	12.0	12.5	18.0	17.0	17.5
22	---	---	---	12.5	11.5	12.0	14.0	12.0	12.5	18.0	16.5	17.0
23	---	---	---	12.5	11.5	12.0	14.5	12.5	13.0	17.0	16.0	16.5
24	---	---	---	12.0	11.0	11.5	15.0	13.0	14.0	17.0	16.0	16.5
25	---	---	---	11.5	10.5	11.0	15.0	13.5	14.0	17.5	16.0	16.5
26	---	---	---	11.0	10.0	10.5	15.5	14.0	15.0	17.5	16.5	16.5
27	---	---	---	10.5	9.5	10.0	17.0	14.5	15.5	18.0	16.5	17.0
28	---	---	---	10.0	9.5	9.5	18.0	15.5	16.5	18.5	16.5	17.0
29	---	---	---	9.5	9.0	9.5	18.0	16.0	16.5	18.5	17.0	17.5
30	---	---	---	9.5	9.0	9.0	19.0	16.0	17.0	18.5	16.0	17.0
31	---	---	---	9.5	9.0	9.0	---	---	---	17.0	16.0	16.5
MONTH	---	---	---	15.0	3.5	7.7	19.0	8.5	11.6	19.0	16.0	17.3

## DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.5	16.5	17.5	26.0	25.0	25.5	26.5	26.0	26.5	25.5	24.5	25.0
2	20.0	18.0	18.5	26.0	25.0	25.5	26.5	26.0	26.0	25.5	24.5	25.0
3	20.0	18.5	19.0	26.0	25.0	25.5	---	---	---	25.5	24.5	25.0
4	20.5	19.0	19.5	26.0	25.0	25.5	---	---	---	25.0	24.5	25.0
5	21.0	19.0	19.5	26.5	25.5	25.5	---	---	---	25.0	24.5	24.5
6	21.0	19.5	20.0	26.5	25.5	26.0	---	---	---	25.5	24.5	25.0
7	21.0	20.0	20.5	26.0	25.5	26.0	---	---	---	25.0	24.5	25.0
8	21.5	20.5	21.0	26.5	25.5	26.0	---	---	---	25.0	24.5	24.5
9	22.0	20.5	21.0	26.5	25.5	26.0	26.5	26.0	26.0	24.5	24.0	24.0
10	23.0	21.0	22.0	26.5	26.0	26.0	26.5	26.0	26.0	24.5	24.0	24.0
11	22.5	21.5	22.0	26.5	26.0	26.0	26.5	26.0	26.0	25.0	24.0	24.5
12	22.5	21.0	22.0	26.0	25.5	25.5	26.5	26.0	26.5	25.0	24.0	24.5
13	23.0	21.5	22.0	25.5	25.0	25.0	27.0	26.0	26.5	25.0	24.5	24.5
14	22.0	22.0	22.0	25.5	24.5	25.0	26.5	26.0	26.5	25.0	24.5	24.5
15	23.0	21.5	22.0	24.5	24.5	24.5	26.5	26.0	26.5	25.0	24.5	24.5
16	23.5	22.0	22.5	25.0	24.5	24.5	26.5	26.0	26.0	24.5	24.0	24.0
17	24.5	22.5	23.0	25.0	24.5	24.5	27.0	26.0	26.5	24.0	23.0	23.5
18	24.0	23.0	23.5	25.5	24.5	25.0	27.0	26.0	26.5	23.0	22.5	23.0
19	24.5	22.5	23.5	26.0	25.0	25.5	27.0	26.0	26.5	22.5	22.0	22.5
20	24.0	23.0	23.5	26.0	25.5	25.5	26.0	25.0	25.5	22.5	22.0	22.0
21	24.0	23.5	24.0	26.5	25.5	26.0	25.0	24.5	25.0	22.0	21.5	22.0
22	24.0	23.0	23.5	27.0	26.0	26.5	24.5	24.5	24.5	22.0	21.5	21.5
23	24.0	23.5	23.5	27.0	26.0	26.5	24.5	24.0	24.0	21.5	21.0	21.5
24	24.0	23.5	24.0	26.5	26.0	26.5	24.0	23.5	24.0	21.0	20.5	20.5
25	24.0	23.5	24.0	27.0	26.0	26.5	24.0	23.5	24.0	20.5	20.0	20.5
26	24.5	23.5	24.0	27.0	26.0	26.5	24.5	23.5	24.0	20.5	20.0	20.0
27	24.5	24.0	24.0	27.0	26.0	26.5	24.5	24.0	24.0	20.5	20.0	20.0
28	25.0	24.0	24.5	27.0	26.0	26.5	24.5	24.0	24.5	20.5	20.0	20.5
29	25.5	24.5	25.0	27.0	26.0	26.5	25.0	24.0	24.5	20.5	20.0	20.5
30	25.5	25.0	25.5	27.0	26.0	26.5	25.5	24.5	24.5	20.5	20.0	20.5
31	---	---	---	27.0	26.5	26.5	25.5	24.5	25.0	---	---	---
MONTH	25.5	16.5	22.2	27.0	24.5	25.8	27.0	23.5	25.4	25.5	20.0	23.1

## DARBY CREEK BASIN

01475300 DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA

LOCATION.--40°01'21", long 75°25'20", Chester County, Hydrologic Unit 02040202, on left bank 125 ft upstream from bridge on Waterloo Road, 2 mi south of Devon, and 2.5 mi northwest of Newtown Square.

DRAINAGE AREA.--5.15 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 310 ft, from topographic map.

REMARKS.--Records good except for periods of estimated records, which are poor. Several observations of water temperature were made during year.

AVERAGE DISCHARGE.--18 years, 8.94 ft<sup>3</sup>/s, 23.58 in/yr.

EXTREME FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft<sup>3</sup>/s, Sept. 6, 1979, gage height, 6.71 ft; minimum, 0.74 ft<sup>3</sup>/s, Aug. 26, 1983, gage height, 1.18 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above of 250 ft<sup>3</sup>/s, revised and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	1600	*599	*5.05	June 18	2115	553	4.88
June 15	0315	431	4.39	Aug. 13	2200	301	3.79

Minimum daily discharge, 2.1 ft<sup>3</sup>/s, Sept. 29. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	8.6	5.2	27	10	6.7	5.7	6.9	11	5.4	2.8	3.5
2	27	7.7	5.0	6.7	9.9	6.8	7.4	6.1	9.6	5.1	2.3	3.1
3	8.3	10	5.1	5.4	9.7	7.2	26	5.7	9.4	5.0	2.2	2.9
4	5.7	8.3	4.5	5.5	13	6.2	11	9.6	8.8	4.8	2.2	2.7
5	5.3	8.0	4.7	5.9	10	6.1	8.8	18	7.7	5.1	5.4	2.7
6	5.2	8.2	4.7	5.4	9.1	6.1	8.5	6.9	7.4	5.0	21	2.8
7	5.0	8.0	4.7	4.8	8.5	5.7	17	6.2	7.7	4.0	23	2.6
8	4.6	10	4.5	5.9	8.0	5.8	10	5.8	7.9	4.1	4.4	2.4
9	4.5	28	4.6	9.0	8.2	6.4	8.1	5.5	22	8.1	4.3	2.2
10	4.3	8.2	4.4	15	28	7.0	7.9	40	7.3	5.6	5.4	2.4
11	6.0	5.9	4.5	11	12	6.6	12	14	7.0	4.2	5.0	2.2
12	4.5	5.4	4.6	7.9	9.9	6.1	7.9	7.8	6.9	6.3	3.5	2.3
13	4.4	4.9	5.4	6.0	9.0	5.9	7.4	14	6.1	22	25	2.3
14	4.3	5.2	5.0	5.3	8.5	5.7	7.2	9.1	6.7	11	16	4.5
15	4.3	5.5	4.3	6.0	7.8	5.5	30	6.9	86	11	4.5	3.9
16	4.5	14	e4.0	6.5	8.0	5.6	10	6.6	11	6.7	3.6	2.5
17	9.1	6.6	e3.8	6.8	7.5	11	9.9	6.6	8.5	4.7	3.3	6.3
18	9.1	5.6	e3.6	7.7	7.1	13	8.9	5.9	61	5.2	3.0	2.5
19	26	5.2	e3.4	6.1	7.2	6.9	8.0	5.6	23	3.9	2.8	2.4
20	41	5.3	e3.3	13	6.8	14	7.7	5.4	10	3.6	3.7	2.6
21	11	5.3	e3.2	11	6.7	7.0	8.2	5.9	9.2	5.9	3.4	2.2
22	7.6	4.7	e3.2	7.6	8.3	5.7	7.6	5.4	8.5	7.8	22	15
23	6.7	6.0	e3.1	6.5	13	5.1	7.0	4.9	8.8	4.1	6.8	4.2
24	6.4	5.7	e3.0	6.5	12	5.3	6.9	4.8	7.3	3.5	4.8	2.8
25	6.0	5.4	e2.9	37	7.5	4.9	7.0	4.6	7.0	3.1	4.3	2.5
26	6.0	7.9	e2.9	44	6.6	4.6	6.9	9.9	6.6	2.9	3.8	2.3
27	6.2	6.5	e2.8	12	6.7	4.3	6.3	6.1	6.4	2.9	3.4	2.3
28	7.2	8.7	e2.7	9.8	7.0	4.3	6.4	5.0	6.1	2.8	3.3	2.3
29	7.0	6.0	e2.6	22	---	4.3	8.4	164	5.8	2.7	19	2.1
30	6.8	5.3	e2.3	36	---	8.6	8.9	36	5.5	2.7	8.3	2.1
31	7.2	---	6.5	12	---	6.8	---	13	---	3.4	4.0	---
TOTAL	265.6	230.1	124.5	371.3	266.0	205.2	293.0	452.2	396.2	172.6	226.5	96.6
MEAN	8.57	7.67	4.02	12.0	9.50	6.62	9.77	14.6	13.2	5.57	7.31	3.22
MAX	41	28	6.5	44	28	14	30	164	86	22	25	15
MIN	4.3	4.7	2.3	4.8	6.6	4.3	5.7	4.6	5.5	2.7	2.2	2.1
CFSM	1.66	1.49	.78	2.33	1.84	1.29	1.90	2.83	2.56	1.08	1.42	.63
IN.	1.92	1.66	.90	2.68	1.92	1.48	2.12	3.27	2.86	1.25	1.64	.70

CAL YR 1989 TOTAL 3412.3 MEAN 9.35 MAX 120 MIN 2.3 CFSM 1.82 IN. 24.65  
WTR YR 1990 TOTAL 3099.8 MEAN 8.49 MAX 164 MIN 2.1 CFSM 1.65 IN. 22.39

e Estimated.

## DARBY CREEK BASIN

01475300 DARBY CREEK AT WATERLOO MILLS, PA--Continued

PERIOD OF RECORD.--November 1970 to current year.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
OCT 25...	1745	5.6	258	7.4	14.0	13.0	0.80	9.6	96	30	22	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 25...	10	12	0.5	21	2.3	66	18	20	16	148	<0.010	
DATE		NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
OCT 25...		1.80	0.020	0.30	0.30	0.030	0.030	0.020	10	120	17	

## DARBY CREEK BASIN

01475510 DARBY CREEK NEAR DARBY, PA

LOCATION.--Lat 39°55'44", long 75°16'22", Delaware County, Hydrologic Unit 02040202, on right bank 20 ft upstream from Providence Road Bridge, 1.1 mi northwest of Upper Darby, 2.3 mi upstream from Cobbs Creek, and 8.4 mi upstream from mouth.

DRAINAGE AREA.--37.4 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1964 to September 1990 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 19.41 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--26 years, 64.6 ft<sup>3</sup>/s, 23.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,920 ft<sup>3</sup>/s, Aug. 23, 1974, gage height, 10.23 ft, from rating curve extended above 920 ft<sup>3</sup>/s, on basis of step-backwater analysis; minimum, 8.2 ft<sup>3</sup>/s, Sept. 12, 13, 1980; minimum gage height, 1.16 ft Sept. 2, 1966.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	1930	2420	6.35	Aug. 6	2345	*2710	*6.75
June 18	2100	1460	4.89				

Minimum daily discharge, 19 ft<sup>3</sup>/s, Sept. 11, 12, 13, 21, 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	42	e410	58	41	43	44	70	40	36	26
2	181	34	40	e41	55	41	51	40	64	38	27	24
3	60	43	40	e38	55	41	154	38	98	38	26	23
4	40	37	39	e33	72	40	63	70	84	37	26	22
5	37	34	e36	e33	58	38	52	134	57	41	104	22
6	37	34	e33	e33	51	38	51	46	54	40	279	22
7	36	35	e31	e31	50	37	101	40	56	36	326	21
8	33	50	e36	e120	48	37	64	39	64	35	36	21
9	33	131	e43	e175	48	40	54	37	97	58	37	21
10	32	54	e48	81	172	46	49	327	54	58	83	21
11	36	39	e50	63	69	39	69	133	50	36	87	19
12	32	37	e52	48	57	38	47	56	50	52	32	19
13	30	34	e57	38	52	37	44	126	47	160	73	19
14	29	34	e50	35	51	37	44	72	48	76	140	53
15	29	41	e45	41	47	36	181	50	302	103	34	38
16	28	63	e42	38	49	36	63	50	65	53	29	21
17	88	50	e40	39	51	92	56	74	55	40	27	43
18	60	41	e37	41	46	107	53	48	243	39	25	21
19	182	40	e36	38	45	46	47	43	214	35	25	20
20	244	40	e33	76	43	106	45	41	63	34	29	22
21	78	43	e32	67	42	54	50	47	59	33	27	19
22	52	40	e30	46	57	45	45	41	62	55	115	168
23	45	49	e29	39	80	42	43	39	61	43	46	36
24	43	45	e28	38	71	43	42	38	49	34	31	23
25	40	43	e28	200	48	42	42	36	48	31	29	21
26	39	51	e27	291	42	40	41	86	47	29	27	21
27	38	52	e27	74	41	37	40	47	48	29	25	20
28	37	62	e26	58	42	36	40	38	46	30	24	20
29	37	45	e25	104	---	36	65	883	42	29	119	19
30	36	43	e31	212	---	62	60	289	41	29	87	19
31	37	---	e120	66	---	51	---	84	---	42	29	---
TOTAL	1761	1380	1233	2647	1600	1461	1799	3136	2338	1433	2040	864
MEAN	56.8	46.0	39.8	85.4	57.1	47.1	60.0	101	77.9	46.2	65.8	28.8
MAX	244	131	120	410	172	107	181	883	302	160	326	168
MIN	28	34	25	31	41	36	40	36	41	29	24	19
CFSM	1.52	1.23	1.06	2.28	1.53	1.26	1.60	2.70	2.08	1.24	1.76	.77
IN.	1.75	1.37	1.23	2.63	1.59	1.45	1.79	3.12	2.33	1.43	2.03	.86

CAL YR 1989 TOTAL 24113 MEAN 66.1 MAX 1120 MIN 19 CFSM 1.77 IN. 23.98  
WTR YR 1990 TOTAL 21692 MEAN 59.4 MAX 883 MIN 19 CFSM 1.59 IN. 21.58

e Estimated.



## DARBY CREEK BASIN

01475550 COBBS CREEK AT DARBY, PA

LOCATION.--Lat 39°55'02", long 75°14'52", Delaware County, Hydrologic Unit 02040202, on right bank 60 ft upstream from dam, 200 ft upstream from bridge on Woodland Avenue, at Darby, and 1.1 mi upstream from mouth.

DRAINAGE AREA.--22.0 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR PA-75-1: 1974(M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 11.93 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--Records fair except for periods of estimated record, which are poor. Several observations of water temperature were made during the year. Low flow records prior to 1970 affected by diversion to sewer system through submerged manhole.

AVERAGE DISCHARGE.--26 years, 30.9 ft<sup>3</sup>/s, 19.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,490 ft<sup>3</sup>/s, June 29, 1973, gage height, 10.98 ft, from rating curve extended above 850 ft<sup>3</sup>/s, on basis of computation of peak flow through culvert; maximum gage height, 12.85 ft Aug. 23, 1974, backwater from storage tank; minimum discharge, no flow on many days in 1964-66.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 18	2130	*1590	*5.19				

Minimum daily discharge, 6.2 ft<sup>3</sup>/s, Sept. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	19	13	174	17	14	15	18	16	12	16	8.1
2	151	14	12	15	17	13	19	17	15	11	10	7.6
3	21	31	12	13	19	15	92	16	72	11	9.9	7.2
4	16	16	11	12	32	13	20	58	31	12	10	6.8
5	16	14	13	12	17	13	18	117	17	15	147	6.8
6	17	14	12	12	16	13	18	19	16	13	221	7.2
7	16	13	11	11	16	13	64	18	18	13	227	7.0
8	13	49	11	54	15	13	19	17	26	15	13	7.2
9	12	103	12	62	17	15	17	17	28	32	17	8.3
10	12	19	12	32	119	21	17	302	16	20	75	8.5
11	15	16	13	19	20	14	33	47	15	13	63	8.4
12	13	14	13	16	19	13	16	20	16	49	13	9.0
13	13	14	15	15	16	13	15	125	15	121	109	8.8
14	13	14	12	14	16	12	14	29	17	38	52	62
15	13	24	11	23	16	12	169	17	171	138	12	25
16	12	33	11	15	17	13	22	18	18	20	11	11
17	89	15	10	13	16	97	25	75	17	14	11	29
18	36	13	e9.9	13	15	68	21	21	222	14	9.8	11
19	133	12	e9.8	13	15	16	17	15	55	14	9.9	11
20	217	13	e9.2	59	15	75	18	14	20	13	12	13
21	27	18	e9.0	24	15	18	25	19	21	13	11	10
22	19	12	e8.8	15	36	15	18	14	43	20	75	202
23	17	23	e8.6	13	43	15	17	13	28	23	14	12
24	19	16	e8.2	13	30	17	18	13	15	13	11	7.5
25	17	14	e7.9	193	17	15	19	14	14	12	10	6.8
26	16	21	e7.6	134	14	14	18	65	14	11	9.6	6.5
27	15	17	e7.4	22	15	14	18	16	26	10	21	6.3
28	15	27	e7.1	18	15	14	19	14	17	10	15	6.2
29	14	14	e7.0	112	---	14	29	557	13	9.9	137	6.8
30	16	12	e11	102	---	40	25	89	13	9.8	36	6.3
31	17	---	e24	19	---	20	---	20	---	73	9.0	---
TOTAL	1034	634	339.5	1262	635	672	855	1814	1025	792.7	1397.2	533.3
MEAN	33.4	21.1	11.0	40.7	22.7	21.7	28.5	58.5	34.2	25.6	45.1	17.8
MAX	217	103	24	193	119	97	169	557	222	138	227	202
MIN	12	12	7.0	11	14	12	14	13	13	9.8	9.0	6.2
CFSM	1.52	.96	.50	1.85	1.03	.99	1.30	2.66	1.55	1.16	2.05	.81
IN.	1.75	1.07	.57	2.13	1.07	1.14	1.45	3.07	1.73	1.34	2.36	.90

CAL YR 1989 TOTAL 13197.8 MEAN 36.2 MAX 708 MIN 7.0 CFSM 1.64 IN. 22.32  
WTR YR 1990 TOTAL 10993.7 MEAN 30.1 MAX 557 MIN 6.2 CFSM 1.37 IN. 18.59

e Estimated.

## CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA

LOCATION.--Lat 39°58'35", long 7526'13", Delaware County, Hydrologic Unit 02040202, at Castle Rock Bridge on State Highway 3, 0.6 mi upstream from Preston Run, 0.8 mi upstream from Geist Reservoir and 2.0 mi west of Newtown Square.

DRAINAGE AREA.--15.8 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1932, 1949, 1970-1977, and annual maximum 1977-1981. October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 225.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for periods of estimated record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 21.9 ft<sup>3</sup>/s, 18.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft<sup>3</sup>/s, August 15, 16, 1986.

EXTREMES OF CURRENT YEAR.--Peak discharges above base of 600 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	1830	*969	*6.86	June 19	0030	629	5.81

Minimum daily discharge, 2.3 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	23	15	89	29	20	21	19	26	18	4.6	9.3
2	76	22	14	27	28	20	24	17	24	17	2.9	7.8
3	32	25	15	20	27	21	78	16	26	16	2.4	6.4
4	20	24	11	21	35	19	35	21	24	16	2.3	5.7
5	17	23	14	23	30	19	27	41	20	16	8.9	5.4
6	17	24	15	20	26	19	24	21	19	19	34	5.8
7	15	26	15	18	25	18	42	18	19	15	35	5.6
8	14	26	14	20	24	17	33	16	19	14	8.5	4.7
9	14	66	13	31	24	19	24	15	46	20	8.3	4.6
10	14	26	13	48	65	21	22	87	24	22	17	5.3
11	18	16	13	37	35	19	29	49	22	15	15	4.0
12	14	13	13	28	28	19	23	24	21	17	7.7	4.0
13	14	11	14	21	25	18	21	34	20	56	30	4.4
14	13	11	11	18	25	17	20	33	20	29	46	10
15	13	13	e10	19	23	17	70	22	169	32	13	11
16	14	33	e9.6	21	24	18	29	21	32	23	11	5.1
17	26	21	e9.0	23	23	25	25	22	26	17	9.7	12
18	26	15	e8.3	25	21	44	24	20	64	15	8.7	4.9
19	74	12	e7.8	21	22	22	21	18	103	14	7.8	4.7
20	131	12	e7.2	33	20	30	21	18	29	13	9.1	6.0
21	43	13	e6.9	38	20	25	22	20	27	13	11	4.2
22	28	13	e6.6	26	22	20	21	21	25	26	61	36
23	25	17	e6.5	21	33	19	19	22	26	14	24	13
24	24	15	e6.5	20	34	19	19	17	23	10	17	6.5
25	24	16	e6.4	83	24	20	18	16	22	7.2	15	5.3
26	22	24	e6.4	144	19	19	18	24	22	5.7	14	4.9
27	22	22	e6.4	39	20	18	17	24	21	5.5	11	4.9
28	22	25	e6.3	29	21	17	16	19	20	5.4	10	4.2
29	22	19	e6.3	37	---	18	18	289	19	5.1	40	4.2
30	22	16	e6.3	113	---	23	21	e130	18	4.9	32	4.2
31	22	---	13	34	---	25	---	32	---	5.2	12	---
TOTAL	851	622	319.5	1147	752	645	802	1146	976	506.0	528.9	214.1
MEAN	27.5	20.7	10.3	37.0	26.9	20.8	26.7	37.0	32.5	16.3	17.1	7.14
MAX	131	66	15	144	65	44	78	289	169	56	61	36
MIN	13	11	6.3	18	19	17	16	15	18	4.9	2.3	4.0
CFSM	1.74	1.31	.65	2.34	1.70	1.32	1.69	2.34	2.06	1.03	1.08	.45
IN.	2.00	1.46	.75	2.70	1.77	1.52	1.89	2.70	2.30	1.19	1.25	.50

CAL YR 1989 TOTAL 8776.3 MEAN 24.0 MAX 255 MIN 4.5 CFSM 1.52 IN. 20.66  
WTR YR 1990 TOTAL 8509.5 MEAN 23.3 MAX 289 MIN 2.3 CFSM 1.48 IN. 20.04

e Estimated.

## RIDLEY CREEK BASIN

01476480 RIDLEY CREEK AT MEDIA, PA

LOCATION.--Lat 39°54'58", long 75°24'13", Delaware County, Hydrologic Unit 02040202, on right bank 400 ft downstream from Route 1 bridge (Baltimore Pike) at Media.

DRAINAGE AREA.--30.50 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 110 ft., from topographic map.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft<sup>3</sup>/s, July 5, 1989, gage height, 7.78 ft; minimum daily discharge, 5.7 ft<sup>3</sup>/s, Oct. 7, 1986.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 6	2245	*628	*5.45	No other peaks above base discharge.			

Minimum daily discharge, 10 ft<sup>3</sup>/s, Sept. 8, 12, 13, 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	33	e28	e200	63	40	e31	33	e53	29	19	22
2	166	31	e27	e68	62	40	36	e31	e51	26	14	19
3	91	35	e29	e46	55	e43	119	e28	e57	25	14	19
4	44	38	e24	e48	61	e39	54	35	e53	23	11	17
5	37	33	e29	e52	64	e38	39	73	e40	27	23	19
6	37	35	e32	e46	52	e38	37	e36	e40	32	92	20
7	35	35	e32	e42	50	e37	e68	e29	e41	23	109	16
8	32	34	e29	e46	48	e36	e51	e28	e40	23	28	10
9	32	106	e28	e72	49	e39	39	27	e77	26	24	13
10	31	62	e28	e105	121	e44	37	149	39	35	34	15
11	35	43	e27	e85	79	40	e47	172	35	25	44	11
12	32	35	e27	e67	59	40	e37	52	35	27	24	10
13	54	36	e28	e49	50	e38	e35	e69	31	91	27	10
14	36	33	e24	e41	47	e37	e33	e64	33	50	79	17
15	24	35	e20	e44	40	e37	165	e44	258	52	25	23
16	26	49	e20	e48	37	37	e47	e42	65	40	21	14
17	20	e42	e18	e53	37	e54	e41	e45	49	27	19	e27
18	17	e39	e18	e54	36	e92	e40	48	71	25	16	e12
19	24	e38	e17	50	36	e47	e37	36	174	24	15	e11
20	233	e38	e17	71	36	e65	e34	33	54	21	17	e14
21	106	e32	e16	86	36	e51	36	36	48	21	20	e10
22	52	e31	e16	57	38	e41	e34	34	44	e42	144	75
23	45	e36	e16	47	55	e40	e31	32	48	e27	60	40
24	42	e36	e15	46	54	e39	e31	30	38	e21	33	21
25	39	e29	e15	134	42	e41	e29	30	39	e17	e56	15
26	39	e36	e15	329	40	e38	e29	55	38	e15	40	15
27	37	e39	e14	92	40	e36	e27	44	39	e14	26	18
28	35	e42	e14	66	40	e31	e26	33	34	e13	23	16
29	35	e37	e14	71	---	e32	e29	e210	33	e13	30	14
30	34	e32	e15	276	---	e38	e32	e84	32	e14	76	13
31	35	---	e31	73	---	e42	---	e64	---	e18	27	---
TOTAL	1528	1180	683	2564	1427	1310	1331	1726	1689	866	1190	556
MEAN	49.3	39.3	22.0	82.7	51.0	42.3	44.4	55.7	56.3	27.9	38.4	18.5
MAX	233	106	32	329	121	92	165	210	258	91	144	75
MIN	17	29	14	41	36	31	26	27	31	13	11	10
MEAN#	55.9	46.8	29.8	90.8	58.9	49.8	50.8	62.1	62.1	34.1	44.6	24.0
CFSM#	1.83	1.53	.98	2.98	1.93	1.63	1.67	2.04	2.04	1.12	1.46	.79
IN.#	2.11	1.71	1.13	3.43	2.01	1.88	1.86	2.35	2.27	1.29	1.68	.88
†	6.6	7.5	7.8	8.1	7.9	7.5	6.4	6.4	5.8	6.2	6.2	5.5

CAL YR 1989 TOTAL 19364 MEAN 53.1 MAX 693 MIN 13 MEAN# 60.5 CFSM# 1.99 IN.# 26.93  
WTR YR 1990 TOTAL 16050 MEAN 44.0 MAX 329 MIN 10 MEAN# 50.8 CFSM# 1.67 IN.# 22.62

# Adjusted for diversion.

† Diversion, equivalent in cubic feet per second, furnished by Media Water Co.

e Estimated.

## CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA

LOCATION.--Lat 39°52'08", long 75°24'31", Delaware County, Hydrologic Unit 02040202, on right bank 30 ft downstream from Dutton Mill Bridge and 3 mi Northwest of Chester.

DRAINAGE AREA.--61.1 mi<sup>2</sup>.

PERIOD OF RECORDS.--August 1931 to current year. Monthly discharges only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR pa-72-1: 1971.

GAGE.--Water-stage recorder. Datum of gage is 23.41 ft above Penn Central Railroad datum. Prior to June 27, 1966, water-stage recorder at site 50 ft upstream and June 28, 1966, to Oct. 4, 1967, nonrecording gage 150 ft upstream, all at same datum.

REMARKS>.--Records good except for periods of estimated discharge, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--59 years, 89.0 ft<sup>3</sup>/s, 19.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft<sup>3</sup>/s, Sept. 13, 1971, gage height, 24.59 ft, from floodmark, from rating curve extended above 2,400 ft<sup>3</sup>/s, on basis of contracted-opening measurement at gage height 13.57 ft and slope-area measurement of peak flow; minimum, 0.3 ft<sup>3</sup>/s, Aug. 7, 1934, gage height, 0.28 ft; minimum daily, 6.5 ft<sup>3</sup>/s, Sept. 25, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	1730	*2520	*8.46	No other peaks above base discharge.			

Minimum daily discharge, 31 ft<sup>3</sup>/s, Sept. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	95	86	396	124	87	92	87	e198	61	40	48
2	395	86	e84	132	118	84	104	78	e105	62	38	45
3	168	102	85	101	113	87	316	73	e101	59	37	43
4	101	95	72	82	138	84	156	93	e101	58	37	42
5	84	88	e64	88	121	81	119	203	e100	74	62	40
6	82	91	e58	e88	106	82	106	96	e92	83	178	40
7	82	89	e52	e82	103	79	164	81	e86	61	263	40
8	75	100	e55	85	99	78	131	77	e80	57	65	39
9	74	264	e61	166	99	82	102	73	e165	61	56	38
10	69	141	e69	171	254	90	100	386	e125	70	94	39
11	83	106	76	124	155	84	130	268	e90	57	123	39
12	71	99	87	96	119	82	101	112	72	60	61	36
13	68	93	87	76	112	79	92	146	68	205	56	37
14	68	e83	e80	67	106	77	90	147	71	119	114	64
15	67	e98	e79	75	100	77	271	98	535	122	54	63
16	63	e150	e73	85	105	75	128	91	134	88	46	42
17	123	e110	e70	86	101	111	108	97	100	65	43	51
18	129	e94	e67	91	93	184	102	101	113	58	43	34
19	317	e91	e64	86	96	96	92	81	252	54	42	31
20	536	91	e63	135	89	125	91	76	128	52	45	38
21	210	87	e61	149	86	98	96	82	105	53	48	33
22	129	82	e60	110	99	85	93	78	101	68	293	205
23	112	93	e58	93	147	83	87	73	126	66	119	85
24	106	89	e56	91	139	82	83	e69	94	52	70	50
25	e97	e75	e55	299	111	85	83	e69	82	43	130	43
26	94	e93	e54	585	87	80	83	e130	77	41	99	39
27	94	e94	e53	175	84	76	80	e160	80	41	58	41
28	e90	e115	e52	133	89	75	81	e102	83	46	53	41
29	e89	95	e50	145	---	74	91	e285	69	46	61	41
30	89	87	e49	386	---	109	100	e600	63	45	98	41
31	96	---	e120	146	---	111	---	e210	---	42	53	---
TOTAL	3938	3076	2100	4624	3193	2782	3472	4322	3596	2069	2579	1468
MEAN	127	103	67.7	149	114	89.7	116	139	120	66.7	83.2	48.9
MAX	536	264	120	585	254	184	316	600	535	205	293	205
MIN	63	75	49	67	84	74	80	69	63	41	37	31
CFSM	2.08	1.68	1.11	2.44	1.87	1.47	1.89	2.28	1.96	1.09	1.36	.80
IN.	2.40	1.87	1.28	2.82	1.94	1.69	2.11	2.63	2.19	1.26	1.57	.89

CAL YR 1989 TOTAL 47317 MEAN 130 MAX 1960 MIN 42 CFSM 2.12 IN. 28.81  
WTR YR 1990 TOTAL 37219 MEAN 102 MAX 600 MIN 31 CFSM 1.67 IN. 22.66

e Estimated.

## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA

LOCATION.--Lat 39°50'33", long 75°21'28", Delaware County, Hydrologic Unit 02040202, in the pumping house of Scott Paper Company.

DRAINAGE AREA.--10,300 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1961 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

pH: January 1968 to current year.

WATER TEMPERATURE: December 1961 to current year.

DISSOLVED OXYGEN: December 1961 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1961.

REMARKS.--Prior to April 1981, sampling site was located at (latitude 39°50'12", longitude 75°22'00") auxiliary tidal-gaging station at the end of Reynolds Aluminum Company pier, 0.5 mi downstream from Chester Creek in Chester. Station not operated Dec. 1 to Feb. 28. Other interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 5,900 microsiemens, Oct. 7, 1965; minimum, 103 microsiemens, June 2, 1984, Apr. 9, 1987.

pH: Maximum, 8.7, Sept. 13, 14, 1971 and Oct. 16, 1979; minimum, 5.5, Dec. 10, 11, 1969.

WATER TEMPERATURE: Maximum, 33.0°C, July 21, 1977; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 13.5 mg/L, Apr. 20, 1979, minimum, 0.0 mg/L, on many days.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	232	220	226	189	175	181	---	---	---	---	---	---
2	234	222	227	199	177	187	---	---	---	---	---	---
3	230	222	226	210	179	193	---	---	---	---	---	---
4	236	222	229	209	192	202	---	---	---	---	---	---
5	243	229	236	215	197	207	---	---	---	---	---	---
6	252	231	242	221	199	211	---	---	---	---	---	---
7	251	233	244	224	206	217	---	---	---	---	---	---
8	251	239	245	235	214	223	---	---	---	---	---	---
9	254	242	248	244	221	233	---	---	---	---	---	---
10	258	241	252	245	226	235	---	---	---	---	---	---
11	269	248	258	246	222	235	---	---	---	---	---	---
12	267	254	260	248	231	240	---	---	---	---	---	---
13	270	255	263	251	228	239	---	---	---	---	---	---
14	270	253	261	252	230	239	---	---	---	---	---	---
15	272	257	264	243	225	237	---	---	---	---	---	---
16	275	261	267	240	226	234	---	---	---	---	---	---
17	281	262	271	241	228	233	---	---	---	---	---	---
18	281	269	275	250	229	236	---	---	---	---	---	---
19	324	273	283	292	239	254	---	---	---	---	---	---
20	301	269	279	267	247	256	---	---	---	---	---	---
21	306	268	293	254	221	235	---	---	---	---	---	---
22	279	239	257	239	228	235	---	---	---	---	---	---
23	242	210	230	237	225	232	---	---	---	---	---	---
24	216	189	202	240	222	231	---	---	---	---	---	---
25	198	180	188	242	223	229	---	---	---	---	---	---
26	184	173	179	232	221	227	---	---	---	---	---	---
27	186	169	174	239	225	230	---	---	---	---	---	---
28	177	166	171	237	226	231	---	---	---	---	---	---
29	182	165	171	231	222	228	---	---	---	---	---	---
30	181	169	174	240	220	225	---	---	---	---	---	---
31	187	172	179	---	---	---	---	---	---	---	---	---
MONTH	324	165	235	292	175	226	---	---	---	---	---	---

## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	238	224	230	239	229	236
2	---	---	---	238	219	225	234	223	227	241	229	234
3	---	---	---	234	216	226	232	223	226	244	232	238
4	---	---	---	227	218	223	236	221	226	251	235	244
5	---	---	---	226	214	221	253	230	238	252	238	244
6	---	---	---	229	216	221	256	237	244	251	239	244
7	---	---	---	236	213	222	249	223	236	265	240	249
8	---	---	---	230	216	223	252	224	232	260	244	253
9	---	---	---	233	218	225	241	223	231	264	246	255
10	---	---	---	241	223	228	236	223	228	264	232	254
11	---	---	---	261	226	232	---	---	---	256	238	248
12	---	---	---	245	226	236	236	223	230	274	252	260
13	---	---	---	243	229	233	233	219	226	273	250	262
14	---	---	---	242	230	235	231	213	221	261	239	248
15	---	---	---	242	233	237	222	206	213	254	224	240
16	---	---	---	245	235	239	211	199	205	236	213	225
17	---	---	---	257	237	245	216	205	209	219	191	207
18	---	---	---	247	235	241	230	208	218	192	174	183
19	---	---	---	251	234	241	257	220	230	178	162	169
20	---	---	---	244	234	240	238	225	231	166	158	162
21	---	---	---	248	239	242	232	220	225	168	158	163
22	---	---	---	251	238	243	224	215	221	173	159	167
23	---	---	---	253	241	246	222	214	219	175	160	167
24	---	---	---	265	240	250	227	217	222	177	162	169
25	---	---	---	249	231	242	233	219	224	177	164	171
26	---	---	---	257	226	240	230	217	223	176	166	170
27	---	---	---	242	221	232	232	220	226	179	168	172
28	---	---	---	238	220	229	235	224	228	179	167	172
29	---	---	---	230	218	226	238	225	231	184	162	173
30	---	---	---	233	223	228	239	227	233	195	163	180
31	---	---	---	245	225	230	---	---	---	195	174	184
MONTH	---	---	---	265	213	233	257	199	226	274	158	211
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	185	171	177	268	261	264	322	297	310	272	258	266
2	186	176	180	277	266	269	330	299	313	277	261	269
3	189	176	183	296	270	275	---	---	---	273	265	268
4	192	180	187	285	271	277	---	---	---	274	265	270
5	195	183	190	282	273	277	353	319	333	281	271	276
6	202	183	194	280	274	277	364	294	325	280	272	275
7	216	187	205	286	277	281	336	278	303	282	272	278
8	221	200	212	292	280	284	319	306	314	303	272	286
9	226	204	217	291	283	286	320	309	315	326	277	294
10	229	211	222	299	285	290	321	299	314	318	277	294
11	237	216	226	298	288	291	319	289	307	312	280	298
12	237	219	227	300	291	295	310	286	301	345	287	305
13	239	220	232	302	293	298	303	287	297	369	284	314
14	246	228	237	301	291	296	297	277	289	447	287	331
15	246	228	235	299	289	294	300	270	286	401	294	335
16	239	227	233	299	288	294	292	273	284	471	293	335
17	250	235	239	302	291	297	287	269	280	434	303	342
18	247	238	242	302	281	292	287	268	280	390	302	337
19	250	230	241	292	277	287	287	265	278	420	309	350
20	258	240	245	288	274	282	305	265	281	458	310	355
21	251	239	245	284	266	277	307	265	285	469	315	367
22	260	241	252	285	265	275	291	261	277	461	300	377
23	259	252	256	291	265	276	285	260	274	425	300	346
24	271	247	257	275	258	268	278	264	273	371	304	335
25	259	250	255	277	264	270	281	266	273	371	312	342
26	261	252	257	281	267	275	277	269	272	374	312	344
27	264	254	258	317	274	296	273	265	269	362	310	338
28	264	255	259	317	304	310	279	259	270	370	318	343
29	264	257	260	319	303	313	276	264	271	376	316	344
30	266	257	261	320	304	313	288	260	272	375	318	348
31	---	---	---	323	303	314	279	261	271	---	---	---
MONTH	271	171	229	323	258	287	364	259	290	471	258	319

## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

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

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



## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.7	6.7	6.7	6.8	6.7	6.7	6.9	6.7	6.8	6.8	6.7	6.7
2	6.8	6.7	6.7	6.8	6.7	6.8	6.9	6.7	6.8	6.9	6.7	6.8
3	6.8	6.7	6.7	6.9	6.8	6.8	---	---	---	6.9	6.7	6.8
4	6.8	6.7	6.8	7.0	6.8	6.8	---	---	---	6.9	6.7	6.8
5	6.9	6.8	6.8	6.9	6.8	6.8	6.9	6.7	6.8	6.8	6.8	6.8
6	6.9	6.7	6.8	6.8	6.8	6.8	6.9	6.7	6.8	6.8	6.7	6.7
7	6.9	6.7	6.8	6.8	6.7	6.8	6.8	6.6	6.7	6.7	6.7	6.7
8	6.9	6.8	6.8	6.8	6.7	6.8	6.7	6.6	6.6	6.8	6.7	6.7
9	6.9	6.7	6.8	6.8	6.8	6.8	6.6	6.6	6.6	6.8	6.7	6.8
10	6.8	6.7	6.8	6.8	6.7	6.8	6.6	6.5	6.6	6.8	6.7	6.8
11	6.8	6.7	6.8	6.8	6.7	6.8	6.6	6.5	6.6	6.7	6.7	6.7
12	7.0	6.8	6.9	6.8	6.7	6.8	6.6	6.5	6.6	6.7	6.6	6.7
13	7.0	6.9	6.9	6.8	6.7	6.8	6.6	6.5	6.6	6.7	6.6	6.7
14	6.9	6.9	6.9	6.8	6.7	6.8	6.6	6.6	6.6	6.7	6.6	6.6
15	6.9	6.8	6.9	6.8	6.7	6.8	6.6	6.6	6.6	6.7	6.6	6.7
16	6.9	6.8	6.8	6.8	6.7	6.7	6.7	6.6	6.6	6.7	6.6	6.7
17	7.0	6.8	6.9	6.8	6.7	6.7	6.7	6.6	6.6	6.7	6.6	6.7
18	7.0	6.8	6.9	6.8	6.7	6.8	6.7	6.6	6.6	6.8	6.7	6.7
19	6.8	6.8	6.8	6.8	6.7	6.8	6.7	6.6	6.6	6.8	6.7	6.8
20	6.8	6.7	6.8	6.9	6.7	6.8	6.8	6.7	6.8	6.8	6.7	6.7
21	6.8	6.7	6.7	6.9	6.8	6.8	6.8	6.7	6.8	6.8	6.7	6.8
22	6.8	6.6	6.7	6.8	6.8	6.8	6.9	6.7	6.8	6.8	6.6	6.8
23	6.8	6.7	6.7	6.8	6.8	6.8	6.9	6.7	6.8	6.8	6.7	6.7
24	6.8	6.7	6.7	6.8	6.7	6.8	6.8	6.7	6.8	6.8	6.7	6.7
25	6.8	6.7	6.7	6.7	6.7	6.7	6.8	6.7	6.7	6.8	6.7	6.8
26	6.8	6.7	6.7	6.7	6.6	6.7	6.7	6.7	6.7	6.8	6.7	6.8
27	6.8	6.7	6.7	6.8	6.6	6.7	6.7	6.6	6.7	6.8	6.7	6.8
28	6.7	6.7	6.7	6.8	6.8	6.8	6.7	6.6	6.7	6.8	6.7	6.8
29	6.8	6.7	6.7	6.9	6.8	6.8	6.7	6.7	6.7	6.8	6.7	6.8
30	6.8	6.7	6.7	6.9	6.8	6.8	6.8	6.7	6.7	6.8	6.6	6.7
31	---	---	---	6.8	6.8	6.8	6.8	6.7	6.7	---	---	---
MONTH	7.0	6.6	6.8	7.0	6.6	6.8	6.9	6.5	6.7	6.9	6.6	6.7

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	20.0	19.5	19.5	14.0	13.5	13.5	---	---	---	---	---	---
2	20.0	19.5	19.5	14.0	13.0	13.5	---	---	---	---	---	---
3	20.0	19.0	19.5	13.5	13.0	13.5	---	---	---	---	---	---
4	19.0	18.0	19.0	13.0	12.5	13.0	---	---	---	---	---	---
5	18.5	18.0	18.0	13.0	12.5	12.5	---	---	---	---	---	---
6	18.5	18.0	18.0	13.0	12.5	13.0	---	---	---	---	---	---
7	18.0	17.5	18.0	13.5	12.5	13.0	---	---	---	---	---	---
8	17.5	17.0	17.5	14.0	13.0	13.5	---	---	---	---	---	---
9	17.0	16.5	17.0	14.0	13.5	13.5	---	---	---	---	---	---
10	17.0	16.0	16.5	13.5	13.0	13.5	---	---	---	---	---	---
11	17.0	16.0	16.5	13.0	12.5	13.0	---	---	---	---	---	---
12	17.0	16.0	16.5	13.0	12.5	12.5	---	---	---	---	---	---
13	17.5	16.5	17.0	13.0	12.0	12.5	---	---	---	---	---	---
14	17.5	17.0	17.0	13.5	12.5	13.0	---	---	---	---	---	---
15	17.5	17.0	17.0	13.5	13.0	13.0	---	---	---	---	---	---
16	18.0	17.0	17.5	13.5	12.5	13.5	---	---	---	---	---	---
17	18.0	17.5	17.5	13.0	12.0	12.5	---	---	---	---	---	---
18	17.5	16.5	17.0	12.0	11.0	11.5	---	---	---	---	---	---
19	16.5	15.5	16.0	11.0	10.5	11.0	---	---	---	---	---	---
20	16.0	15.5	15.5	11.0	10.5	11.0	---	---	---	---	---	---
21	15.5	14.0	15.0	10.5	9.5	10.0	---	---	---	---	---	---
22	14.5	14.0	14.0	9.5	9.0	9.5	---	---	---	---	---	---
23	14.0	13.5	13.5	9.0	8.0	8.5	---	---	---	---	---	---
24	13.5	12.5	13.0	8.5	7.5	8.0	---	---	---	---	---	---
25	13.5	12.5	13.0	8.0	7.5	7.5	---	---	---	---	---	---
26	13.5	12.5	13.0	8.0	7.5	7.5	---	---	---	---	---	---
27	13.5	12.5	13.0	8.0	7.5	8.0	---	---	---	---	---	---
28	13.5	12.5	13.0	8.5	8.0	8.0	---	---	---	---	---	---
29	13.5	13.0	13.0	8.0	7.5	8.0	---	---	---	---	---	---
30	14.0	13.0	13.5	7.5	7.0	7.5	---	---	---	---	---	---
31	14.0	13.5	13.5	---	---	---	---	---	---	---	---	---
MONTH	20.0	12.5	16.0	14.0	7.0	11.3	---	---	---	---	---	---

## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	5.5	5.0	5.5	10.5	10.0	10.5	17.0	16.0	16.5
2	---	---	---	5.5	5.0	5.0	10.5	10.0	10.5	17.5	16.5	17.0
3	---	---	---	6.0	5.5	5.5	11.0	10.0	10.5	17.0	16.5	17.0
4	---	---	---	6.0	5.5	5.5	10.5	10.0	10.0	17.0	16.5	16.5
5	---	---	---	6.0	5.5	5.5	10.5	9.5	10.0	17.0	16.0	16.5
6	---	---	---	6.0	5.5	5.5	10.0	9.5	10.0	17.0	16.0	16.5
7	---	---	---	5.5	5.0	5.5	10.0	9.0	9.5	17.5	16.5	17.0
8	---	---	---	6.0	5.0	5.5	9.5	8.5	9.5	18.0	16.5	17.5
9	---	---	---	6.0	5.0	5.5	10.5	9.0	9.5	18.5	17.0	17.5
10	---	---	---	6.5	5.5	6.0	11.0	9.5	10.5	18.0	17.5	18.0
11	---	---	---	6.5	6.0	6.0	---	---	---	17.5	17.0	17.5
12	---	---	---	7.0	6.0	6.5	11.0	10.5	10.5	17.5	17.0	17.5
13	---	---	---	8.0	6.5	7.5	11.0	10.0	10.5	17.5	17.5	17.5
14	---	---	---	8.5	7.0	8.0	11.0	10.5	10.5	18.0	17.5	17.5
15	---	---	---	9.0	7.5	8.5	11.5	10.5	11.0	18.5	17.5	18.0
16	---	---	---	9.5	8.5	9.0	12.0	11.0	11.5	18.0	18.0	18.0
17	---	---	---	10.5	9.0	9.5	12.0	11.0	11.5	18.5	18.0	18.0
18	---	---	---	10.5	9.5	10.0	12.0	11.0	11.5	17.5	17.0	17.5
19	---	---	---	11.0	10.0	10.5	12.5	11.5	12.0	17.5	17.0	17.0
20	---	---	---	11.0	10.0	10.5	13.0	12.0	12.5	17.5	17.0	17.0
21	---	---	---	11.0	10.0	10.5	13.0	12.5	12.5	17.0	16.5	17.0
22	---	---	---	11.5	10.5	11.0	13.5	12.5	13.0	17.0	16.0	16.5
23	---	---	---	12.5	11.5	12.0	14.0	13.0	13.5	17.0	16.5	16.5
24	---	---	---	12.0	11.5	12.0	14.5	13.5	14.0	17.0	16.5	16.5
25	---	---	---	12.0	11.5	11.5	14.5	14.0	14.0	17.5	16.5	17.0
26	---	---	---	12.5	11.5	11.5	15.5	14.0	15.0	17.0	16.5	16.5
27	---	---	---	12.0	11.0	11.5	16.0	15.0	15.5	17.0	16.0	16.5
28	---	---	---	12.0	11.0	11.5	17.0	15.5	16.0	17.5	17.0	17.0
29	---	---	---	11.5	10.5	11.0	16.5	16.0	16.0	17.0	16.5	17.0
30	---	---	---	11.0	10.5	11.0	16.0	16.0	16.0	17.0	16.0	16.5
31	---	---	---	10.5	10.0	10.5	---	---	---	17.5	16.5	17.0
MONTH	---	---	---	12.5	5.0	8.5	17.0	8.5	12.0	18.5	16.0	17.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.5	17.0	17.5	26.5	25.5	26.0	26.5	26.0	26.5	25.5	24.5	25.0
2	19.0	17.5	18.0	26.0	25.5	25.5	27.0	25.5	26.0	26.0	25.0	25.5
3	19.5	18.5	19.0	26.0	25.0	25.5	---	---	---	25.5	25.0	25.5
4	19.5	19.0	19.0	26.0	25.0	25.5	---	---	---	26.0	24.5	25.0
5	20.0	18.5	19.0	26.5	25.5	26.0	27.0	24.5	26.0	25.5	24.5	25.0
6	20.5	19.0	19.5	27.0	25.5	26.0	27.0	26.0	26.5	25.5	25.0	25.0
7	21.0	19.5	20.0	26.5	25.5	26.0	27.0	26.0	26.5	26.0	25.0	25.5
8	21.0	20.0	20.5	26.0	25.5	26.0	27.5	26.0	26.5	25.0	24.5	25.0
9	21.5	20.5	21.0	27.0	25.5	26.0	26.5	25.5	26.0	24.5	23.5	24.0
10	21.5	20.5	21.0	27.0	26.0	26.5	26.0	25.5	26.0	24.5	24.0	24.0
11	21.0	20.5	21.0	26.5	25.5	26.0	26.5	26.0	26.0	25.0	24.0	24.5
12	21.5	20.5	21.0	26.0	24.5	25.5	27.0	26.0	26.5	25.0	24.5	24.5
13	21.5	20.5	21.0	25.0	23.5	24.5	27.0	26.5	26.5	25.0	24.5	25.0
14	21.5	21.0	21.5	24.0	23.5	24.0	27.0	26.5	27.0	25.0	24.5	25.0
15	21.5	21.0	21.5	24.5	24.0	24.5	27.0	26.5	26.5	25.0	24.5	24.5
16	22.5	21.5	22.0	25.0	24.5	24.5	27.0	26.5	27.0	24.5	24.0	24.0
17	23.0	22.0	22.5	25.5	24.5	25.0	27.5	26.5	27.0	24.0	23.0	23.5
18	24.0	22.5	23.0	26.0	25.0	25.5	27.5	27.0	27.0	23.0	22.0	22.5
19	23.5	23.0	23.5	26.5	25.5	26.0	27.5	26.5	27.0	22.5	22.0	22.0
20	24.0	23.0	23.5	27.0	26.0	26.5	26.5	25.0	26.0	22.5	22.0	22.0
21	24.0	23.0	23.5	27.0	26.0	26.5	25.5	24.5	25.0	22.0	21.5	22.0
22	25.0	23.5	24.0	27.0	26.0	26.5	24.5	23.5	24.0	22.0	21.0	21.5
23	24.5	24.0	24.0	27.5	26.5	27.0	24.0	23.5	24.0	21.5	20.5	21.0
24	24.5	24.0	24.0	27.5	26.5	27.0	24.0	24.0	24.0	21.0	20.0	20.5
25	24.0	23.5	24.0	27.5	26.5	27.0	24.5	24.0	24.0	20.5	20.0	20.0
26	24.5	23.5	24.0	27.5	26.5	27.0	24.5	24.0	24.5	20.5	20.0	20.0
27	25.5	24.0	24.5	27.0	26.5	27.0	25.5	24.0	24.5	20.5	19.5	20.0
28	25.5	24.5	25.0	26.5	26.5	26.5	25.5	24.5	25.0	20.5	20.0	20.0
29	26.0	25.0	25.5	27.0	26.0	26.5	25.5	25.0	25.5	21.0	20.0	20.5
30	26.0	25.5	26.0	27.0	26.5	26.5	25.5	25.0	25.0	21.0	20.5	20.5
31	---	---	---	27.0	26.5	26.5	25.5	25.0	25.0	---	---	---
MONTH	26.0	17.0	22.0	27.5	23.5	26.0	27.5	23.5	25.8	26.0	19.5	23.1

## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	6.1	5.6	5.8	8.6	8.0	8.3	---	---	---	---	---	---
2	6.2	5.9	6.1	8.6	7.9	8.3	---	---	---	---	---	---
3	5.9	5.6	5.8	8.5	7.9	8.2	---	---	---	---	---	---
4	6.6	5.6	6.0	8.6	8.1	8.4	---	---	---	---	---	---
5	6.9	6.0	6.5	8.6	8.2	8.4	---	---	---	---	---	---
6	6.9	6.6	6.8	8.6	8.1	8.4	---	---	---	---	---	---
7	6.9	6.7	6.8	8.5	8.0	8.3	---	---	---	---	---	---
8	6.9	6.6	6.7	8.3	7.8	8.0	---	---	---	---	---	---
9	7.0	6.5	6.7	8.2	7.7	7.9	---	---	---	---	---	---
10	7.4	6.5	7.0	8.3	7.7	8.0	---	---	---	---	---	---
11	7.3	6.9	7.1	8.8	8.0	8.3	---	---	---	---	---	---
12	7.2	6.6	7.0	8.7	8.1	8.5	---	---	---	---	---	---
13	7.1	6.5	6.9	8.5	8.0	8.3	---	---	---	---	---	---
14	7.0	6.3	6.6	8.2	7.7	8.0	---	---	---	---	---	---
15	6.8	6.1	6.4	8.0	7.5	7.8	---	---	---	---	---	---
16	6.8	6.0	6.3	8.6	7.5	8.0	---	---	---	---	---	---
17	6.7	6.0	6.3	9.1	8.2	8.6	---	---	---	---	---	---
18	6.6	6.1	6.3	9.3	8.4	8.9	---	---	---	---	---	---
19	8.0	6.5	7.3	9.4	8.9	9.1	---	---	---	---	---	---
20	8.0	7.4	7.8	9.7	9.1	9.4	---	---	---	---	---	---
21	7.9	7.3	7.6	10.3	9.7	9.9	---	---	---	---	---	---
22	8.9	7.9	8.4	10.2	9.7	9.9	---	---	---	---	---	---
23	9.1	8.6	8.9	10.3	9.8	9.9	---	---	---	---	---	---
24	9.2	8.8	9.0	10.5	9.9	10.1	---	---	---	---	---	---
25	9.2	8.8	9.0	10.5	10.1	10.3	---	---	---	---	---	---
26	9.1	8.6	8.8	10.5	10.2	10.3	---	---	---	---	---	---
27	8.9	8.6	8.7	10.4	10.1	10.2	---	---	---	---	---	---
28	8.8	8.3	8.6	10.4	10.1	10.2	---	---	---	---	---	---
29	8.6	8.1	8.4	10.5	10.1	10.3	---	---	---	---	---	---
30	8.5	7.9	8.3	10.7	10.2	10.4	---	---	---	---	---	---
31	8.4	7.8	8.1	---	---	---	---	---	---	---	---	---
MONTH	9.2	5.6	7.3	10.7	7.5	9.0	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	10.0	9.8	9.9	8.4	8.1	8.2	7.8	6.5	7.2
2	---	---	---	10.0	9.8	9.9	8.3	8.0	8.1	7.6	6.4	7.2
3	---	---	---	9.9	9.6	9.7	8.4	8.0	8.2	7.5	7.1	7.3
4	---	---	---	10.0	9.7	9.9	8.6	8.1	8.3	7.5	7.1	7.4
5	---	---	---	10.8	10.1	10.7	8.8	8.3	8.5	7.5	6.4	7.0
6	---	---	---	10.9	10.7	10.8	8.9	8.5	8.6	7.1	6.3	6.7
7	---	---	---	11.2	10.8	11.0	8.9	8.6	8.7	7.7	6.9	7.2
8	---	---	---	11.4	10.9	11.0	10.1	8.7	9.4	8.2	7.0	7.6
9	---	---	---	11.2	9.4	10.5	10.3	8.7	9.5	8.1	7.3	7.8
10	---	---	---	9.7	9.4	9.5	10.0	8.7	9.2	8.0	7.3	7.7
11	---	---	---	9.7	9.4	9.5	---	---	---	8.0	7.3	7.6
12	---	---	---	9.8	9.3	9.5	9.7	8.7	9.0	7.9	7.2	7.6
13	---	---	---	9.7	9.2	9.5	10.2	9.7	9.9	7.6	6.6	7.2
14	---	---	---	9.7	9.2	9.5	10.4	10.1	10.2	7.4	6.4	6.8
15	---	---	---	10.4	9.2	9.7	10.4	8.3	9.3	7.4	6.7	7.1
16	---	---	---	9.4	9.1	9.2	8.4	8.2	8.3	7.2	6.3	6.8
17	---	---	---	9.3	9.1	9.2	9.2	8.1	8.4	6.4	6.2	6.3
18	---	---	---	9.3	8.9	9.1	9.5	9.1	9.3	6.8	6.3	6.6
19	---	---	---	10.3	9.0	9.9	9.6	9.2	9.5	7.4	6.7	7.1
20	---	---	---	10.2	9.9	10.0	9.5	9.3	9.4	7.6	6.8	7.3
21	---	---	---	10.2	9.9	10.1	9.4	7.8	8.8	7.6	7.3	7.4
22	---	---	---	10.1	9.7	9.9	9.0	7.8	8.3	7.5	7.2	7.4
23	---	---	---	9.9	8.1	8.8	7.8	7.5	7.7	7.3	7.0	7.1
24	---	---	---	9.0	7.9	8.7	8.5	7.5	7.9	7.2	6.9	7.0
25	---	---	---	8.9	8.6	8.8	8.6	7.4	8.1	7.3	6.8	7.0
26	---	---	---	8.7	7.6	7.8	7.5	7.0	7.2	7.3	6.9	7.1
27	---	---	---	8.1	7.7	7.9	7.3	6.9	7.0	7.5	6.7	7.1
28	---	---	---	8.2	7.7	7.9	7.0	6.6	6.8	7.4	7.1	7.3
29	---	---	---	8.4	7.8	8.1	7.9	6.8	7.4	7.5	7.1	7.3
30	---	---	---	8.7	7.9	8.3	8.0	7.6	7.8	7.3	7.1	7.2
31	---	---	---	8.5	8.1	8.3	---	---	---	7.2	6.9	7.1
MONTH	---	---	---	11.4	7.6	9.4	10.4	6.6	8.5	8.2	6.2	7.2

## DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.3	6.8	7.0	5.8	5.3	5.5	5.9	5.1	5.4	7.2	5.5	6.2
2	7.2	6.6	6.9	6.2	5.4	5.6	5.9	5.3	5.5	7.2	5.4	6.2
3	6.9	6.4	6.6	6.4	5.5	6.0	---	---	---	7.0	5.5	6.1
4	6.9	6.4	6.6	6.4	5.6	6.0	---	---	---	6.9	5.6	6.1
5	7.3	6.6	6.9	5.9	5.3	5.6	6.0	5.6	5.8	6.4	5.6	6.0
6	7.4	6.7	7.0	5.6	5.1	5.3	5.7	5.2	5.5	5.8	5.3	5.6
7	7.1	6.3	6.7	5.9	5.1	5.4	5.3	4.4	4.9	5.4	5.2	5.3
8	7.2	6.3	6.8	6.1	5.3	5.6	4.4	3.9	4.2	5.7	5.1	5.3
9	7.1	6.3	6.8	5.6	4.9	5.3	4.0	3.7	3.9	5.6	5.4	5.5
10	6.9	6.3	6.7	5.0	4.6	4.8	4.4	3.6	4.0	5.5	5.1	5.3
11	7.1	6.2	6.6	4.8	4.4	4.6	4.3	3.9	4.1	5.1	4.8	4.9
12	7.6	6.9	7.3	5.0	4.5	4.6	4.3	3.8	4.0	4.9	4.6	4.7
13	8.5	7.1	7.8	5.1	4.7	4.9	4.6	3.8	4.1	4.8	4.2	4.5
14	8.1	7.2	7.6	5.2	4.6	5.0	4.9	4.1	4.4	4.7	4.0	4.4
15	8.0	7.0	7.4	4.8	4.5	4.7	5.2	4.1	4.5	4.6	4.3	4.5
16	7.9	6.7	7.2	4.5	4.1	4.3	5.3	4.2	4.7	4.7	4.2	4.5
17	8.1	6.6	7.2	4.8	4.0	4.4	5.7	4.4	4.9	5.0	4.3	4.7
18	7.9	6.5	7.1	5.0	4.3	4.5	6.1	4.7	5.1	5.5	4.7	5.1
19	7.0	6.3	6.6	5.1	4.2	4.6	6.0	4.9	5.3	5.4	5.0	5.2
20	6.5	5.9	6.1	5.6	4.4	4.8	6.0	5.2	5.6	5.6	5.0	5.4
21	5.9	5.4	5.7	5.6	4.7	5.0	6.0	5.6	5.7	5.7	5.0	5.4
22	6.2	5.1	5.7	5.5	4.7	4.9	6.0	5.7	5.9	5.7	5.1	5.4
23	6.1	5.4	5.7	5.3	4.6	4.9	6.0	5.5	5.8	5.6	5.1	5.3
24	6.1	5.3	5.5	5.1	4.7	4.9	5.8	5.2	5.5	5.6	5.2	5.4
25	6.0	5.3	5.6	4.9	4.5	4.7	5.4	5.0	5.2	5.8	5.4	5.6
26	6.0	5.3	5.6	5.0	4.5	4.7	5.2	4.7	5.0	5.8	5.6	5.7
27	5.7	5.3	5.5	5.2	4.6	4.8	5.3	4.7	4.9	5.8	5.5	5.7
28	5.8	5.3	5.5	5.4	4.7	5.0	5.6	4.8	5.1	5.8	5.5	5.7
29	5.8	5.4	5.5	5.6	4.9	5.2	6.1	5.0	5.4	5.8	5.2	5.6
30	5.8	5.3	5.5	5.6	5.0	5.2	6.5	5.2	5.8	5.6	5.1	5.5
31	---	---	---	5.5	5.0	5.2	6.8	5.5	6.0	---	---	---
MONTH	8.5	5.1	6.5	6.4	4.0	5.0	6.8	3.6	5.0	7.2	4.0	5.4

## CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA

LOCATION.--Lat 39°49'00", long 75°41'31", Chester County, Hydrologic Unit 02040205, on left bank 3 mile south of the intersection of Route 1 and Route 82 (at Kennett Square) on Route 82 (Creek Road).

DRAINAGE AREA.--28.33 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 200 ft. from topographic map.

REMARKS.--Records good except for periods of estimated record, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,730 ft<sup>3</sup>/s, July 5, 1989, gage height, 7.96 ft; minimum daily, 8.1 ft<sup>3</sup>/s, Oct. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1000 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	1530	*1130	*6.29	No other peaks above base discharge.			
Minimum daily discharge, 9.9 ft <sup>3</sup> /s, Sept. 9.							

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	42	36	183	50	37	32	36	49	32	15	14
2	150	39	34	47	47	36	46	31	44	31	13	12
3	57	43	34	39	47	37	125	29	69	29	11	11
4	42	39	30	39	56	33	63	35	66	26	11	11
5	38	37	e26	44	46	33	55	72	44	30	25	12
6	38	38	37	40	43	34	48	36	41	35	63	13
7	37	37	33	37	42	31	72	32	40	27	72	12
8	35	46	32	45	40	31	50	30	56	25	24	11
9	35	90	32	87	41	33	44	28	54	31	34	9.9
10	35	51	31	90	111	36	42	189	40	31	74	12
11	41	41	31	57	57	34	56	80	37	28	43	11
12	35	38	32	45	48	34	43	45	35	30	26	11
13	35	37	33	37	44	33	39	60	34	95	22	12
14	33	38	31	33	43	33	38	54	35	55	40	16
15	33	40	e28	38	42	31	107	41	316	42	22	17
16	34	52	e26	39	43	29	51	39	57	36	20	12
17	58	39	e25	38	39	45	47	44	46	30	19	18
18	54	36	e24	42	36	63	43	37	54	28	17	12
19	139	34	e23	37	38	35	40	33	83	26	22	14
20	254	35	e22	64	35	38	38	31	56	23	26	18
21	73	34	22	60	35	34	40	37	46	25	21	12
22	51	35	21	45	42	31	38	34	43	23	63	64
23	46	41	21	39	61	29	36	32	48	23	40	24
24	44	39	21	38	56	30	35	31	38	21	28	17
25	42	40	21	164	40	30	35	30	36	19	23	16
26	42	47	e20	219	34	28	34	65	35	17	20	16
27	41	42	e20	65	35	26	33	43	76	17	19	15
28	40	45	e20	53	38	26	31	34	43	17	18	15
29	40	39	e19	83	---	25	36	413	36	16	21	13
30	39	37	e20	172	---	40	42	151	34	16	26	13
31	42	---	35	56	---	39	---	57	---	17	16	---
TOTAL	1715	1251	840	2075	1289	1054	1439	1909	1691	901	894	463.9
MEAN	55.3	41.7	27.1	66.9	46.0	34.0	48.0	61.6	56.4	29.1	28.8	15.5
MAX	254	90	37	219	111	63	125	413	316	95	74	64
MIN	32	34	19	33	34	25	31	28	34	16	11	9.9
CFSM	1.95	1.47	.96	2.36	1.62	1.20	1.69	2.17	1.99	1.03	1.02	.55
IN.	2.25	1.64	1.10	2.72	1.69	1.38	1.89	2.51	2.22	1.18	1.17	.61

CAL YR 1989 TOTAL 18540 MEAN 50.8 MAX 922 MIN 13 CFSM 1.79 IN. 24.34  
WTR YR 1990 TOTAL 15521.9 MEAN 42.5 MAX 413 MIN 9.9 CFSM 1.50 IN. 20.38

e Estimated.

## CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA

LOCATION.--Lat 40°04'22", long 75°51'40", Chester County, Hydrologic Unit 02040205, at right upstream end of bridge on Legislative Route 15185, at Birdell, 0.4 mi downstream from Two Log Run, and 3.0 mi southeast of Honey Brook.

DRAINAGE AREA.--18.7 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1960 to current year.

REVISED RECORDS.--WDR PA-73-1: 1972(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 591.20 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of estimated record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 26.3 ft<sup>3</sup>/s, 19.10 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,140 ft<sup>3</sup>/s, June 22, 1972, July 1, 1984, gage height, 11.41 ft, from rating curve extended above 1,900 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 1.7 ft<sup>3</sup>/s Aug. 15-19, 1963; minimum gage height, 1.06 ft, Feb. 9, 1989, result of freezeup.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1700	578	6.15	May 30	0015	*817	*6.82
Jan. 30	0300	687	6.49				

Minimum daily discharge, 7.3 ft<sup>3</sup>/s, Dec. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	20	15	e140	31	17	16	14	22	10	18	12
2	34	18	14	e34	30	17	31	13	19	10	12	13
3	21	20	12	23	30	17	83	12	17	10	11	39
4	15	17	e12	24	43	16	37	15	17	9.2	9.5	15
5	14	16	e11	30	32	15	35	28	16	10	16	14
6	13	17	14	18	27	15	21	15	15	23	31	13
7	12	16	14	16	26	14	27	13	15	11	33	13
8	12	17	13	16	24	14	22	12	15	10	12	11
9	12	31	12	24	24	15	18	12	18	15	13	11
10	12	22	e12	107	56	17	18	64	14	14	93	12
11	13	17	e11	38	33	16	21	42	14	12	108	12
12	12	15	e12	22	25	16	17	16	13	13	20	11
13	12	15	14	18	22	15	15	19	13	35	22	11
14	11	16	13	15	21	15	15	21	13	15	45	11
15	11	17	e12	14	19	14	44	15	23	17	17	10
16	12	46	e11	16	22	14	22	14	15	14	15	9.1
17	54	25	e9.6	17	19	24	19	14	13	12	14	10
18	42	17	e9.0	20	17	41	18	12	29	11	13	10
19	126	14	e8.9	16	18	18	16	11	38	10	12	11
20	219	15	e8.8	28	16	20	15	10	16	10	15	12
21	50	15	e8.5	35	16	18	16	12	15	10	15	10
22	26	14	e8.3	23	18	16	15	11	14	11	71	42
23	22	15	e8.2	17	21	15	14	11	12	10	40	16
24	21	16	e8.1	18	37	14	14	10	12	9.5	29	12
25	20	16	e8.0	80	17	15	14	9.8	12	10	22	11
26	19	22	e8.0	188	15	14	13	22	12	8.2	19	11
27	20	20	e7.8	36	17	13	12	15	11	7.9	16	11
28	17	27	e7.6	26	17	13	11	11	11	8.2	15	9.7
29	17	18	e7.4	56	---	13	14	207	11	8.2	14	8.7
30	17	15	e7.3	238	---	17	19	236	10	9.2	16	8.7
31	19	---	e23	39	---	17	---	30	---	28	13	---
TOTAL	917	569	340.5	1392	693	515	652	946.8	475	391.4	799.5	400.2
MEAN	29.6	19.0	11.0	44.9	24.7	16.6	21.7	30.5	15.8	12.6	25.8	13.3
MAX	219	46	23	238	56	41	83	236	38	35	108	42
MIN	11	14	7.3	14	15	13	11	9.8	10	7.9	9.5	8.7
CFSM	1.58	1.01	.59	2.40	1.32	.89	1.16	1.63	.85	.68	1.38	.71
IN.	1.82	1.13	.68	2.77	1.38	1.02	1.30	1.88	.94	.78	1.59	.80

CAL YR 1989 TOTAL 10881.5 MEAN 29.8 MAX 457 MIN 7.3 CFSM 1.59 IN. 21.65  
WTR YR 1990 TOTAL 8091.4 MEAN 22.2 MAX 238 MIN 7.3 CFSM 1.19 IN. 16.10

e Estimated.

## CHRISTINA RIVER BASIN

## 01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA

LOCATION.--Lat 39°59'08", long 75°49'40", Chester County, Hydrologic Unit 02040205, on right bank at city limits of Coatesville, 1,200 ft upstream from bridge on old Lincoln Highway, and 0.6 mi downstream from Rock Run.

DRAINAGE AREA.--45.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1943 to December 1951, January 1970 to current year.

GAGE.--Water-stage recorder and V-notch sharp crested weir. Altitude of gage is 305 ft, from topographic map.

Sept. 10, 1943, to Dec. 31, 1951, nonrecording gage at site 1,100 ft downstream at different datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Diversion above station from Rock Run Reservoir, capacity, 320 mil. gal, 2.6 mi upstream for municipal supply of City of Coatesville. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years (water years 1943-51, 1970-90), 69.6 ft<sup>3</sup>/s, 20.63 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft<sup>3</sup>/s, June 29, 1973, gage height, 10.08 ft, from rating curve extended above 2,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 9.92 ft; minimum observed, 4.6 ft<sup>3</sup>/s, Sept. 10, 1944, gage height, 0.70 ft, site and datum then in use; minimum daily, 7.7 ft<sup>3</sup>/s, Sept. 14, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 9, 1942 reached a stage of 12.3 ft, site and datum then in use, discharge, 8,600 ft<sup>3</sup>/s, by slope-area measurement.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1400	754	5.56	May 29	2015	*1170	*6.04
Jan. 30	0045	1140	6.00				

Minimum daily discharge, 17 ft<sup>3</sup>/s, July 28, 29, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	56	43	269	95	51	48	47	65	24	45	29
2	93	49	41	81	91	50	67	40	56	23	23	27
3	66	56	41	51	91	51	159	38	51	23	18	51
4	46	54	33	47	109	48	93	43	48	22	17	31
5	42	46	e30	67	99	45	87	82	45	27	22	28
6	41	45	40	52	85	45	61	50	43	123	59	27
7	41	45	41	44	83	43	68	42	42	32	67	26
8	38	46	38	42	80	43	66	38	43	27	30	25
9	38	75	36	63	78	45	55	37	56	28	30	23
10	38	65	e34	148	142	49	51	145	42	39	133	24
11	41	44	e33	108	94	47	66	131	38	28	182	23
12	39	41	e34	65	72	47	54	56	37	30	44	23
13	37	39	39	47	64	45	49	58	35	88	41	22
14	35	40	34	42	60	43	47	69	36	41	83	24
15	35	44	e30	43	58	42	102	49	70	38	37	27
16	36	79	e29	45	63	42	69	45	45	37	31	22
17	64	67	e27	47	59	54	56	45	37	30	28	24
18	87	48	e26	52	52	103	54	41	51	27	25	22
19	209	44	e25	47	53	56	49	38	102	25	24	22
20	368	45	e25	61	50	55	47	37	42	23	27	27
21	159	43	e24	88	49	53	49	40	38	22	30	23
22	74	42	e24	67	54	48	48	40	36	25	118	64
23	58	48	e23	51	63	44	45	37	35	23	88	44
24	54	46	e23	49	92	44	43	35	32	21	60	28
25	52	47	e23	166	61	46	42	34	30	20	46	25
26	53	59	e22	402	47	44	41	66	30	19	43	23
27	52	61	e22	124	48	41	39	59	28	18	36	23
28	55	73	e22	91	51	40	38	41	27	17	33	22
29	50	52	e21	157	---	40	43	424	26	17	39	21
30	49	45	e21	497	---	50	62	478	25	18	41	20
31	53	---	45	117	---	53	---	84	---	35	31	---
TOTAL	2142	1544	949	3230	2043	1507	1798	2469	1291	970	1531	820
MEAN	69.1	51.5	30.6	104	73.0	48.6	59.9	79.6	43.0	31.3	49.4	27.3
MAX	368	79	45	497	142	103	159	478	102	123	182	64
MIN	35	39	21	42	47	40	38	34	25	17	17	20
MEAN#	73.5	56.0	35.9	110	78.4	54.0	65.2	84.8	48.2	36.8	55.4	33.0
CFSM#	1.60	1.22	.78	2.40	1.71	1.18	1.42	1.85	1.05	.80	1.21	.72
IN.#	1.85	1.36	.90	2.77	1.78	1.36	1.59	2.14	1.17	.93	1.40	.80
†	4.4	4.5	5.3	5.9	5.4	5.4	5.3	5.2	5.2	5.5	6.0	5.7

CAL YR 1989 TOTAL 25262 MEAN 69.2 MAX 750 MIN 21 MEAN# 73.7 CFSM# 1.61 IN.# 21.85  
WTR YR 1990 TOTAL 20294 MEAN 55.6 MAX 497 MIN 17 MEAN# 60.9 CFSM# 1.33 IN.# 18.06

# Adjusted for diversion.

† Diversion from Rock Run Reservoir, furnished by City of Coatesville

e Estimated.



## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA

LOCATION.--Lat 39°57'42", long 75°48'06", Chester County, Hydrologic Unit 02040205, on left bank at bridge on Legislative Route 15068 at Modena, and 300 ft upstream from Dennis Run.

DRAINAGE AREA.--55.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1970 to current year.

REVISED RECORDS.--WDR PA-74-1: 1971-72(P), 1973. WDR PA-75-1: 1974(m).

GAGE.--Water-stage recorder. Altitude of gage is 265 ft, from topographic map.

REMARKS.--Records fair except for periods of estimated discharges, which are poor. Flow regulated by Rock Run Reservoir, capacity, 320 Mgal, 5.6 mi upstream and by Lukens Steel Company.

AVERAGE DISCHARGE.--20 years, 90.7 ft<sup>3</sup>/s, 22.39 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,600 ft<sup>3</sup>/s, June 26, 1973, gage height, 12.47 ft, from rating curve extended above 920 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 11.48 ft, minimum, 1.8 ft<sup>3</sup>/s, Aug. 29, 1974; minimum gage height, 2.27 ft, Oct. 14, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s, revised and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1400	1030	5.31	May 29	2130	*1490	*6.01
Jan. 30	0130	1420	5.91				

Minimum daily discharge, 22 ft<sup>3</sup>/s, Dec. 29, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	65	49	300	128	67	60	72	92	37	69	40
2	144	59	47	111	116	63	96	59	74	36	33	38
3	88	66	47	63	113	65	231	53	67	38	29	70
4	58	63	40	56	135	61	140	66	70	37	28	42
5	51	56	e33	80	127	57	132	131	69	57	40	36
6	50	56	e44	62	106	58	90	76	64	215	110	38
7	49	54	e44	50	101	52	98	56	63	48	111	37
8	45	60	e42	54	93	52	97	53	70	39	43	34
9	43	95	e40	82	91	56	79	48	104	40	57	34
10	47	88	e38	187	186	63	76	218	65	63	203	33
11	48	60	e37	149	133	59	102	198	56	44	268	33
12	46	53	e39	86	103	59	81	82	53	58	69	33
13	43	50	e41	56	87	58	69	85	51	148	79	32
14	41	49	e38	50	79	54	66	100	51	70	131	36
15	40	53	e33	52	73	52	159	71	130	60	56	38
16	38	107	e32	52	82	52	104	64	73	60	45	35
17	70	83	e30	55	74	76	85	63	58	46	41	34
18	129	54	e29	62	62	152	78	55	84	40	38	30
19	290	45	e28	58	62	72	70	51	168	38	36	31
20	446	52	e27	80	58	68	66	47	66	35	42	35
21	179	51	e26	119	61	67	73	53	61	36	44	31
22	102	47	e26	89	77	58	70	51	54	38	188	108
23	82	53	e25	63	89	52	67	45	52	37	137	61
24	75	51	e25	59	135	53	62	42	48	32	87	35
25	73	53	e25	211	86	53	59	40	43	32	63	31
26	70	64	e23	515	59	52	59	104	45	32	54	30
27	64	67	e23	157	62	48	58	84	43	28	47	29
28	64	79	e23	111	65	47	52	50	39	28	44	28
29	59	61	e22	187	---	47	70	563	39	27	65	29
30	59	52	e22	637	---	62	98	597	38	29	61	27
31	62	---	56	154	---	67	---	124	---	49	43	---
TOTAL	2701	1846	1054	4047	2643	1902	2647	3401	1990	1577	2361	1148
MEAN	87.1	61.5	34.0	131	94.4	61.4	88.2	110	66.3	50.9	76.2	38.3
MAX	446	107	56	637	186	152	231	597	168	215	268	108
MIN	38	45	22	50	58	47	52	40	38	27	28	27
MEAN#	91.5	66.0	39.3	137	99.8	66.8	93.5	115	71.5	56.4	82.2	44.0
CFSM#	1.66	1.20	.71	2.49	1.81	1.21	1.70	2.09	1.30	1.03	1.49	.80
IN.#	1.92	1.34	.82	2.87	1.89	1.40	1.90	2.41	1.45	1.18	1.72	.89
†	4.4	4.5	5.3	5.9	5.4	5.4	5.3	5.2	5.2	5.5	6.0	5.7

CAL YR 1989 TOTAL 33631 MEAN 92.1 MAX 919 MIN 22 MEAN# 96.6 CFSM# 1.76 IN.# 23.85  
WTR YR 1990 TOTAL 27317 MEAN 74.8 MAX 637 MIN 22 MEAN# 80.2 CFSM# 1.46 IN.# 19.80

# Adjusted for diversion.

† Diversion, equivalent in cubic feet per second, furnished by City of Coatesville.

e Estimated.

## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to October 1978, August 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1971 to October 1978, August 1981 to current year.

pH: May 1971 to October 1978, August 1981 to current year.

WATER TEMPERATURE: May 1971 to October 1978, August 1981 to current year.

DISSOLVED OXYGEN: May 1971 to October 1978, August 1981 to current year.

INSTRUMENTATION.--Water-quality monitor May 1971 to October 1978, August 1981 to current year.

REMARKS.--Not operated Dec. 4 to Feb. 23. Other interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 858 microsiemens, Jan. 10, 1977; minimum, 72 microsiemens, Nov. 16, 1985.

pH: Maximum, 10.0, Dec. 21, 1971, minimum, 6.3, April 3, 1975.

WATER TEMPERATURE: Maximum, 33.5°C, July 19, 1977; minimum, freezing point on many days during winter months.

DISSOLVED OXYGEN: Maximum, 19.5 mg/L, Sept. 2, 1990; minimum, 0.6 mg/L, Nov. 1, 3, 1974.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	TEMPER- ATURE WATER (DEG C) (00010)	PH (STAND- ARD UNITS) (00400)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)
OCT 1989							
03...	0938	97	248	9.4	17.0	7.2	11000
10...	0905	50	294	10.7	10.0	7.4	600
17...	0900	43	305	8.4	18.0	7.2	865
24...	1000	56	262	10.6	10.0	7.2	1200
30...	0939	59	279	10.1	13.0	7.3	410
NOV							
06...	0930	61	274	10.3	10.5	--	--
13...	0924	40	270	11.2	8.5	7.4	2300
20...	0900	54	268	9.6	6.5	7.3	1370
27...	1100	66	253	10.4	5.5	7.5	330
DEC							
04...	1130	36	290	14.0	1.5	7.6	727
MAR 1990							
12...	1100	59	E254	13.8	11.0	8.3	2900
20...	1020	72	243	11.1	10.0	7.0	1400
26...	0845	59	244	13.4	7.0	7.4	1400
APR							
02...	1020	90	233	12.7	9.0	7.4	1800
09...	0908	82	242	13.8	7.0	7.3	1000
16...	0930	110	217	12.2	10.5	7.3	1200
23...	0912	52	243	12.2	13.0	7.5	950
MAY							
02...	0930	64	270	11.7	16.0	7.7	720
07...	0850	64	258	11.5	13.5	7.2	1100
15...	0745	56	260	10.3	15.0	7.1	950
21...	0845	61	286	9.6	15.5	7.1	4000
29...	0840	79	266	9.4	16.0	7.1	1600
JUN							
05...	0807	69	273	10.5	15.0	7.3	--
12...	1030	59	277	10.6	17.0	7.5	250
26...	0930	50	284	10.2	18.5	7.4	850
JUL							
02...	0915	61	312	10.9	21.0	7.4	690
10...	0710	72	251	8.8	23.0	6.9	2300
16...	0840	66	270	9.9	21.0	7.1	2900
23...	0930	43	305	10.3	24.0	7.5	14000
AUG							
07...	0810	106	194	8.8	21.0	7.0	--
13...	0915	52	278	9.7	21.5	7.4	1300
20...	0817	38	331	8.4	20.5	7.2	1000
28...	0742	45	332	10.0	22.0	7.1	1100
SEP							
04...	0910	45	307	10.0	19.5	7.3	52000
10...	0930	36	340	10.7	19.5	7.6	1400
20...	0900	36	324	10.9	15.5	7.2	860
25...	0900	35	340	11.1	13.0	7.2	7100

## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	316	307	311	284	273	276	315	274	287	---	---	---
2	310	202	248	309	272	285	279	268	275	---	---	---
3	277	242	258	299	272	283	279	267	274	---	---	---
4	291	278	284	274	267	270	---	---	---	---	---	---
5	319	291	303	280	271	275	---	---	---	---	---	---
6	312	295	303	279	273	276	---	---	---	---	---	---
7	312	299	305	278	269	273	---	---	---	---	---	---
8	317	303	309	281	266	276	---	---	---	---	---	---
9	310	300	304	275	243	261	---	---	---	---	---	---
10	302	293	298	263	235	248	---	---	---	---	---	---
11	301	289	294	269	263	266	---	---	---	---	---	---
12	361	291	309	275	268	271	---	---	---	---	---	---
13	333	298	309	279	271	274	---	---	---	---	---	---
14	319	296	305	279	274	277	---	---	---	---	---	---
15	312	298	303	279	268	273	---	---	---	---	---	---
16	316	289	301	277	217	255	---	---	---	---	---	---
17	306	224	287	255	220	240	---	---	---	---	---	---
18	269	221	250	262	254	259	---	---	---	---	---	---
19	229	171	205	272	263	268	---	---	---	---	---	---
20	213	168	193	273	266	269	---	---	---	---	---	---
21	223	161	192	273	263	269	---	---	---	---	---	---
22	252	224	236	285	270	278	---	---	---	---	---	---
23	266	251	258	509	272	338	---	---	---	---	---	---
24	276	259	267	373	290	307	---	---	---	---	---	---
25	285	272	276	286	273	281	---	---	---	---	---	---
26	313	279	290	322	265	279	---	---	---	---	---	---
27	303	286	293	282	251	260	---	---	---	---	---	---
28	289	281	285	277	243	253	---	---	---	---	---	---
29	286	280	282	269	253	259	---	---	---	---	---	---
30	282	277	280	335	264	284	---	---	---	---	---	---
31	284	274	278	---	---	---	---	---	---	---	---	---
MONTH	361	161	278	509	217	273	315	267	279	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	304	258	274	249	241	246	268	251	259
2	---	---	---	282	260	268	251	211	230	275	263	269
3	---	---	---	275	259	265	211	170	193	323	270	286
4	---	---	---	273	260	265	238	212	226	306	248	278
5	---	---	---	273	253	263	241	204	222	252	202	220
6	---	---	---	274	255	261	252	241	245	261	241	248
7	---	---	---	291	259	271	252	233	241	268	256	260
8	---	---	---	276	260	268	246	225	235	295	265	271
9	---	---	---	494	260	274	250	240	244	315	283	294
10	---	---	---	369	256	276	303	239	252	291	154	225
11	---	---	---	268	256	261	337	233	263	228	160	195
12	---	---	---	265	253	259	274	245	257	260	232	245
13	---	---	---	282	256	263	272	246	257	262	237	253
14	---	---	---	302	264	278	269	249	256	258	222	237
15	---	---	---	280	264	271	258	171	207	306	259	268
16	---	---	---	289	269	275	228	216	220	335	273	295
17	---	---	---	291	247	270	244	229	236	285	271	277
18	---	---	---	251	205	223	269	238	247	290	279	283
19	---	---	---	260	248	254	259	246	251	292	280	286
20	---	---	---	290	242	254	257	245	251	294	283	289
21	---	---	---	311	247	272	259	248	251	294	275	282
22	---	---	---	273	253	260	255	242	246	294	266	277
23	---	---	---	276	255	264	253	243	248	323	286	298
24	250	205	228	269	259	264	256	250	253	296	284	290
25	257	241	247	260	250	254	264	254	257	299	283	292
26	282	252	265	268	243	257	262	254	259	299	201	248
27	348	257	280	297	250	260	271	260	266	260	202	235
28	286	271	277	293	255	266	273	267	270	275	260	268
29	---	---	---	269	254	263	275	232	266	278	117	204
30	---	---	---	266	237	251	249	211	234	---	---	---
31	---	---	---	244	233	238	---	---	---	---	---	---
MONTH	348	205	259	494	205	263	337	170	244	335	117	263

## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANYWINE CREEK AT MODENA, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	321	300	311	291	168	240	349	315	332
2	---	---	---	321	299	310	291	272	282	350	313	329
3	---	---	---	313	292	304	307	282	296	346	245	294
4	---	---	---	314	292	307	321	287	309	355	302	313
5	316	271	280	320	133	300	324	188	291	361	325	342
6	334	276	299	265	125	197	237	141	213	352	317	336
7	289	273	279	315	269	296	261	191	214	370	336	354
8	292	224	272	343	307	314	340	269	296	403	322	357
9	270	143	239	341	282	317	331	237	295	361	331	343
10	279	267	273	300	250	264	261	125	213	367	326	347
11	294	281	285	310	291	300	224	165	185	380	322	346
12	293	278	284	312	181	300	271	226	248	375	333	360
13	295	284	288	253	166	208	292	117	265	405	333	359
14	333	282	298	299	261	277	258	184	221	370	303	347
15	321	190	232	286	270	279	304	260	275	358	309	330
16	272	234	257	285	260	273	301	286	296	---	---	---
17	278	269	273	301	287	291	321	284	299	---	---	---
18	303	167	272	320	296	302	321	303	312	---	---	---
19	249	166	210	321	305	314	338	305	320	---	---	---
20	275	250	259	325	300	312	332	294	315	---	---	---
21	305	274	286	330	304	316	318	293	301	341	303	316
22	295	274	283	320	295	305	320	172	231	365	191	257
23	296	282	288	312	297	307	272	203	238	301	207	262
24	296	281	288	319	285	306	283	260	272	326	303	315
25	299	287	293	326	301	315	309	285	295	368	315	335
26	301	287	292	323	287	310	310	296	301	419	322	366
27	308	290	297	323	288	312	343	305	322	382	332	358
28	316	297	304	328	296	317	357	324	336	372	324	346
29	319	279	302	325	284	312	367	238	333	370	328	348
30	317	299	308	331	293	317	323	261	291	384	336	349
31	---	---	---	323	210	297	349	326	334	---	---	---
MONTH	334	143	278	343	125	296	367	117	279	419	191	334

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.1	7.4	7.6	8.3	7.4	7.7	8.3	7.2	7.6	---	---	---
2	7.5	7.3	7.4	8.3	7.4	7.7	8.3	7.2	7.6	---	---	---
3	8.1	7.3	7.6	7.9	7.4	7.5	8.3	7.3	7.7	---	---	---
4	8.2	7.4	7.7	8.4	7.3	7.7	---	---	---	---	---	---
5	8.2	7.4	7.7	8.4	7.3	7.8	---	---	---	---	---	---
6	8.3	7.4	7.7	8.1	7.4	7.6	---	---	---	---	---	---
7	8.5	7.4	7.8	8.4	7.2	7.7	---	---	---	---	---	---
8	8.5	7.3	7.8	8.0	7.3	7.5	---	---	---	---	---	---
9	8.5	7.4	7.9	7.6	7.2	7.4	---	---	---	---	---	---
10	8.6	7.4	7.9	7.7	7.2	7.4	---	---	---	---	---	---
11	8.6	7.4	7.9	8.1	7.2	7.5	---	---	---	---	---	---
12	8.6	7.3	7.8	8.2	7.2	7.6	---	---	---	---	---	---
13	8.7	7.3	7.9	8.2	7.2	7.6	---	---	---	---	---	---
14	8.7	7.3	7.9	8.2	7.2	7.6	---	---	---	---	---	---
15	8.7	7.3	7.9	8.3	7.3	7.7	---	---	---	---	---	---
16	8.8	7.3	7.9	7.6	7.3	7.4	---	---	---	---	---	---
17	7.5	7.2	7.4	7.6	7.2	7.3	---	---	---	---	---	---
18	7.3	7.2	7.3	7.7	7.2	7.4	---	---	---	---	---	---
19	7.2	7.1	7.2	8.0	7.2	7.5	---	---	---	---	---	---
20	7.3	7.0	7.1	8.3	7.3	7.6	---	---	---	---	---	---
21	7.2	7.0	7.1	8.2	7.3	7.6	---	---	---	---	---	---
22	7.4	7.2	7.3	8.0	7.2	7.5	---	---	---	---	---	---
23	7.4	7.2	7.3	8.1	7.2	7.5	---	---	---	---	---	---
24	7.5	7.2	7.3	7.9	7.2	7.4	---	---	---	---	---	---
25	7.5	7.3	7.4	7.9	7.2	7.4	---	---	---	---	---	---
26	7.6	7.3	7.4	7.9	7.2	7.4	---	---	---	---	---	---
27	7.7	7.3	7.5	8.2	7.2	7.6	---	---	---	---	---	---
28	7.8	7.3	7.5	8.1	7.2	7.5	---	---	---	---	---	---
29	7.9	7.4	7.6	8.4	7.2	7.6	---	---	---	---	---	---
30	8.0	7.4	7.6	8.3	7.2	7.6	---	---	---	---	---	---
31	7.9	7.4	7.6	---	---	---	---	---	---	---	---	---
MONTH	8.8	7.0	7.6	8.4	7.2	7.5	8.3	7.2	7.6	---	---	---

## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	8.5	7.2	7.7	8.8	7.2	7.8	8.8	7.0	7.8
2	---	---	---	8.6	7.3	7.8	8.6	7.1	7.7	8.9	7.0	7.9
3	---	---	---	8.9	7.3	7.9	7.2	7.0	7.0	8.6	7.0	7.6
4	---	---	---	8.9	7.3	8.0	7.9	7.0	7.3	8.4	7.0	7.4
5	---	---	---	8.7	7.2	7.9	8.3	6.9	7.5	8.1	7.1	7.4
6	---	---	---	8.7	7.1	7.7	8.5	7.1	7.7	8.7	7.1	7.8
7	---	---	---	8.8	7.1	7.8	8.6	7.0	7.7	8.8	7.1	7.9
8	---	---	---	9.0	7.1	8.0	8.8	7.0	7.8	8.9	7.0	7.9
9	---	---	---	9.1	7.3	8.0	8.9	7.0	7.9	8.8	7.0	7.8
10	---	---	---	9.3	7.4	8.1	9.0	7.0	7.8	7.3	6.9	7.1
11	---	---	---	9.4	7.5	8.3	8.9	7.1	7.8	7.3	7.0	7.1
12	---	---	---	9.1	7.2	8.2	8.9	7.0	7.9	7.7	7.0	7.3
13	---	---	---	9.1	7.0	7.9	9.0	7.1	8.1	7.4	7.1	7.2
14	---	---	---	9.1	7.0	7.9	9.1	7.1	8.1	7.8	7.2	7.4
15	---	---	---	9.0	7.0	7.9	8.3	7.1	7.5	8.0	7.1	7.5
16	---	---	---	8.9	7.0	7.7	9.0	7.1	7.9	7.7	7.2	7.4
17	---	---	---	8.0	7.0	7.3	8.5	7.0	7.6	8.0	7.1	7.5
18	---	---	---	8.1	7.1	7.4	9.0	7.0	8.0	8.2	7.2	7.6
19	---	---	---	8.3	7.0	7.5	9.0	7.0	8.0	8.2	7.2	7.6
20	---	---	---	8.1	7.0	7.3	9.1	7.0	8.1	8.3	7.2	7.6
21	---	---	---	8.5	7.0	7.6	8.8	7.0	7.8	7.6	7.1	7.3
22	---	---	---	8.6	7.0	7.7	9.1	7.0	8.0	8.2	7.2	7.6
23	8.7	7.2	8.0	8.8	7.0	7.8	9.1	7.0	8.0	8.1	7.1	7.5
24	8.3	7.1	7.5	8.5	7.0	7.6	9.1	6.9	8.0	8.3	7.1	7.6
25	8.4	7.1	7.6	8.8	7.0	7.8	9.0	6.9	7.9	8.4	7.1	7.6
26	8.4	7.0	7.5	8.8	7.0	7.8	9.1	6.9	7.9	7.2	7.1	7.2
27	8.1	7.1	7.5	8.8	7.0	7.8	9.1	6.9	7.9	7.9	7.1	7.4
28	8.5	7.2	7.7	9.0	7.0	7.9	9.1	6.9	7.9	8.2	7.1	7.5
29	---	---	---	9.0	7.1	8.0	8.5	6.9	7.4	7.6	6.9	7.1
30	---	---	---	8.6	7.1	7.6	8.2	7.0	7.4	---	---	---
31	---	---	---	8.8	7.1	7.8	---	---	---	---	---	---
MONTH	8.7	7.0	7.6	9.4	7.0	7.8	9.1	6.9	7.8	8.9	6.9	7.5
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	9.0	7.2	8.1	8.5	7.1	7.7	9.3	7.3	8.3
2	---	---	---	9.0	7.2	8.1	8.7	7.0	7.9	9.6	7.3	8.4
3	---	---	---	9.0	7.2	8.1	8.9	7.0	8.0	9.0	7.3	8.1
4	---	---	---	8.8	7.1	8.0	9.0	7.0	8.1	9.2	7.3	8.1
5	8.2	7.4	7.8	8.7	7.0	7.7	8.0	7.0	7.4	9.1	7.2	8.1
6	8.3	7.2	7.7	7.6	6.9	7.2	7.8	7.0	7.3	9.3	7.3	8.3
7	8.5	7.2	7.8	8.1	7.2	7.6	7.8	7.0	7.3	9.2	7.3	8.2
8	8.5	7.2	7.7	8.2	7.0	7.6	8.3	7.1	7.6	9.3	7.3	8.3
9	8.3	7.2	7.6	8.3	7.0	7.6	7.7	7.2	7.4	8.9	7.2	8.0
10	8.3	7.2	7.7	8.2	7.0	7.5	7.5	7.2	7.3	9.2	7.1	8.2
11	8.1	7.2	7.6	7.9	7.1	7.4	7.3	7.2	7.2	9.3	7.2	8.3
12	8.4	7.2	7.7	7.6	7.1	7.3	7.8	7.3	7.5	9.2	7.2	8.3
13	8.3	7.2	7.7	7.2	7.1	7.2	8.3	7.2	7.7	9.2	7.2	8.2
14	8.2	7.2	7.7	7.5	7.1	7.3	7.8	7.2	7.5	8.8	7.2	7.8
15	7.6	7.1	7.3	7.9	7.1	7.5	8.2	7.3	7.7	9.0	7.3	7.9
16	8.1	7.2	7.6	8.1	7.1	7.6	8.5	7.3	7.8	---	---	---
17	8.3	7.2	7.7	8.4	7.1	7.7	8.9	7.3	8.0	---	---	---
18	8.6	7.2	7.7	8.6	7.1	7.9	9.0	8.3	8.4	---	---	---
19	7.3	7.1	7.2	8.8	7.1	8.0	9.1	7.3	8.2	---	---	---
20	7.9	7.2	7.4	8.9	7.1	8.1	8.0	7.3	7.6	---	---	---
21	8.0	7.2	7.5	9.0	7.1	8.1	8.6	7.3	7.9	8.9	7.7	8.6
22	8.3	7.2	7.7	9.0	7.0	8.0	7.4	7.2	7.3	7.5	7.1	7.2
23	8.4	7.2	7.7	8.9	7.0	8.0	7.6	7.3	7.4	8.2	7.2	7.6
24	8.5	7.2	7.8	9.1	7.1	8.1	8.0	7.3	7.6	8.3	7.1	7.6
25	8.6	7.2	7.9	9.1	7.0	8.1	8.5	7.3	7.8	8.5	7.1	7.7
26	8.9	7.2	8.0	9.1	7.0	8.1	8.8	7.2	7.9	8.5	7.3	7.8
27	8.9	7.2	8.1	9.0	7.0	8.0	9.0	7.2	8.1	8.7	7.3	7.9
28	9.0	7.2	8.1	9.0	7.0	7.9	9.2	7.2	8.2	8.8	7.2	7.9
29	9.1	7.2	8.2	9.0	7.0	8.0	9.1	7.2	8.0	8.9	7.2	8.0
30	9.1	7.2	8.2	8.9	7.0	7.9	9.0	7.2	8.0	8.7	7.2	7.8
31	---	---	---	8.6	7.0	7.7	9.1	7.3	8.2	---	---	---
MONTH	9.1	7.1	7.7	9.1	6.9	7.8	9.2	7.0	7.7	9.6	7.1	8.0

## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.5	15.0	16.0	15.5	13.5	14.5	5.5	4.5	5.0	---	---	---
2	17.5	16.5	17.0	13.0	11.5	12.5	5.5	4.0	5.0	---	---	---
3	19.0	17.0	17.5	12.5	10.5	11.5	5.5	2.5	4.0	---	---	---
4	16.5	14.5	15.5	10.5	9.0	9.5	---	---	---	---	---	---
5	16.0	13.0	14.5	10.5	8.5	9.5	---	---	---	---	---	---
6	16.0	13.5	14.5	11.5	10.5	11.0	---	---	---	---	---	---
7	16.0	14.0	15.5	12.5	10.5	11.5	---	---	---	---	---	---
8	14.0	12.5	13.5	13.5	12.5	13.0	---	---	---	---	---	---
9	13.0	11.0	12.0	14.5	12.5	13.5	---	---	---	---	---	---
10	12.5	10.0	11.0	12.0	10.0	11.0	---	---	---	---	---	---
11	14.0	11.5	12.5	10.0	9.0	9.5	---	---	---	---	---	---
12	15.0	11.5	13.5	10.5	9.5	10.0	---	---	---	---	---	---
13	16.5	13.5	15.0	10.0	8.5	9.5	---	---	---	---	---	---
14	16.5	14.5	15.5	12.0	9.5	10.5	---	---	---	---	---	---
15	18.0	15.5	16.5	14.0	12.0	13.0	---	---	---	---	---	---
16	19.5	17.0	18.0	15.0	11.5	14.0	---	---	---	---	---	---
17	18.5	17.5	18.0	11.0	8.5	9.5	---	---	---	---	---	---
18	17.5	15.0	16.5	8.0	6.5	7.0	---	---	---	---	---	---
19	15.0	11.5	13.0	6.5	5.5	6.0	---	---	---	---	---	---
20	13.0	12.0	12.5	9.0	6.5	7.5	---	---	---	---	---	---
21	12.5	10.5	11.0	8.0	5.0	6.5	---	---	---	---	---	---
22	12.0	10.0	11.0	6.0	4.5	5.0	---	---	---	---	---	---
23	12.0	9.5	11.0	5.5	4.0	4.5	---	---	---	---	---	---
24	11.5	10.0	11.0	4.5	2.5	3.5	---	---	---	---	---	---
25	12.0	10.5	11.5	5.0	2.5	4.0	---	---	---	---	---	---
26	13.5	11.5	12.5	7.0	5.0	6.0	---	---	---	---	---	---
27	13.0	11.5	12.5	7.5	6.0	7.0	---	---	---	---	---	---
28	14.0	12.5	13.5	9.0	7.5	8.5	---	---	---	---	---	---
29	14.5	13.0	14.0	8.5	6.0	7.0	---	---	---	---	---	---
30	15.0	13.0	14.0	6.0	4.5	5.5	---	---	---	---	---	---
31	15.5	15.0	15.0	---	---	---	---	---	---	---	---	---
MONTH	19.5	9.5	14.0	15.5	2.5	9.0	5.5	2.5	4.7	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	7.0	3.0	5.0	9.0	8.5	9.0	19.5	15.0	17.0
2	---	---	---	7.0	4.0	5.5	10.0	8.5	9.5	18.5	16.0	17.5
3	---	---	---	9.5	6.5	8.0	10.0	8.5	9.0	16.5	14.5	15.5
4	---	---	---	8.0	5.0	6.5	8.5	7.5	8.0	14.5	13.5	14.0
5	---	---	---	7.5	5.0	6.5	11.5	6.5	9.0	16.5	12.0	14.0
6	---	---	---	7.0	5.0	6.5	10.5	9.0	9.5	17.5	13.5	15.5
7	---	---	---	7.0	3.0	5.0	9.5	7.5	8.5	18.0	13.5	16.0
8	---	---	---	8.0	3.0	5.0	10.0	6.0	8.0	20.0	15.0	17.5
9	---	---	---	8.0	5.0	6.5	12.0	6.5	9.5	19.5	17.0	18.0
10	---	---	---	9.5	7.5	8.5	13.5	10.0	11.5	18.0	15.5	17.0
11	---	---	---	11.0	8.5	9.5	13.5	10.5	12.5	16.5	14.0	15.5
12	---	---	---	14.5	10.5	12.5	11.0	8.0	9.5	15.0	13.0	14.0
13	---	---	---	16.5	12.5	14.5	11.5	7.0	9.5	15.5	13.5	14.5
14	---	---	---	17.5	14.0	15.5	12.5	8.5	10.5	19.5	14.0	16.5
15	---	---	---	17.0	14.0	15.5	13.0	10.5	12.0	19.5	15.0	17.5
16	---	---	---	17.5	14.5	16.0	15.0	10.5	13.0	18.5	17.0	17.5
17	---	---	---	17.0	15.0	16.5	14.0	11.0	12.5	21.5	17.5	19.0
18	---	---	---	15.0	12.5	14.0	13.5	8.5	11.0	18.5	16.5	17.5
19	---	---	---	12.0	10.5	11.5	14.0	8.5	11.5	19.5	14.5	17.0
20	---	---	---	11.5	8.0	10.0	15.0	10.5	12.5	19.5	16.5	17.5
21	---	---	---	10.5	6.5	8.5	14.0	13.0	13.5	17.5	14.5	15.5
22	---	---	---	13.0	8.0	10.5	16.5	11.5	14.0	17.0	13.5	15.0
23	12.5	11.0	12.0	14.0	10.5	12.0	18.5	13.0	15.5	17.0	14.0	15.5
24	11.5	8.5	9.5	11.0	7.5	9.0	18.5	14.5	16.5	18.5	14.5	16.5
25	8.0	3.0	5.5	9.5	7.0	8.0	17.5	14.0	16.0	19.5	15.0	17.0
26	8.5	1.5	3.5	10.5	7.0	8.5	21.5	15.5	18.5	17.5	15.0	16.0
27	4.0	2.0	3.0	10.0	6.5	8.5	22.5	18.0	20.5	19.0	14.5	16.5
28	6.5	3.5	5.0	10.5	6.0	8.5	23.5	18.5	21.0	20.0	15.5	17.5
29	---	---	---	10.0	8.0	9.0	20.5	16.0	18.5	18.0	15.0	16.0
30	---	---	---	9.0	8.0	8.5	16.5	14.5	15.5	---	---	---
31	---	---	---	9.0	7.5	8.0	---	---	---	---	---	---
MONTH	12.5	1.5	6.4	17.5	3.0	9.6	23.5	6.0	12.5	21.5	12.0	16.3

## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	25.5	22.5	24.0	25.5	21.0	23.0	24.0	20.0	22.0
2	---	---	---	24.5	20.5	22.5	25.5	20.0	22.5	25.0	20.5	22.5
3	---	---	---	25.5	20.5	22.5	25.5	20.5	23.0	23.5	21.0	22.0
4	---	---	---	26.5	21.0	23.5	26.5	21.5	24.0	23.0	19.5	21.0
5	19.5	15.5	18.0	27.0	23.0	24.5	23.5	22.0	22.5	21.5	19.0	20.5
6	20.5	15.5	18.0	25.5	22.0	24.0	23.5	21.0	22.0	23.5	20.0	21.5
7	21.5	18.0	19.5	25.0	21.0	23.0	24.0	21.5	22.5	23.5	21.0	22.5
8	20.5	17.5	19.0	24.5	21.0	23.0	24.5	20.5	22.5	22.5	20.5	21.5
9	21.5	17.5	19.5	27.0	22.5	24.5	22.5	20.5	21.5	20.0	18.5	19.0
10	23.0	19.0	20.5	25.5	23.0	24.0	21.5	19.5	20.0	22.0	19.0	20.5
11	20.0	17.5	19.0	23.5	21.0	22.0	24.0	20.0	22.0	23.0	19.5	21.0
12	22.0	18.0	18.5	21.0	18.5	20.5	25.5	22.0	23.5	23.0	20.5	21.5
13	20.5	17.0	19.0	19.0	18.0	18.5	26.0	21.5	23.5	22.5	21.0	21.5
14	20.5	18.0	19.0	20.0	18.0	19.0	24.5	21.5	23.0	22.0	20.5	21.0
15	19.0	17.0	18.0	23.5	19.5	21.5	25.0	21.0	22.5	22.5	20.5	21.0
16	22.0	17.5	19.5	24.0	21.0	22.5	24.0	21.5	22.5	---	---	---
17	23.5	19.0	21.0	25.0	21.0	23.0	25.0	20.5	22.5	---	---	---
18	24.0	19.5	21.5	26.5	21.5	24.0	26.0	23.5	25.0	---	---	---
19	23.0	20.0	21.0	27.5	23.0	25.0	25.0	22.5	23.5	---	---	---
20	23.0	19.0	20.5	27.5	23.0	25.0	22.0	19.0	20.0	---	---	---
21	23.5	19.5	21.0	26.5	23.0	25.0	19.0	18.5	18.5	18.5	15.5	17.5
22	24.0	19.5	21.5	26.5	23.5	25.0	19.0	18.5	18.5	16.5	15.5	16.0
23	24.0	21.0	22.0	28.0	23.5	25.5	20.0	18.5	19.0	17.5	14.5	15.5
24	22.5	20.0	21.5	26.0	23.0	24.5	21.0	19.0	20.0	17.0	14.0	15.0
25	21.5	18.5	20.0	27.0	22.5	24.5	23.5	20.0	21.5	17.0	13.5	15.0
26	23.0	18.0	20.5	26.5	22.5	24.5	24.5	20.5	22.5	17.0	14.0	15.5
27	24.5	20.0	22.0	26.0	23.0	24.0	25.5	22.0	23.5	18.5	14.5	16.5
28	25.5	20.5	23.0	25.5	22.5	24.0	26.0	22.0	24.0	19.0	15.5	17.0
29	26.5	21.5	23.5	26.0	22.5	24.0	25.0	22.5	23.5	19.5	16.0	17.5
30	27.0	22.5	24.5	26.0	23.0	24.0	24.5	21.0	22.5	20.0	17.0	18.5
31	---	---	---	25.0	22.5	23.5	23.5	20.0	22.0	---	---	---
MONTH	27.0	15.5	20.4	28.0	18.0	23.4	26.5	18.5	22.2	25.0	13.5	19.3

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

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



## CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	15.4	12.1	13.6	13.9	10.4	11.7	13.3	7.6	10.3
2	---	---	---	15.6	11.8	13.6	14.0	10.4	11.9	14.9	7.7	10.6
3	---	---	---	15.8	11.3	13.0	11.5	10.6	11.2	14.4	8.2	10.6
4	---	---	---	16.7	11.4	13.9	13.0	11.3	12.0	13.1	9.4	10.6
5	---	---	---	17.5	12.0	14.5	13.6	10.5	12.2	11.5	8.9	10.4
6	---	---	---	17.0	12.0	13.8	14.1	10.6	12.2	12.8	8.4	10.5
7	---	---	---	17.8	12.8	15.0	14.9	11.1	12.7	13.5	8.4	10.9
8	---	---	---	17.6	12.1	14.8	15.5	11.3	13.3	14.1	7.4	10.5
9	---	---	---	17.0	10.8	13.8	16.2	10.2	13.3	13.6	7.4	9.9
10	---	---	---	16.9	10.9	13.1	15.3	9.2	11.7	9.6	7.7	8.6
11	---	---	---	16.7	10.1	12.9	14.2	9.2	11.2	10.4	9.3	10.0
12	---	---	---	14.7	8.6	11.6	16.4	10.7	13.0	11.6	9.9	10.7
13	---	---	---	14.1	8.1	10.7	17.0	10.4	13.3	11.1	9.5	10.3
14	---	---	---	14.1	8.1	10.5	16.8	9.6	12.8	11.0	8.6	10.0
15	---	---	---	13.8	8.1	10.4	12.5	9.5	10.7	11.6	8.5	9.9
16	---	---	---	13.0	7.7	9.6	14.2	8.8	11.4	10.6	8.5	9.5
17	---	---	---	10.6	7.6	8.7	13.4	8.9	10.6	10.7	8.6	9.5
18	---	---	---	11.0	8.9	9.9	15.1	10.0	12.4	11.1	8.6	9.8
19	---	---	---	12.8	9.7	10.9	15.3	9.5	12.3	11.1	7.9	9.8
20	---	---	---	13.0	9.8	11.2	15.9	9.0	12.0	10.6	8.1	9.2
21	---	---	---	14.3	10.6	12.4	14.0	8.9	10.8	11.0	9.0	10.0
22	---	---	---	14.0	9.6	11.9	15.2	8.3	11.7	12.0	9.2	10.7
23	11.0	8.0	9.5	13.9	9.5	11.3	15.0	7.4	11.1	11.5	9.2	10.4
24	11.5	8.2	9.9	14.7	9.6	11.9	14.9	7.3	10.6	11.8	8.9	10.3
25	13.8	10.0	12.1	15.2	10.8	12.7	14.7	7.5	10.5	12.0	8.5	10.2
26	15.9	12.4	13.8	15.3	10.5	12.7	14.4	6.3	10.1	10.0	8.4	9.4
27	15.0	12.8	13.8	15.5	10.5	12.8	14.3	6.2	9.5	10.8	8.8	10.0
28	15.6	12.1	13.6	15.7	10.1	12.9	15.8	6.3	9.7	11.0	8.5	9.7
29	---	---	---	15.7	10.0	12.5	13.5	6.3	8.9	9.8	8.5	9.3
30	---	---	---	14.1	10.2	11.7	11.7	9.0	10.2	---	---	---
31	---	---	---	14.1	10.4	12.0	---	---	---	---	---	---
MONTH	15.9	8.0	12.1	17.8	7.6	12.3	17.0	6.2	11.5	14.9	7.4	10.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	15.2	7.4	10.0	11.6	7.8	9.5	18.7	9.7	12.6
2	---	---	---	17.8	8.0	11.0	13.0	7.7	9.9	19.5	9.1	12.9
3	---	---	---	18.1	8.1	11.3	14.9	7.5	10.2	13.9	8.5	10.7
4	---	---	---	16.4	7.6	10.8	18.7	7.0	10.9	17.0	8.4	11.0
5	12.5	10.8	11.8	14.0	6.1	9.0	11.1	6.9	8.4	16.6	8.1	11.2
6	13.0	9.9	11.5	8.7	5.2	6.4	10.0	8.2	9.0	16.8	7.8	10.9
7	12.7	9.5	10.8	11.1	8.6	9.8	9.5	7.9	8.8	16.3	7.4	10.5
8	13.3	9.0	11.0	12.2	8.6	10.0	11.8	7.9	9.4	16.3	7.3	11.0
9	10.9	8.6	10.0	11.5	7.3	9.3	10.1	7.9	8.9	14.3	7.9	10.4
10	10.7	8.3	9.5	11.6	8.0	9.3	10.3	9.3	9.7	16.1	8.0	10.8
11	10.8	8.3	9.7	11.0	8.4	9.6	9.9	8.9	9.4	17.0	7.7	11.0
12	10.7	8.4	9.7	11.0	9.4	10.2	10.0	8.8	9.3	16.9	7.3	10.4
13	10.6	8.3	9.4	11.2	10.6	11.0	11.4	8.0	9.5	15.3	7.1	10.1
14	10.8	8.3	9.3	11.3	10.0	10.8	9.7	8.6	9.1	13.0	7.2	8.9
15	8.4	7.2	7.8	11.0	9.1	10.1	11.1	8.2	9.3	13.4	7.4	9.8
16	7.9	6.0	7.2	11.4	8.9	10.0	11.1	8.2	9.4	---	---	---
17	7.4	5.3	6.5	13.0	8.8	10.4	12.6	8.2	9.8	---	---	---
18	8.0	4.2	5.6	16.0	8.4	10.7	13.0	7.8	10.7	---	---	---
19	8.9	7.8	8.3	16.5	7.8	10.6	15.0	7.4	9.8	---	---	---
20	9.5	7.8	8.7	14.3	7.9	10.2	11.1	7.6	9.1	---	---	---
21	9.8	7.8	8.6	16.0	7.4	10.5	13.4	9.1	10.4	15.3	9.3	12.7
22	10.0	7.5	8.7	18.4	7.0	10.5	10.1	9.1	9.7	10.5	8.8	9.9
23	9.8	7.3	8.3	14.4	7.0	9.8	9.9	9.3	9.7	12.8	10.2	11.1
24	10.0	7.4	8.7	16.1	7.3	10.9	10.9	9.0	9.7	14.1	10.2	11.5
25	10.9	7.9	9.3	17.9	7.4	11.5	12.1	8.1	10.0	13.9	9.8	11.4
26	12.1	8.1	9.7	17.2	6.8	10.7	12.8	8.3	9.9	13.5	9.8	11.1
27	12.0	7.8	9.7	19.2	6.4	10.8	13.0	8.0	10.0	14.9	9.5	11.3
28	13.5	7.6	9.8	17.6	6.9	10.6	18.0	7.8	12.0	14.9	9.4	11.3
29	13.8	7.4	9.9	18.4	6.9	10.7	19.2	8.9	11.9	15.7	9.3	11.3
30	14.9	7.3	9.9	15.3	6.7	9.9	15.4	9.6	11.8	13.5	8.7	10.4
31	---	---	---	13.5	6.9	9.1	18.9	9.5	12.6	---	---	---
MONTH	14.9	4.2	9.2	19.2	5.2	10.2	19.2	6.9	9.9	19.5	7.1	11.0

## CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, PA

LOCATION.--Lat 40°05'52", long 75°44'31", Chester County, Hydrologic Unit 02040205, on left bank, 200 ft north of Pennsylvania Turnpike, 1.2 mi downstream from Lyons Run, 1.8 mi upstream from Black Horse Creek, and 3 mi northeast of Glenmoore.

DRAINAGE AREA.--8.57 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1966 to current year.

REVISED RECORDS.--WDR PA-74-1: 1967(M), 1971-72(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 450 ft, from topographic map.

REMARKS.--Records good except for periods of estimated discharge, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 12.7 ft<sup>3</sup>/s, 20.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 946 ft<sup>3</sup>/s, June 22, 1972, gage height, 4.68 ft; minimum, 0.3 ft<sup>3</sup>/s, Aug. 31, 1966, gage height, 0.98 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 30	1115	147	2.37	May 30	0615	*149	*2.38

Minimum daily discharge, 2.1 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	11	7.5	25	19	10	11	8.7	12	3.3	2.8	2.9
2	22	9.6	6.9	30	18	10	17	7.3	9.1	3.2	2.5	2.7
3	23	11	6.9	13	17	11	45	6.3	8.4	3.0	2.2	2.7
4	11	11	4.7	9.7	21	10	32	8.9	8.1	2.9	2.1	2.5
5	7.7	9.6	e3.9	13	21	9.1	20	22	7.1	2.9	3.5	2.4
6	6.6	9.2	e4.3	12	15	9.3	13	13	6.6	3.2	8.3	2.5
7	6.0	8.9	8.0	9.3	14	8.2	16	7.9	6.6	2.9	9.3	2.4
8	5.7	9.0	6.3	8.5	13	7.8	18	6.4	6.4	2.8	5.5	2.3
9	5.5	15	5.7	9.5	13	8.8	12	5.7	7.7	3.0	4.7	2.2
10	5.4	18	5.7	17	24	12	10	26	7.4	3.2	15	2.2
11	6.6	12	5.7	28	25	11	13	48	6.1	3.1	26	2.3
12	6.3	9.2	6.1	16	16	10	11	15	5.5	3.9	12	2.2
13	5.9	8.2	6.5	9.9	13	9.2	9.3	11	5.1	12	6.0	2.3
14	5.5	8.0	6.1	7.5	13	8.4	8.7	13	5.2	8.3	11	3.4
15	5.4	8.7	5.4	7.2	12	8.1	25	9.0	8.5	5.8	10	3.4
16	5.4	15	e4.8	8.3	13	7.9	19	7.6	8.0	4.4	4.9	3.0
17	12	19	e4.3	11	13	11	12	7.6	6.2	3.6	3.5	4.3
18	31	11	e3.8	16	11	27	11	6.5	8.0	3.1	2.9	3.3
19	40	8.7	e3.5	14	11	14	9.0	5.7	24	2.9	3.9	2.8
20	76	8.4	e3.2	13	10	12	8.5	5.2	13	2.7	3.7	2.9
21	80	8.8	e3.0	20	9.3	11	9.6	6.2	7.2	2.7	3.4	2.7
22	24	6.8	e2.9	16	11	8.7	9.7	6.2	5.6	2.8	22	9.1
23	13	7.7	e2.8	11	15	8.1	8.7	5.4	5.3	2.9	29	10
24	11	7.9	e2.7	10	21	7.8	7.8	5.0	4.6	2.7	14	5.3
25	10	8.1	e2.6	26	14	8.7	7.4	4.8	4.3	2.4	8.4	3.2
26	9.8	12	e2.6	111	8.1	8.1	7.5	11	4.1	2.2	5.9	2.8
27	9.5	13	e2.5	48	8.1	7.2	6.9	14	3.9	2.2	4.4	2.6
28	9.2	14	e2.4	19	9.5	6.6	6.4	7.9	3.7	2.3	3.7	2.5
29	9.2	11	e2.4	24	---	6.6	7.3	50	3.5	2.4	3.9	2.4
30	9.2	8.2	e2.6	118	---	11	9.7	130	3.4	2.4	4.2	2.4
31	9.8	---	6.1	38	---	13	---	34	---	2.7	3.2	---
TOTAL	487.8	318.0	141.9	718.9	408.0	311.6	401.5	515.3	214.6	107.9	241.9	97.7
MEAN	15.7	10.6	4.58	23.2	14.6	10.1	13.4	16.6	7.15	3.48	7.80	3.26
MAX	80	19	8.0	118	25	27	45	130	24	12	29	10
MIN	5.4	6.8	2.4	7.2	8.1	6.6	6.4	4.8	3.4	2.2	2.1	2.2
CFSM	1.84	1.24	.53	2.71	1.70	1.17	1.56	1.94	.83	.41	.91	.38
IN.	2.12	1.38	.62	3.12	1.77	1.35	1.74	2.24	.93	.47	1.05	.42

CAL YR 1989 TOTAL 5534.1 MEAN 15.2 MAX 135 MIN 2.4 CFSM 1.77 IN. 24.02  
WTR YR 1990 TOTAL 3965.1 MEAN 10.9 MAX 130 MIN 2.1 CFSM 1.27 IN. 17.21

e Estimated.

## CHRISTINA RIVER BASIN

01480685 MARSH CREEK NEAR DOWNINGTOWN, PA

LOCATION.--Lat 40°03'19", long 75°43'00", Chester County, Hydrologic Unit 02040205, on left bank 1,000 ft downstream from Marsh Creek Dam, 0.2 mi upstream from mouth and 3.0 mi north of Downingtown.

DRAINAGE AREA.--20.3 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 280 ft, from topographic map.

REMARKS.--Records good, except periods of estimated record which are poor. Flow completely regulated since November 1973.

AVERAGE DISCHARGE.--17 years, 31.3 ft<sup>3</sup>/s, 20.94 in/yr, adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 560 ft<sup>3</sup>/s, Dec. 14, 1983, gage height, 3.70 ft, from rating curve extended above 200 ft<sup>3</sup>/s; minimum daily, 0.31 ft<sup>3</sup>/s, Dec. 22, 23, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 461 ft<sup>3</sup>/s, Nov. 20, gage height, 3.53 ft; minimum daily, 5.7 ft<sup>3</sup>/s, March 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	14	19	16	62	8.0	22	17	212	10	8.7	16
2	32	14	19	15	62	6.0	24	17	16	9.3	7.8	14
3	36	15	19	30	62	6.0	60	17	17	8.9	7.2	13
4	34	15	19	43	62	6.0	91	18	18	9.4	6.8	11
5	31	16	19	43	62	5.8	83	23	17	10	7.0	10
6	29	16	19	43	59	5.8	75	25	17	10	11	9.8
7	26	17	19	43	61	5.8	43	24	17	9.6	13	9.4
8	24	44	16	28	61	5.8	23	22	17	8.9	13	8.9
9	22	65	14	21	61	5.8	27	21	18	9.4	13	8.2
10	20	63	15	25	61	5.8	28	30	18	11	20	7.7
11	20	62	15	36	61	5.8	29	49	17	11	30	7.4
12	19	35	15	43	61	5.8	28	76	16	11	29	7.3
13	19	12	15	43	42	5.7	26	91	15	16	27	7.1
14	18	12	15	43	11	5.8	25	82	15	16	28	7.4
15	18	12	15	36	11	5.9	31	47	18	16	26	8.6
16	17	12	15	28	11	6.5	34	18	19	15	23	8.2
17	18	13	15	23	11	8.4	34	19	19	14	20	8.7
18	24	14	15	15	11	13	32	19	18	13	17	7.8
19	39	14	15	15	11	16	30	18	22	13	16	7.5
20	76	185	15	15	11	18	28	17	23	12	16	7.7
21	115	306	15	15	11	19	27	17	21	11	14	7.4
22	105	203	15	40	11	19	27	17	20	11	23	11
23	93	63	15	61	11	18	26	17	19	11	31	14
24	82	63	15	61	11	18	25	15	15	9.8	33	13
25	74	63	15	61	11	18	24	14	13	9.0	30	12
26	68	35	15	61	11	17	24	16	12	8.3	27	11
27	64	12	14	61	11	17	23	20	12	7.8	24	11
28	35	17	12	61	11	17	22	20	12	7.1	21	10
29	12	19	12	61	---	17	18	38	12	7.2	19	9.6
30	12	19	12	62	---	18	17	86	11	8.6	20	9.2
31	13	---	13	62	---	20	---	236	---	8.9	18	---
TOTAL	1218	1450	481	1210	942	349.7	1006	1146	696	333.2	599.5	293.9
MEAN	39.3	48.3	15.5	39.0	33.6	11.3	33.5	37.0	23.2	10.7	19.3	9.80
MAX	115	306	19	62	62	20	91	236	212	16	33	16
MIN	12	12	12	15	11	5.7	17	14	11	7.1	6.8	7.1
MEAN*	35.7	21.6	14.0	54.6	35.0	25.3	32.5	48.7	10.8	9.7	21.6	7.8
CFSM*	1.76	1.06	.69	2.69	1.72	1.25	1.60	2.40	.53	.48	1.06	.38
IN.*	2.03	1.19	.80	3.10	1.80	1.44	1.79	2.77	.59	.55	1.23	.43

CAL YR 1989 TOTAL 12641.23 MEAN 34.6 MAX 306 MIN .72 MEAN\* 37.1 CFSM\* 1.83 IN.\* 24.82  
WTR YR 1990 TOTAL 9725.3 MEAN 26.6 MAX 306 MIN 5.7 MEAN\* 26.4 CFSM\* 1.30 IN.\* 17.66

\* Adjusted for change in contents in Marsh Creek Reservoir.

## CHRISTINA RIVER BASIN

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA

LOCATION.--Lat 40°02'05", long 75°42'32", Chester County, Hydrologic Unit 02040205, on right bank 20 ft downstream from bridge on Dowlin Forge Road, 200 ft east of State Highway 282, 0.4 mi downstream from Shamona Creek, 1.5 mi downstream from Marsh Creek, 2.0 mi upstream from Beaver Creek, and 2.2 mi north of Downingtown.

DRAINAGE AREA.--60.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948-57, October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 270 ft, from topographic map. Prior to July 30, 1966, norecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) 1.9 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 91.9 ft<sup>3</sup>/s, 20.59 in/yr, adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,070 ft<sup>3</sup>/s, June 22, 1972, gage height, 12.06 ft, from flood-mark, from rating curve extended above 5,000 ft<sup>3</sup>/s; minimum, 7.2 ft<sup>3</sup>/s, Sept. 2, 3, 11, 12, 13, 1966, gage height, 1.80 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft<sup>3</sup>/s, Jan. 30, gage height, 5.45 ft; minimum daily, 23 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	67	65	194	146	61	71	62	295	37	40	58
2	164	64	64	90	139	58	95	58	75	35	28	50
3	103	68	64	82	138	60	255	55	70	33	25	47
4	82	68	58	93	158	57	194	62	67	32	23	41
5	74	65	e58	108	144	54	176	105	64	35	30	39
6	70	65	e55	97	127	54	140	73	61	41	70	39
7	67	66	64	89	124	52	123	65	61	35	64	38
8	64	92	58	75	120	51	98	61	60	32	43	36
9	62	146	54	88	118	53	83	58	68	44	48	34
10	60	130	e52	153	187	60	81	234	61	50	160	34
11	63	112	59	137	147	56	95	182	57	39	100	34
12	61	86	e58	113	130	54	83	128	54	41	65	33
13	59	59	59	95	106	53	75	147	52	98	77	32
14	58	58	55	87	73	51	73	144	52	57	98	36
15	58	60	e50	82	70	51	147	94	86	53	60	47
16	57	95	e50	75	75	51	100	64	63	49	53	36
17	103	81	e50	73	71	64	90	64	58	44	53	46
18	123	67	e49	72	65	125	85	60	72	41	49	35
19	286	64	e49	68	66	73	78	57	105	38	50	30
20	509	232	e48	87	63	78	75	54	67	36	53	30
21	289	360	e48	111	62	73	76	57	62	35	51	27
22	193	255	e48	106	66	67	75	56	58	37	176	87
23	162	102	e47	112	76	64	70	53	56	35	107	53
24	144	102	e47	109	104	63	67	50	51	31	91	40
25	131	103	e46	251	73	65	66	48	46	28	75	36
26	121	89	e46	503	61	62	66	81	44	26	71	34
27	115	66	e46	175	61	60	63	72	43	25	61	32
28	87	81	e45	142	64	58	61	60	42	24	63	30
29	63	72	e45	210	---	58	61	572	40	25	79	29
30	62	66	e45	572	---	70	67	569	39	30	77	28
31	64	---	55	170	---	77	---	332	---	38	62	---
TOTAL	3619	3041	1637	4419	2834	1933	2889	3777	2029	1204	2102	1171
MEAN	117	101	52.8	143	101	62.4	96.3	122	67.6	38.8	67.8	39.0
MAX	509	360	65	572	187	125	255	572	295	98	176	87
MIN	57	58	45	68	61	51	61	48	39	24	23	27
MEAN*	113	74.3	51.3	159	102	76.4	95.3	134	55.2	37.8	70.1	37.0
CFSM*	1.86	1.23	.85	2.62	1.68	1.26	1.57	2.21	.91	.62	1.16	.61
IN.*	2.15	1.37	.98	3.03	1.75	1.45	1.76	2.55	1.02	.72	1.33	.68

CAL YR 1989 TOTAL 39782 MEAN 109 MAX 792 MIN 21 MEAN\* 112 CFSM\* 1.85 IN.\* 25.10  
WTR YR 1990 TOTAL 30655 MEAN 84.0 MAX 572 MIN 23 MEAN\* 83.8 CFSM\* 1.38 IN.\* 18.78

\* Adjusted for change in contents in Marsh Creek Reservoir.  
e Estimated.

## CHRISTINA RIVER BASIN

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

PERIOD OF RECORD.--November 1970 to current year.

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

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
OCT 10...	1015	60	187	7.2	11.5	11.0	1.1	10.7	62	8	16	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT 10...	5.4	8.2	0.5	22	2.3	54	14	14	14	116	1.99	
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 10...	0.010	2.00	0.090	0.40	<0.20	0.030	0.010	<0.010	<10	190	160	

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA

LOCATION.--Lat 39°58'07", long 75°40'25", Chester County, Hydrologic Unit 02040205, on left bank at downstream side of Sugars Bridge (State Highway 322), 2,000 ft upstream from Valley Creek, 1.5 mi north of Marshallton, and 3.3 mi southeast of Downingtown.

DRAINAGE AREA.--89.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1972 to current year.

REVISED RECORDS.--WDR PA-75-1: 1972(P), 1973, 1974.

GAGE.--Water-stage recorder. Altitude of gage is 195 ft, from topographic map. Feb. 1 to Apr. 10, June 25 to Nov. 17, 1972, nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated records, which are poor. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 7.5 mi upstream.

AVERAGE DISCHARGE.--18 years, 152 ft<sup>3</sup>/s, 22.91 in/yr, adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,160 ft<sup>3</sup>/s, June 22, 1972, gage height, 13.4 ft, from flood-mark, from rating curve extended above 3,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 22 ft<sup>3</sup>/s, Sept. 25, 1980; minimum gage height, 1.97 ft, July 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,540 ft<sup>3</sup>/s, May 29, gage height, 8.48 ft; minimum daily, 41 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	106	92	e335	242	103	119	110	515	65	65	85
2	335	101	90	e110	215	99	151	103	148	61	45	77
3	158	109	92	108	205	102	480	98	137	60	42	71
4	123	105	83	120	234	98	327	112	132	59	41	64
5	112	102	e80	137	206	94	278	183	120	78	56	60
6	107	103	e78	125	176	93	205	124	110	96	130	61
7	105	102	89	115	166	90	196	111	110	63	111	59
8	101	131	84	107	158	89	160	104	108	59	63	55
9	100	212	79	130	156	92	138	99	188	71	87	52
10	97	183	e75	218	305	100	136	495	109	93	356	54
11	98	151	83	199	211	95	169	357	100	67	169	51
12	92	128	e77	150	174	93	141	190	93	71	95	50
13	90	93	e73	124	154	92	128	227	88	208	184	50
14	89	92	e71	113	118	91	126	226	88	98	240	55
15	87	94	e70	112	116	90	269	156	215	87	91	74
16	87	136	e69	103	121	90	169	113	115	78	78	54
17	134	125	e69	103	118	112	148	114	100	70	76	80
18	174	101	e68	103	108	210	142	105	123	65	69	52
19	515	94	e68	99	111	122	130	99	194	59	68	48
20	809	286	e68	126	107	129	125	95	112	59	82	51
21	524	474	e68	163	102	122	129	100	103	55	75	45
22	299	361	e68	144	111	111	127	98	97	60	387	193
23	235	134	e67	145	127	106	121	93	93	55	193	92
24	209	130	e67	141	162	106	116	90	84	51	151	62
25	183	130	e67	378	119	108	114	86	78	47	119	54
26	162	125	e66	903	100	103	113	148	76	45	112	50
27	154	98	e66	274	102	100	109	127	74	43	93	49
28	131	114	e66	193	107	97	106	101	71	44	91	48
29	101	102	e65	289	---	98	112	976	71	43	142	46
30	100	94	e65	1010	---	118	120	1060	69	46	140	46
31	103	---	82	305	---	127	---	528	---	56	92	---
TOTAL	5710	4316	2305	6682	4331	3280	4904	6628	3721	2112	3743	1888
MEAN	184	144	74.4	216	155	106	163	214	124	68.1	121	62.9
MAX	809	474	92	1010	305	210	480	1060	515	208	387	193
MIN	87	92	65	99	100	89	106	86	69	43	41	45
MEAN*	180	117	72.9	232	156	120	162	226	112	67.1	123	60.9
CFSM*	2.00	1.30	.81	2.58	1.74	1.33	1.80	2.51	1.25	.75	1.37	.68
IN.*	2.31	1.45	.94	2.98	1.81	1.54	2.01	2.90	1.39	.86	1.58	.76

CAL YR 1989 TOTAL 62386 MEAN 171 MAX 1280 MIN 38 MEAN\* 174 CFSM\* 1.94 IN.\* 26.28  
WTR YR 1990 TOTAL 49620 MEAN 136 MAX 1060 MIN 41 MEAN\* 136 CFSM\* 1.51 IN.\* 20.53

\* Adjusted for change in contents in Marsh Creek Reservoir.  
e Estimated.

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1972 to current year.

pH: February 1972 to current year.

WATER TEMPERATURE: February 1972 to current year.

DISSOLVED OXYGEN: February 1972 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1972.

REMARKS.--Not operated Dec. 4 to March 13. Other interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 652 microsiemens, Feb. 6, 1977; 67 microsiemens, July 1, 1984.

pH: Maximum, 9.9, May 13, June 5, 1973; minimum, 5.4, Oct. 24, 26, 1973.

WATER TEMPERATURE: Maximum, 33.0° C, July 18, 1977; minimum, 0.0° C, on many days during winter months of most years.

DISSOLVED OXYGEN: Maximum, 19.4 mg/L, Mar. 18, 1989; minimum, 0.8 mg/L, July 23, 1984.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	TEMPER- ATURE WATER (DEG C) (00010)	PH (STAND- ARD UNITS) (00400)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)
OCT 1989							
03...	1255	150	237	9.4	17.5	7.2	6270
10...	1200	98	258	9.9	10.5	7.4	135
17...	1035	90	258	7.9	16.0	7.2	540
24...	1455	192	216	10.6	12.5	7.2	290
30...	1045	101	246	9.0	13.5	--	180
NOV							
06...	1240	103	263	10.9	11.0	7.5	--
13...	1230	96	264	12.0	9.5	7.6	450
20...	1330	354	233	10.3	8.5	7.7	390
27...	1230	95	249	11.4	6.5	7.4	510
DEC							
04...	0900	61	245	11.2	0.0	7.4	20
MAR 1990							
20...	1254	134	253	11.3	9.5	7.6	170
26...	1118	105	251	13.0	7.5	8.1	72
APR							
02...	1310	174	225	12.3	8.5	8.1	150
09...	1255	141	242	13.8	9.0	7.8	9
16...	1130	164	--	--	--	--	310
23...	1250	124	248	13.1	16.0	8.4	9
MAY							
02...	1318	101	270	12.9	17.5	8.1	99
07...	1040	112	239	11.3	13.0	7.5	270
15...	1015	174	215	10.3	14.0	7.4	600
21...	1100	103	2050	9.0	15.0	7.2	600
29...	1120	207	231	8.9	15.5	7.3	2100
JUN							
05...	1055	126	248	10.2	15.5	7.2	520
12...	1230	95	269	11.0	18.5	7.4	2200
26...	1130	80	264	10.5	19.5	7.4	400
JUL							
02...	1120	67	268	9.7	21.0	7.4	2400
10...	1100	86	241	7.8	23.0	7.3	27000
16...	1100	78	252	9.3	21.5	7.3	2300
23...	1110	49	271	9.6	24.0	7.4	570
AUG							
07...	0950	110	207	8.8	22.0	7.1	--
13...	1215	82	242	10.3	23.5	7.6	700
20...	1000	71	237	7.8	20.0	7.3	2400
28...	0925	90	233	7.5	22.0	7.2	420
SEP							
04...	1100	62	268	8.9	19.5	7.6	--
10...	1100	54	292	9.1	19.0	7.6	955
19...	1350	46	320	9.9	15.5	8.1	140
25...	1042	54	284	8.3	13.0	7.4	230



## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	288	254	272	---	---	---	252	228	240	---	---	---
2	275	174	211	---	---	---	262	229	243	---	---	---
3	248	211	230	258	242	247	261	229	243	---	---	---
4	263	237	249	256	231	244	---	---	---	---	---	---
5	273	246	260	260	229	246	---	---	---	---	---	---
6	279	251	264	265	243	254	---	---	---	---	---	---
7	282	252	265	263	224	250	---	---	---	---	---	---
8	279	255	268	264	208	243	---	---	---	---	---	---
9	282	257	270	218	195	208	---	---	---	---	---	---
10	276	258	265	220	196	206	---	---	---	---	---	---
11	265	245	257	---	---	---	---	---	---	---	---	---
12	268	249	261	265	205	228	---	---	---	---	---	---
13	271	253	264	276	241	258	---	---	---	---	---	---
14	279	254	268	263	244	254	---	---	---	---	---	---
15	280	254	267	265	247	255	---	---	---	---	---	---
16	275	256	268	---	---	---	---	---	---	---	---	---
17	280	207	258	---	---	---	---	---	---	---	---	---
18	242	203	217	---	---	---	---	---	---	---	---	---
19	215	150	177	---	---	---	---	---	---	---	---	---
20	187	108	154	---	---	---	---	---	---	---	---	---
21	198	137	168	169	163	166	---	---	---	---	---	---
22	208	193	199	215	160	174	---	---	---	---	---	---
23	211	197	204	225	195	210	---	---	---	---	---	---
24	---	---	---	233	200	215	---	---	---	---	---	---
25	218	210	214	228	201	212	---	---	---	---	---	---
26	221	208	215	250	200	219	---	---	---	---	---	---
27	226	209	219	260	235	250	---	---	---	---	---	---
28	262	210	228	262	232	244	---	---	---	---	---	---
29	268	243	256	248	225	240	---	---	---	---	---	---
30	263	246	255	254	228	241	---	---	---	---	---	---
31	261	244	254	---	---	---	---	---	---	---	---	---
MONTH	288	108	239	276	160	230	262	228	242	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	266	232	249	285	261	273
2	---	---	---	---	---	---	259	213	234	284	260	270
3	---	---	---	---	---	---	232	170	187	270	250	262
4	---	---	---	---	---	---	206	181	194	271	248	258
5	---	---	---	---	---	---	219	194	206	246	208	223
6	---	---	---	---	---	---	230	211	221	251	225	238
7	---	---	---	---	---	---	239	212	225	262	235	250
8	---	---	---	---	---	---	247	226	238	264	247	257
9	---	---	---	---	---	---	246	237	242	271	247	258
10	---	---	---	---	---	---	247	233	241	263	135	206
11	---	---	---	---	---	---	246	220	232	213	153	184
12	---	---	---	---	---	---	243	230	235	232	209	215
13	---	---	---	---	---	---	250	224	239	215	206	210
14	---	---	---	294	261	276	251	233	244	222	201	210
15	---	---	---	297	271	284	---	---	---	253	212	226
16	---	---	---	283	264	273	---	---	---	255	243	250
17	---	---	---	280	257	266	---	---	---	260	245	251
18	---	---	---	245	213	229	235	221	227	264	239	254
19	---	---	---	259	233	247	240	221	230	271	154	254
20	---	---	---	258	234	245	244	227	234	270	249	259
21	---	---	---	259	233	247	247	231	238	265	250	257
22	---	---	---	263	240	253	246	226	236	267	245	257
23	---	---	---	271	248	259	249	228	240	274	250	262
24	---	---	---	269	246	259	257	239	245	273	253	264
25	---	---	---	263	239	251	257	237	244	278	257	268
26	---	---	---	267	236	255	261	237	247	271	216	240
27	---	---	---	266	244	257	265	244	253	247	214	229
28	---	---	---	268	241	258	270	248	261	262	237	248
29	---	---	---	275	249	259	273	252	264	259	102	188
30	---	---	---	264	243	251	274	250	262	189	104	146
31	---	---	---	257	233	246	---	---	---	203	182	192
MONTH	---	---	---	297	213	256	274	170	236	285	102	237

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	236	184	192	280	257	271	288	244	265	---	---	---
2	266	230	240	292	265	280	311	278	298	---	---	---
3	249	234	242	296	276	289	322	287	310	---	---	---
4	255	237	247	305	276	291	333	295	317	297	267	289
5	262	242	250	295	275	285	323	244	302	297	274	288
6	257	241	251	---	---	---	245	192	220	301	276	292
7	260	246	253	---	---	---	249	203	227	307	283	298
8	264	247	255	---	---	---	277	249	263	320	284	303
9	251	177	221	---	---	---	282	198	260	320	286	305
10	259	242	250	272	240	260	244	110	187	317	291	306
11	265	248	256	285	261	275	229	150	193	314	288	304
12	273	251	262	286	254	274	245	223	234	316	295	308
13	273	255	265	245	180	204	255	122	234	323	298	313
14	274	259	267	268	225	247	229	120	186	324	290	308
15	264	184	225	268	244	257	252	229	240	294	245	275
16	260	239	249	271	249	263	265	243	254	---	---	---
17	267	247	257	282	258	272	267	241	256	---	---	---
18	271	207	258	283	264	277	272	244	259	---	---	---
19	236	196	215	296	243	270	274	247	261	---	---	---
20	254	235	244	301	277	290	258	237	250	326	296	314
21	262	228	250	301	270	286	267	241	256	330	302	320
22	266	246	257	291	262	280	266	164	193	332	189	254
23	269	249	259	302	238	276	224	172	200	279	210	246
24	272	250	262	304	261	281	236	201	219	306	262	283
25	281	261	273	308	261	281	247	224	236	315	282	301
26	280	264	273	316	266	288	---	---	---	321	294	310
27	278	261	271	310	275	292	---	---	---	322	295	311
28	276	256	268	318	282	305	252	232	244	328	299	316
29	271	252	264	317	284	305	---	---	---	339	300	321
30	282	254	269	313	275	295	233	201	222	336	296	320
31	---	---	---	310	264	295	---	---	---	---	---	---
MONTH	282	177	251	318	180	277	333	110	244	339	189	299

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	7.6	7.3	7.4	---	---	---	7.6	7.2	7.4	---	---	---
2	7.3	7.1	7.2	---	---	---	7.5	7.3	7.4	---	---	---
3	7.4	7.2	7.3	---	---	---	7.6	7.3	7.4	---	---	---
4	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
5	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
6	7.7	7.3	7.4	8.0	7.4	7.6	---	---	---	---	---	---
7	7.7	7.3	7.4	8.6	7.3	7.7	---	---	---	---	---	---
8	7.7	7.3	7.4	8.0	7.2	7.5	---	---	---	---	---	---
9	7.9	7.3	7.5	7.4	7.2	7.3	---	---	---	---	---	---
10	7.9	7.4	7.5	7.5	7.2	7.3	---	---	---	---	---	---
11	7.9	7.3	7.5	7.4	7.2	7.3	---	---	---	---	---	---
12	7.9	7.4	7.5	7.8	7.3	7.5	---	---	---	---	---	---
13	8.1	7.3	7.6	7.8	7.3	7.5	---	---	---	---	---	---
14	8.1	7.3	7.6	7.9	7.3	7.5	---	---	---	---	---	---
15	8.0	7.2	7.5	8.0	7.3	7.5	---	---	---	---	---	---
16	8.0	7.2	7.5	---	---	---	---	---	---	---	---	---
17	7.3	7.1	7.2	---	---	---	---	---	---	---	---	---
18	7.2	7.1	7.1	---	---	---	---	---	---	---	---	---
19	7.2	6.9	7.1	---	---	---	---	---	---	---	---	---
20	7.2	6.9	7.1	7.9	7.2	7.5	---	---	---	---	---	---
21	7.2	7.0	7.1	7.4	6.9	7.2	---	---	---	---	---	---
22	7.3	7.2	7.2	7.4	7.2	7.3	---	---	---	---	---	---
23	7.4	7.3	7.3	7.5	7.2	7.3	---	---	---	---	---	---
24	---	---	---	7.5	7.2	7.3	---	---	---	---	---	---
25	7.4	7.2	7.3	7.4	7.2	7.3	---	---	---	---	---	---
26	7.5	7.2	7.3	7.4	7.2	7.3	---	---	---	---	---	---
27	7.6	7.2	7.4	7.5	7.2	7.3	---	---	---	---	---	---
28	7.6	7.2	7.4	7.4	7.2	7.3	---	---	---	---	---	---
29	7.7	7.3	7.4	7.6	7.2	7.4	---	---	---	---	---	---
30	7.9	7.3	7.5	7.5	7.3	7.4	---	---	---	---	---	---
31	7.8	7.3	7.5	---	---	---	---	---	---	---	---	---
MONTH	8.1	6.9	7.4	8.6	6.9	7.4	7.6	7.2	7.4	---	---	---

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	8.1	7.3	7.6	8.4	7.2	7.6
2	---	---	---	---	---	---	8.3	7.3	7.7	8.6	7.2	7.7
3	---	---	---	---	---	---	---	---	---	8.2	7.3	7.6
4	---	---	---	---	---	---	7.6	7.2	7.3	7.9	7.2	7.5
5	---	---	---	---	---	---	7.7	7.2	7.4	7.9	7.3	7.5
6	---	---	---	---	---	---	7.8	7.2	7.5	8.4	7.3	7.7
7	---	---	---	---	---	---	7.7	7.2	7.4	8.5	7.3	7.8
8	---	---	---	---	---	---	7.8	7.2	7.5	8.6	7.3	7.8
9	---	---	---	---	---	---	8.2	7.2	7.7	8.6	7.3	7.8
10	---	---	---	---	---	---	8.4	7.3	7.7	7.4	7.0	7.2
11	---	---	---	---	---	---	8.2	7.3	7.6	7.4	7.1	7.2
12	---	---	---	---	---	---	8.4	7.3	7.7	7.7	7.3	7.4
13	---	---	---	---	---	---	8.5	7.3	7.8	7.4	7.2	7.3
14	---	---	---	---	---	---	8.6	7.4	7.9	7.7	7.2	7.4
15	---	---	---	---	---	---	---	---	---	7.8	7.3	7.5
16	---	---	---	8.4	7.1	7.6	---	---	---	7.6	7.3	7.4
17	---	---	---	7.5	7.1	7.3	---	---	---	7.7	7.2	7.4
18	---	---	---	7.7	7.1	7.3	8.6	7.4	7.9	7.8	7.3	7.5
19	---	---	---	7.9	7.2	7.5	8.6	7.4	7.9	7.8	7.3	7.5
20	---	---	---	7.7	7.2	7.4	8.8	7.3	8.0	7.8	7.3	7.5
21	---	---	---	8.2	7.3	7.6	8.3	7.3	7.7	7.4	7.2	7.3
22	---	---	---	8.3	7.3	7.6	8.6	7.2	7.8	7.7	7.3	7.5
23	---	---	---	8.5	7.3	7.7	8.6	7.2	7.8	7.7	7.3	7.5
24	---	---	---	8.2	7.3	7.6	8.5	7.2	7.8	7.7	7.3	7.4
25	---	---	---	8.5	7.3	7.7	8.6	7.2	7.7	7.8	7.3	7.5
26	---	---	---	8.6	7.3	7.8	8.6	7.2	7.7	7.4	7.2	7.3
27	---	---	---	8.6	7.3	7.8	8.6	7.1	7.7	7.6	7.2	7.4
28	---	---	---	8.7	7.2	7.8	8.5	7.2	7.7	7.8	7.2	7.4
29	---	---	---	8.8	7.3	7.9	8.1	7.2	7.4	7.3	6.8	7.1
30	---	---	---	8.3	7.3	7.6	8.1	7.1	7.5	7.1	6.9	7.0
31	---	---	---	8.3	7.3	7.7	---	---	---	7.3	7.1	7.2
MONTH	---	---	---	8.8	7.1	7.6	8.8	7.1	7.7	8.6	6.8	7.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.2	7.1	7.1	8.4	7.1	7.7	8.2	7.2	7.5	---	---	---
2	7.4	7.2	7.3	8.4	7.2	7.6	8.2	7.2	7.5	---	---	---
3	7.4	7.2	7.3	8.4	7.2	7.7	8.3	7.1	7.6	---	---	---
4	7.5	7.2	7.3	8.3	7.2	7.6	8.5	7.2	7.7	8.4	7.6	7.8
5	7.6	7.2	7.4	8.1	7.2	7.7	7.5	7.2	7.3	8.4	7.5	7.8
6	7.8	7.2	7.5	---	---	---	7.6	7.1	7.3	8.5	7.5	7.9
7	7.9	7.2	7.5	---	---	---	7.8	7.2	7.4	8.5	7.4	7.9
8	8.1	7.2	7.5	---	---	---	8.1	7.2	7.5	8.6	7.5	7.9
9	7.5	7.1	7.3	---	---	---	7.5	7.2	7.3	8.3	7.5	7.7
10	7.8	7.1	7.4	8.1	7.3	7.5	7.5	6.9	7.2	8.5	7.4	7.8
11	7.9	7.3	7.5	7.9	7.4	7.6	7.4	7.1	7.2	8.6	7.3	7.8
12	8.0	7.3	7.6	7.7	7.5	7.6	7.7	7.2	7.4	8.5	7.2	7.8
13	8.0	7.2	7.6	7.6	7.4	7.5	8.1	7.1	7.5	8.6	7.3	7.8
14	8.0	7.3	7.5	7.7	7.4	7.5	7.6	7.0	7.3	8.4	7.2	7.6
15	7.3	7.1	7.2	7.7	7.4	7.6	7.9	7.3	7.5	8.1	7.2	7.7
16	7.6	7.2	7.4	7.8	7.3	7.5	7.9	7.3	7.6	---	---	---
17	7.7	7.2	7.4	7.9	7.2	7.5	8.3	7.3	7.7	---	---	---
18	7.9	7.2	7.4	8.1	7.2	7.6	8.3	7.4	7.7	---	---	---
19	7.4	7.1	7.2	8.4	7.2	7.7	8.4	7.3	7.7	---	---	---
20	7.6	7.1	7.3	8.4	7.2	7.6	7.5	7.3	7.4	8.5	7.5	7.9
21	7.6	7.1	7.3	8.4	7.2	7.7	7.9	7.4	7.6	8.5	7.4	7.8
22	7.6	7.1	7.3	8.5	7.2	7.7	7.4	7.2	7.3	7.5	7.2	7.3
23	7.6	7.1	7.3	8.6	7.2	7.7	7.4	7.3	7.3	7.7	7.2	7.4
24	7.8	7.1	7.4	8.6	7.2	7.7	7.5	7.3	7.4	7.8	7.2	7.4
25	8.0	7.2	7.5	8.7	7.2	7.8	7.6	7.3	7.4	7.9	7.3	7.5
26	8.2	7.2	7.6	8.6	7.2	7.7	---	---	---	7.9	7.4	7.6
27	8.4	7.2	7.7	8.6	7.2	7.8	---	---	---	8.0	7.4	7.6
28	8.5	7.2	7.7	8.4	7.2	7.7	8.1	7.4	7.6	8.2	7.3	7.6
29	8.6	7.2	7.8	8.3	7.2	7.6	---	---	---	8.4	7.4	7.7
30	8.5	7.2	7.7	8.4	7.2	7.6	7.8	7.3	7.5	8.3	7.3	7.6
31	---	---	---	8.0	7.2	7.5	---	---	---	---	---	---
MONTH	8.6	7.1	7.4	8.7	7.1	7.6	8.5	6.9	7.5	8.6	7.2	7.7

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.0	14.5	15.5	17.5	14.5	15.5	5.5	4.0	5.0	---	---	---
2	17.0	16.0	16.5	14.0	10.5	11.5	5.0	3.0	4.0	---	---	---
3	17.5	16.0	17.0	---	---	---	5.0	1.5	3.5	---	---	---
4	15.5	13.5	14.5	---	---	---	---	---	---	---	---	---
5	14.5	12.0	13.5	---	---	---	---	---	---	---	---	---
6	15.5	13.0	14.5	11.5	10.5	11.0	---	---	---	---	---	---
7	16.0	14.0	15.0	12.5	9.5	11.0	---	---	---	---	---	---
8	13.5	11.5	13.0	13.0	12.0	12.5	---	---	---	---	---	---
9	12.5	11.0	12.0	14.5	12.5	13.5	---	---	---	---	---	---
10	12.0	9.5	11.0	13.0	11.5	12.5	---	---	---	---	---	---
11	13.5	11.0	12.0	12.0	8.0	10.0	---	---	---	---	---	---
12	13.5	10.5	12.5	11.5	10.0	10.5	---	---	---	---	---	---
13	15.0	12.5	14.0	10.0	8.0	9.5	---	---	---	---	---	---
14	15.0	13.0	14.0	12.0	9.0	10.5	---	---	---	---	---	---
15	16.0	14.0	15.0	14.5	12.0	13.0	---	---	---	---	---	---
16	17.5	15.5	16.5	---	---	---	---	---	---	---	---	---
17	17.0	16.0	16.5	---	---	---	---	---	---	---	---	---
18	16.0	13.5	15.0	---	---	---	---	---	---	---	---	---
19	13.0	11.0	11.5	---	---	---	---	---	---	---	---	---
20	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
21	12.0	10.5	11.5	9.5	8.0	9.0	---	---	---	---	---	---
22	13.0	11.0	12.0	8.5	6.5	8.0	---	---	---	---	---	---
23	13.0	11.0	12.5	6.5	5.0	5.5	---	---	---	---	---	---
24	---	---	---	6.0	3.5	5.0	---	---	---	---	---	---
25	13.0	10.5	11.5	6.5	3.5	5.0	---	---	---	---	---	---
26	13.5	11.0	12.5	8.0	6.0	6.5	---	---	---	---	---	---
27	14.0	11.0	12.5	7.5	5.5	6.5	---	---	---	---	---	---
28	14.5	12.0	13.5	9.0	7.5	8.5	---	---	---	---	---	---
29	14.5	12.5	13.5	8.0	4.5	6.5	---	---	---	---	---	---
30	14.5	12.5	14.0	5.5	3.5	4.5	---	---	---	---	---	---
31	18.0	14.0	15.5	---	---	---	---	---	---	---	---	---
MONTH	18.0	9.5	13.7	17.5	3.5	9.4	5.5	1.5	4.2	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	8.5	7.5	8.0	19.0	14.5	16.5
2	---	---	---	---	---	---	9.5	8.0	9.0	17.5	15.5	16.5
3	---	---	---	---	---	---	---	---	---	15.5	13.0	13.5
4	---	---	---	---	---	---	10.0	9.0	9.5	13.0	12.0	12.5
5	---	---	---	---	---	---	11.5	8.0	10.0	14.5	11.5	12.5
6	---	---	---	---	---	---	11.0	9.5	10.0	16.5	12.0	14.5
7	---	---	---	---	---	---	9.5	7.5	8.5	16.5	11.5	14.0
8	---	---	---	---	---	---	9.0	6.0	7.5	19.5	14.0	16.5
9	---	---	---	---	---	---	11.0	6.0	8.5	16.5	14.0	15.5
10	---	---	---	---	---	---	12.0	8.5	10.5	16.0	14.5	15.5
11	---	---	---	---	---	---	11.5	9.0	11.0	16.5	13.0	14.5
12	---	---	---	---	---	---	9.5	6.5	8.0	15.5	13.5	14.5
13	---	---	---	---	---	---	10.5	5.5	8.0	16.5	14.5	15.0
14	---	---	---	---	---	---	11.0	7.0	9.0	18.0	14.5	16.0
15	---	---	---	---	---	---	15.5	9.0	11.5	20.5	14.0	17.0
16	---	---	---	17.5	13.0	14.5	---	---	---	18.5	18.0	18.0
17	---	---	---	17.5	14.5	15.5	---	---	---	19.0	17.5	18.0
18	---	---	---	15.5	11.5	13.0	12.5	7.5	10.0	17.5	16.5	17.0
19	---	---	---	11.0	9.5	10.5	15.0	9.0	11.5	17.5	15.0	16.0
20	---	---	---	10.5	7.5	9.0	15.0	10.0	12.5	17.0	15.5	16.0
21	---	---	---	10.5	6.0	8.5	13.0	11.5	12.0	15.5	14.0	15.0
22	---	---	---	12.0	7.0	10.0	16.0	10.5	13.0	16.0	13.0	14.5
23	---	---	---	13.5	9.5	11.5	---	---	---	16.0	13.5	15.0
24	---	---	---	10.5	7.0	8.0	17.5	13.0	15.5	17.5	13.5	15.5
25	---	---	---	9.0	6.0	7.5	17.0	13.5	15.0	18.5	14.5	16.5
26	---	---	---	9.0	5.5	7.5	25.0	14.0	18.0	17.0	14.5	16.0
27	---	---	---	9.0	5.5	7.0	26.5	20.0	22.0	18.5	14.0	16.0
28	---	---	---	9.0	5.0	7.0	26.0	18.0	20.5	19.0	15.0	17.0
29	---	---	---	9.0	7.0	8.0	20.0	15.5	17.5	17.5	14.5	16.0
30	---	---	---	8.0	7.0	7.5	16.0	14.5	15.0	17.0	14.0	15.5
31	---	---	---	8.0	6.5	7.5	---	---	---	17.5	13.0	15.0
MONTH	---	---	---	17.5	5.0	9.5	26.5	5.5	12.0	20.5	11.5	15.5

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	15.5	12.0	13.5	25.5	22.5	23.5	25.0	20.5	22.5	---	---	---
2	20.0	15.5	17.5	24.0	20.5	22.0	25.0	19.5	22.0	---	---	---
3	20.5	17.5	19.0	25.0	20.0	22.0	25.5	20.0	22.5	---	---	---
4	19.0	17.0	18.5	26.0	21.0	23.0	26.0	21.0	23.0	22.5	19.5	20.5
5	19.0	15.0	17.0	26.5	23.5	25.0	23.0	21.5	22.0	21.0	18.5	20.0
6	20.0	15.0	17.5	---	---	---	22.5	21.0	22.0	23.0	20.0	21.5
7	21.0	18.0	19.0	---	---	---	24.0	21.5	22.5	23.5	21.0	22.0
8	19.5	17.5	18.5	---	---	---	24.0	21.0	22.5	23.0	20.0	21.5
9	20.5	18.5	19.5	---	---	---	22.0	20.5	21.5	19.0	18.0	18.5
10	21.5	18.5	20.0	25.5	23.0	24.0	22.0	20.0	21.0	21.5	18.5	19.5
11	20.0	17.5	18.5	23.5	21.0	22.0	23.5	21.0	22.0	22.5	18.5	20.5
12	21.0	16.0	18.0	20.5	19.0	20.0	24.5	21.5	23.0	22.0	20.0	21.0
13	20.0	17.0	18.5	19.0	17.5	18.0	25.5	22.0	23.5	22.5	20.5	21.5
14	19.5	17.5	18.5	19.5	18.0	18.5	24.0	21.5	22.5	21.5	20.0	21.0
15	19.0	17.0	18.0	22.5	19.5	21.0	24.0	21.0	22.5	21.5	20.0	21.0
16	21.0	17.5	19.0	24.0	21.0	22.5	23.5	21.5	22.5	---	---	---
17	22.5	19.0	20.5	24.0	20.5	22.5	24.5	21.0	22.5	---	---	---
18	23.0	19.5	21.0	26.0	21.0	23.5	25.5	21.5	23.5	---	---	---
19	22.5	19.5	21.0	27.0	22.5	24.5	24.5	22.5	23.5	---	---	---
20	22.5	19.0	20.5	27.0	22.5	24.5	22.5	19.0	20.0	18.0	15.5	16.5
21	22.0	19.5	21.0	26.0	22.5	24.5	19.5	18.5	19.0	18.0	14.5	16.0
22	23.5	19.5	21.5	26.0	23.0	24.5	19.0	18.5	19.0	16.0	15.5	16.0
23	23.5	21.0	22.0	27.0	23.0	24.5	20.0	19.0	19.0	17.0	14.5	15.5
24	22.0	19.5	21.0	25.5	22.5	24.0	21.0	19.5	20.0	16.5	13.5	15.0
25	20.5	18.5	19.5	26.5	21.5	23.5	22.0	19.5	21.0	17.0	12.5	14.5
26	22.5	18.0	20.0	26.0	21.5	23.5	---	---	---	16.5	14.0	15.0
27	24.0	19.5	21.5	24.5	21.5	23.0	---	---	---	18.0	14.5	16.0
28	25.0	20.5	22.5	24.5	22.0	23.0	24.5	21.5	23.0	18.5	15.5	17.0
29	25.5	21.5	23.5	24.5	22.0	23.5	---	---	---	19.0	16.0	17.5
30	26.5	22.5	24.0	24.5	22.0	23.0	23.0	20.0	21.5	19.0	17.0	18.0
31	---	---	---	24.5	22.0	23.0	---	---	---	---	---	---
MONTH	26.5	12.0	19.7	27.0	17.5	22.8	26.0	18.5	21.8	23.5	12.5	18.5

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	10.2	8.8	9.3	---	---	---	12.1	10.8	11.3	---	---	---
2	8.9	8.5	8.7	---	---	---	12.1	10.7	11.3	---	---	---
3	9.5	8.4	8.9	---	---	---	12.4	10.6	11.4	---	---	---
4	10.0	8.5	9.2	---	---	---	---	---	---	---	---	---
5	10.1	8.5	9.3	---	---	---	---	---	---	---	---	---
6	9.8	8.1	8.9	11.7	9.4	10.7	---	---	---	---	---	---
7	9.7	8.0	8.6	13.0	8.9	10.4	---	---	---	---	---	---
8	9.9	8.1	8.8	11.5	8.5	9.3	---	---	---	---	---	---
9	10.3	8.2	9.0	---	---	---	---	---	---	---	---	---
10	10.5	8.4	9.3	---	---	---	---	---	---	---	---	---
11	10.7	8.4	9.3	---	---	---	---	---	---	---	---	---
12	11.0	8.5	9.5	---	---	---	---	---	---	---	---	---
13	11.2	8.3	9.4	13.6	9.8	12.0	---	---	---	---	---	---
14	11.4	8.2	9.3	13.5	9.6	11.2	---	---	---	---	---	---
15	11.0	7.8	9.0	12.7	8.7	10.4	---	---	---	---	---	---
16	10.6	7.3	8.5	---	---	---	---	---	---	---	---	---
17	8.5	7.0	7.7	---	---	---	---	---	---	---	---	---
18	8.4	7.6	8.0	---	---	---	---	---	---	---	---	---
19	9.2	8.5	8.9	---	---	---	---	---	---	---	---	---
20	9.0	7.6	8.7	---	---	---	---	---	---	---	---	---
21	10.2	8.6	9.1	9.9	9.3	9.5	---	---	---	---	---	---
22	10.5	10.1	10.3	10.7	8.8	9.8	---	---	---	---	---	---
23	10.7	10.3	10.4	12.1	9.2	10.7	---	---	---	---	---	---
24	---	---	---	12.0	9.5	10.8	---	---	---	---	---	---
25	10.2	8.6	9.7	11.9	10.3	10.9	---	---	---	---	---	---
26	9.5	8.5	8.9	11.1	9.9	10.5	---	---	---	---	---	---
27	9.9	8.1	9.0	11.5	10.0	10.6	---	---	---	---	---	---
28	9.1	7.7	8.4	10.5	9.6	10.0	---	---	---	---	---	---
29	9.9	7.7	8.6	12.4	9.6	10.9	---	---	---	---	---	---
30	9.3	7.0	8.4	13.3	10.7	11.9	---	---	---	---	---	---
31	8.6	6.8	7.6	---	---	---	---	---	---	---	---	---
MONTH	11.4	6.8	9.0	13.6	8.5	10.6	12.4	10.6	11.3	---	---	---

## CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	13.3	10.3	11.5	12.9	8.1	10.2
2	---	---	---	---	---	---	13.2	10.1	11.3	13.0	8.2	10.2
3	---	---	---	---	---	---	---	---	---	12.4	8.1	9.8
4	---	---	---	---	---	---	---	---	---	11.5	8.8	9.9
5	---	---	---	---	---	---	---	---	---	11.3	8.8	9.9
6	---	---	---	---	---	---	---	---	---	12.5	8.4	10.2
7	---	---	---	---	---	---	---	---	---	13.0	8.3	10.3
8	---	---	---	---	---	---	---	---	---	13.4	7.7	10.1
9	---	---	---	---	---	---	13.8	9.9	13.1	12.8	7.5	9.6
10	---	---	---	---	---	---	13.6	9.2	10.9	8.7	7.6	8.1
11	---	---	---	---	---	---	12.5	9.1	10.5	10.0	8.8	9.3
12	---	---	---	---	---	---	13.8	10.0	11.7	11.5	9.2	10.3
13	---	---	---	---	---	---	14.1	10.0	11.9	10.5	9.5	10.0
14	---	---	---	---	---	---	13.9	9.0	11.5	11.1	9.1	10.0
15	---	---	---	---	---	---	---	---	---	11.0	8.5	9.9
16	---	---	---	---	---	---	---	---	---	10.1	8.3	9.1
17	---	---	---	---	---	---	---	---	---	10.3	8.0	9.0
18	---	---	---	---	---	---	13.8	9.7	12.5	10.5	8.0	9.2
19	---	---	---	---	---	---	13.9	9.4	11.4	11.0	8.3	9.5
20	---	---	---	11.5	9.7	10.9	13.9	9.4	11.2	10.9	8.2	9.2
21	---	---	---	12.4	9.7	10.9	12.6	8.7	10.1	9.8	8.2	9.1
22	---	---	---	12.5	9.2	10.8	13.5	8.7	10.7	11.1	8.9	10.0
23	---	---	---	12.9	9.2	10.6	13.2	8.3	10.2	10.7	8.8	9.7
24	---	---	---	13.7	9.3	11.3	13.0	8.1	9.9	10.9	8.6	9.6
25	---	---	---	14.3	10.7	12.1	12.9	7.9	10.0	10.7	8.5	9.5
26	---	---	---	13.3	9.4	11.7	12.8	7.0	9.5	9.1	8.3	8.7
27	---	---	---	14.1	9.4	11.5	12.7	7.0	9.3	10.4	8.4	9.4
28	---	---	---	14.8	9.8	12.0	12.6	7.5	9.3	10.6	8.1	9.3
29	---	---	---	15.2	9.6	11.8	11.6	6.9	8.9	9.0	8.1	8.6
30	---	---	---	13.5	9.8	11.2	11.7	8.5	9.8	9.4	9.1	9.2
31	---	---	---	13.6	10.3	11.6	---	---	---	10.2	9.2	9.8
MONTH	---	---	---	15.2	9.2	11.4	14.1	6.9	10.7	13.4	7.5	9.6
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	10.6	9.2	10.2	12.0	6.4	8.6	10.5	6.6	8.0	---	---	---
2	10.0	8.3	9.3	12.4	6.9	8.9	10.5	6.5	7.9	---	---	---
3	9.7	8.1	8.9	12.3	7.0	9.0	12.2	6.4	8.7	---	---	---
4	9.9	8.1	9.0	11.9	6.6	8.5	12.8	7.1	9.2	10.5	7.4	9.2
5	10.7	8.8	9.6	11.2	6.3	9.0	9.3	7.0	7.9	10.5	7.3	8.7
6	11.1	8.5	9.8	---	---	---	9.5	7.8	8.5	11.2	7.5	8.9
7	11.2	8.4	9.5	---	---	---	10.3	7.8	8.8	11.3	7.4	8.7
8	11.6	8.0	9.6	---	---	---	11.1	7.7	9.0	11.3	7.1	8.7
9	9.9	8.0	8.7	---	---	---	9.3	7.5	8.2	10.9	7.5	8.8
10	10.7	7.9	9.0	9.3	6.6	7.9	9.3	7.8	8.2	11.1	6.9	8.6
11	10.8	8.1	9.3	9.0	6.5	7.6	8.8	7.6	8.2	11.6	6.7	8.5
12	11.5	8.5	9.7	8.8	7.3	8.0	9.2	7.4	8.2	11.1	6.5	8.2
13	11.3	8.3	9.5	9.0	8.0	8.6	10.8	7.3	8.7	11.9	6.4	8.3
14	11.0	8.1	9.2	9.3	8.2	8.7	9.6	8.3	8.8	10.7	6.6	8.0
15	9.3	8.0	8.6	9.3	7.8	8.5	10.1	8.0	9.0	9.7	6.6	8.4
16	9.6	7.5	8.4	10.3	7.7	8.7	10.1	7.9	8.8	---	---	---
17	10.0	7.5	8.6	10.8	7.6	8.9	10.8	7.7	9.0	---	---	---
18	10.3	7.0	8.4	10.9	7.4	8.7	10.8	7.3	8.6	---	---	---
19	8.9	7.2	7.9	11.3	7.2	8.7	10.7	7.0	8.4	---	---	---
20	9.2	7.0	7.9	11.9	6.9	8.7	8.4	7.0	7.8	10.3	6.6	8.0
21	9.6	6.9	8.0	12.1	6.8	8.8	9.7	7.7	8.5	10.4	6.7	8.0
22	9.8	7.0	8.2	12.1	6.4	8.7	8.3	7.7	8.0	7.4	6.6	7.1
23	10.0	6.9	8.0	12.2	6.6	8.7	8.3	7.8	8.1	8.6	7.2	7.7
24	10.1	7.1	8.3	12.1	6.8	8.8	8.6	7.7	8.0	9.2	7.3	7.9
25	10.8	7.4	8.8	12.7	7.0	9.0	8.8	7.4	8.0	9.0	7.4	8.0
26	12.2	7.8	9.5	12.2	6.8	8.9	---	---	---	9.5	7.4	8.2
27	12.3	7.4	9.3	12.5	6.9	9.0	---	---	---	9.9	7.5	8.4
28	12.7	7.1	9.1	12.0	6.9	8.8	9.1	6.7	7.9	10.4	7.5	8.5
29	12.7	6.7	9.0	11.4	6.6	8.4	---	---	---	11.0	7.4	8.6
30	12.5	6.4	8.6	11.6	6.5	8.4	9.1	7.3	7.9	10.7	7.3	8.5
31	---	---	---	10.5	6.4	7.8	---	---	---	---	---	---
MONTH	12.7	6.4	8.9	12.7	6.3	8.6	12.8	6.4	8.4	11.9	6.4	8.3

## CHRISTINA RIVER BASIN

01480887 VALLEY CREEK AT RAVINE ROAD NEAR DOWNINGTOWN, PA

LOCATION.--Lat 39°59'55", long 75°39'52", Chester County, Hydrologic Unit 02040205, on left bank, 20 ft downstream from Ravine Road bridge, 2.5 miles upstream from mouth, and 2.5 miles east of Downingtown.

DRAINAGE AREA.--14.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to September 1990.

GAGE.--Water-statge recorder, altitude of gage is 245 ft, from topographic map.

REMARKS.--Records good except for periods of estimated records, which are poor. Several observations of water temperature were made during the year. Some diversion of flow by quarry upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 758 ft<sup>3</sup>/s, May 29, 1990, gage height, 6.87 ft, minimum daily discharge, 3.8 ft<sup>3</sup>/s, Aug. 4, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft<sup>3</sup>/s, and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 20	1430	358	5.86	May 29	1815	*758	*6.87
Jan. 30	0200	454	6.16	June 18	2315	427	6.08
May 10	1615	364	5.88	Aug. 13	2330	382	5.94

Minimum daily discharge, 3.8 ft<sup>3</sup>/s, Aug. 4, 1990.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	e9.8	42	26	9.5	12	12	27	9.7	5.7	9.8
2	59	11	e9.6	12	24	9.1	15	11	24	10	4.6	9.2
3	18	13	e9.4	9.8	23	9.1	57	10	23	10	3.9	8.7
4	14	13	e9.1	8.8	28	9.1	22	14	21	11	3.8	6.9
5	13	13	e8.8	8.2	23	9.1	19	25	19	12	9.3	6.6
6	13	11	e8.6	8.4	21	9.1	15	13	18	13	18	6.5
7	13	11	e9.8	7.9	20	9.1	26	11	18	10	15	6.3
8	12	14	e9.2	9.4	19	9.1	20	10	18	10	7.7	5.5
9	12	e23	e8.7	22	19	9.2	15	10	60	19	11	5.2
10	9.7	e20	e8.2	25	47	9.8	15	96	21	13	19	4.9
11	9.8	e14	e9.2	15	22	9.1	25	29	17	10	13	5.4
12	9.0	e12	e8.9	12	17	9.1	16	16	18	11	9.4	5.0
13	8.7	e10	e8.7	12	15	9.1	15	22	16	36	44	5.0
14	8.4	e10	e8.6	12	14	9.9	15	18	16	15	44	5.4
15	9.2	e10	e8.4	12	13	11	43	15	111	13	10	8.0
16	9.8	e15	e8.1	11	12	10	19	13	26	10	8.6	4.5
17	15	e14	e7.9	11	12	15	17	14	21	9.3	7.2	9.1
18	19	e11	e7.7	11	11	22	15	11	64	8.5	7.8	5.6
19	59	e10	e7.4	11	11	13	15	9.7	54	7.6	7.3	5.7
20	116	e25	e7.2	21	10	15	14	9.3	19	6.5	8.0	6.4
21	30	e40	e7.1	20	10	12	13	11	17	9.4	7.0	5.4
22	20	e31	e7.0	14	12	12	12	10	16	14	47	40
23	17	e15	e7.0	13	14	11	12	9.8	16	8.0	15	11
24	14	e14	e6.9	12	18	13	12	9.4	14	7.3	11	6.6
25	12	e14	e6.8	72	11	13	12	9.0	13	6.9	15	5.5
26	12	e13	e6.6	107	9.9	11	11	23	13	6.5	12	5.4
27	12	e11	e6.4	28	10	11	10	13	12	5.2	8.4	5.1
28	13	e12	e6.3	23	10	11	9.0	12	12	5.0	6.8	4.8
29	13	e11	e6.2	54	---	9.4	14	247	10	4.8	21	5.7
30	11	e10	e6.1	123	---	14	13	92	9.6	4.7	16	6.2
31	12	---	11	29	---	13	---	31	---	6.0	9.1	---
TOTAL	604.6	443	250.7	776.5	481.9	345.8	528.0	836.2	743.6	322.4	425.6	225.4
MEAN	19.5	14.8	8.09	25.0	17.2	11.2	17.6	27.0	24.8	10.4	13.7	7.51
MAX	116	40	11	123	47	22	57	247	111	36	47	40
MIN	8.4	10	6.1	7.9	9.9	9.1	9.0	9.0	9.6	4.7	3.8	4.5
CFSM	1.35	1.02	.56	1.73	1.19	.77	1.21	1.86	1.71	.72	.95	.52
IN.	1.55	1.14	.64	1.99	1.24	.89	1.35	2.15	1.91	.83	1.09	.58

WTR YR 1990 TOTAL 5983.7 MEAN 16.4 MAX 247 MIN 3.8 CFSM 1.13 IN. 15.35

e Estimated.



## CHRISTINA RIVER BASIN

01480887 VALLEY CREEK AT RAVINE ROAD NEAR DOWNINGTOWN, PA--Continued

PERIOD OF RECORD.--August 1990 to current year.

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

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE) (00027)	AGENCY ANA- LYZING SAMPLE (CODE) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)
AUG 1990 17...	0850	20.0	25.0	1028	80020	6.6	1.2	425	8.4	--	7.9
SEP 06...	1100	18.0	27.0	1028	80020	5.6	1.0	410	10.0	8.2	8.0
DATE		ALKA- LINITY WAT WH TOT FET MG/L AS CACO3 (00410)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
AUG 1990 17...		120	0.020	0.010	0.50	0.60	2.40	0.030	0.020	0.020	75
SEP 06...		138	0.020	<0.010	0.30	0.30	2.20	0.020	<0.010	<0.010	45
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
AUG 1990 17...		40	23	13	3.1	26	48	<0.10	6.1	20	3
SEP 06...		42	19	13	2.4	27	37	<0.10	4.9	20	<1
DATE		IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	DRAIN- AGE AREA (SQ. MI.) (81024)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
AUG 1990 17...		11	17	92	27	231	0.050	--	--	14.5	426
SEP 06...		10	16	98	46	272	0.070	--	--	14.5	426

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA

LOCATION.--Lat 39°52'11", long 75°35'37", Delaware County, Hydrologic Unit 02040205, on left bank 27 ft upstream from Penn Central Railroad bridge at Chadds Ford, 150 ft upstream from Harvey Run and 1,200 ft downstream from highway bridge on U.S. Highway 1.

DRAINAGE AREA.--287 mi, including that of Harvey Run.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to December 1953, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1917-18 (M), 1919-20, 1922-31 (M), 1932-33. 1934 (M), 1936, 1938 (P), 1939 (M), 1942, 1944-46 (M).

GAGE.--Water-stage recorder. Datum of gage is 150.45 ft above National Geodetic Vertical Datum of 1929. Prior to May 21, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 17 mi upstream.

AVERAGE DISCHARGE.--70 years (water years 1911-53, 1962-90), 399 ft<sup>3</sup>/s, 18.90 in/yr, adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft<sup>3</sup>/s June 22, 1972, gage height, 16.56 ft, from rating curve extended above 9,000 ft<sup>3</sup>/s, on basis of area-velocity study; minimum, 4.9 ft<sup>3</sup>/s, Oct. 2, 1941, gage height, 0.28 ft; minimum daily, 42 ft<sup>3</sup>/s, Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,600 ft<sup>3</sup>/s, May 30, gage height, 9.18 ft; minimum daily discharge, 150 ft<sup>3</sup>/s, Aug. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314	388	314	1190	733	374	348	356	928	232	227	230
2	875	362	304	713	675	357	411	316	524	228	175	215
3	633	371	306	414	644	362	1020	285	502	223	153	212
4	425	374	272	371	689	355	813	307	495	210	150	221
5	375	349	295	404	685	329	670	588	417	221	157	190
6	355	347	295	385	577	329	538	410	383	557	436	187
7	346	341	299	335	544	320	570	320	376	267	474	184
8	324	361	288	327	519	304	526	291	362	224	250	175
9	312	591	271	467	498	317	429	280	575	218	215	167
10	300	573	264	668	829	359	402	920	390	294	619	171
11	328	434	300	803	802	344	503	1200	345	231	864	170
12	304	404	277	500	592	335	443	530	326	226	344	164
13	294	330	e270	404	540	319	386	549	306	641	252	160
14	288	322	e260	340	473	313	375	624	306	389	907	165
15	282	331	e250	359	442	303	722	470	1030	312	317	202
16	283	394	e240	344	449	297	580	372	495	296	251	173
17	325	512	e230	345	451	336	454	380	380	252	231	203
18	531	360	e230	347	395	673	437	349	360	233	217	173
19	1130	332	e230	347	399	418	391	314	823	213	204	159
20	1870	399	e225	382	387	397	378	297	422	206	215	172
21	1510	667	e225	587	365	382	380	310	364	200	231	164
22	739	630	e220	488	382	343	389	316	349	222	619	437
23	611	390	e210	419	494	329	363	289	347	201	700	386
24	547	375	e210	397	590	313	347	279	313	191	389	210
25	504	368	e210	671	463	337	333	270	285	180	373	181
26	474	399	e210	2360	357	318	333	427	280	171	332	169
27	458	371	e205	1000	362	303	316	492	269	168	266	164
28	437	378	e205	694	375	292	303	332	263	163	249	160
29	380	366	e205	635	---	290	317	1360	249	161	239	155
30	364	325	e200	2630	---	330	410	3560	239	163	451	155
31	371	---	272	922	---	387	---	978	---	166	256	---
TOTAL	16289	12144	7792	20248	14711	10765	13887	17771	12703	7659	10763	5874
MEAN	525	405	251	653	525	347	463	573	423	247	347	196
MAX	1870	667	314	2630	829	673	1020	3560	1030	641	907	437
MIN	282	322	200	327	357	290	303	270	239	161	150	155
MEAN <sup>‡</sup>	521	378	250	669	526	361	462	585	411	246	349	194
CFSM <sup>‡</sup>	1.82	1.32	.87	2.33	1.83	1.26	1.61	2.04	1.43	.86	1.22	.68
IN. <sup>‡</sup>	2.09	1.47	1.00	2.69	1.91	1.45	1.80	2.35	1.60	.99	1.40	.75

CAL YR 1989 TOTAL 191841 MEAN 526 MAX 3110 MIN 130 MEAN<sup>‡</sup> 528 CFSM<sup>‡</sup> 1.84 IN.<sup>‡</sup> 24.98  
WTR YR 1990 TOTAL 150606 MEAN 413 MAX 3560 MIN 150 MEAN<sup>‡</sup> 413 CFSM<sup>‡</sup> 1.44 IN.<sup>‡</sup> 19.53

<sup>‡</sup> Adjusted for change in contents of Marsh Creek Reservoir.

e Estimated.

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to current year.

pH: October 1965 to September 1966, December 1971 to current year.

WATER TEMPERATURE: October 1964 to current year.

DISSOLVED OXYGEN: October 1971 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1963 to current year.

INSTRUMENTATION.--Water-quality monitor since August 1971.

REMARKS.--Not operated Dec. 7 to Feb. 23. Other interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 516 microsiemens, July 18, 1986; minimum, 42 microsiemens, Nov. 26, 1979.

pH: Maximum, 9.8, Apr. 9, 1975; minimum, 6.1, Feb. 22, 1976.

WATER TEMPERATURE: Maximum, 31.0° C, July 18, 19, 1977, Aug. 15, 1988; minimum daily, freezing point on many days during winter months.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 5, 1976; minimum, 3.0 mg/L, June 21, 1984.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	TEMPER- ATURE WATER (DEG C) (00010)	PH (STAND- ARD UNITS) (00400)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)
OCT 1989							
04...	1430	392	236	10.6	15.5	7.1	1700
11...	1500	318	248	12.4	13.0	7.4	280
18...	1100	486	236	9.2	17.0	6.8	--
25...	1500	458	238	11.6	12.0	6.9	K250
NOV							
01...	1430	364	250	11.0	15.0	6.8	200
08...	1100	331	246	11.0	12.5	6.9	170
14...	--	305	244	12.6	11.0	7.2	110
29...	1500	327	238	13.6	7.0	7.7	130
MAR 1990							
18...	1430	686	246	9.7	16.0	7.4	--
28...	1500	270	254	12.6	9.0	8.4	81
APR							
05...	1530	620	234	12.2	10.5	7.1	120
10...	1430	364	246	12.7	12.5	7.9	36
19...	1530	368	246	12.8	13.0	7.4	K36
26...	--	309	246	10.4	20.5	7.4	63
MAY							
02...	1500	296	244	9.6	18.5	7.2	45
08...	1500	278	244	10.9	18.5	7.6	K27
14...	1430	554	208	9.4	17.5	7.3	260
22...	1430	296	242	10.5	15.5	6.9	270
30...	1430	2460	146	8.7	16.5	6.6	54000
JUN							
05...	1500	384	240	9.5	19.0	7.0	K190
12...	1430	314	244	10.3	20.0	6.8	K90
19...	1400	708	202	6.9	22.5	6.8	23000
26...	1530	274	250	9.7	21.5	7.5	310
JUL							
03...	1300	218	260	9.0	24.0	7.7	230
10...	0830	323	270	5.2	25.5	7.2	1200
16...	0920	304	248	5.6	22.5	7.2	1000
25...	1500	176	260	8.2	27.0	8.0	K90
AUG							
01...	1500	234	272	8.7	25.0	7.3	440
07...	1100	478	216	7.2	23.0	6.9	K1700
15...	1500	278	224	7.3	24.0	7.1	2600
21...	1430	218	268	8.4	20.5	7.1	4200
28...	1530	242	260	8.2	25.5	7.5	6700
SEP							
04...	1430	199	278	8.4	23.0	7.2	K270
11...	1500	158	284	9.4	22.0	7.5	930
17...	1430	222	282	8.7	18.5	7.2	290
25...	1500	161	286	9.7	16.0	7.0	K920

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	255	250	253	253	246	249	246	239	243	---	---	---
2	250	184	224	252	247	249	256	245	250	---	---	---
3	217	185	202	253	245	248	250	244	247	---	---	---
4	236	219	230	257	244	249	---	---	---	---	---	---
5	245	237	242	251	242	246	---	---	---	---	---	---
6	251	242	247	251	242	247	---	---	---	---	---	---
7	255	247	250	250	244	246	---	---	---	---	---	---
8	258	247	253	247	241	244	---	---	---	---	---	---
9	255	248	251	248	216	232	---	---	---	---	---	---
10	255	248	252	227	219	223	---	---	---	---	---	---
11	250	242	246	230	225	227	---	---	---	---	---	---
12	246	240	244	237	228	233	---	---	---	---	---	---
13	250	241	246	245	233	240	---	---	---	---	---	---
14	259	243	251	---	---	---	---	---	---	---	---	---
15	253	244	250	248	241	245	---	---	---	---	---	---
16	254	244	250	249	240	244	---	---	---	---	---	---
17	258	244	251	247	220	231	---	---	---	---	---	---
18	260	227	240	237	221	231	---	---	---	---	---	---
19	237	177	214	245	237	242	---	---	---	---	---	---
20	205	135	183	250	239	245	---	---	---	---	---	---
21	205	137	169	211	200	204	---	---	---	---	---	---
22	226	207	220	206	199	202	---	---	---	---	---	---
23	235	227	231	229	204	218	---	---	---	---	---	---
24	238	235	236	259	230	240	---	---	---	---	---	---
25	240	236	238	282	240	260	---	---	---	---	---	---
26	240	236	238	245	236	240	---	---	---	---	---	---
27	243	237	239	253	237	245	---	---	---	---	---	---
28	249	237	242	251	241	244	---	---	---	---	---	---
29	249	236	244	246	237	241	---	---	---	---	---	---
30	254	247	249	241	237	239	---	---	---	---	---	---
31	251	246	248	---	---	---	---	---	---	---	---	---
MONTH	260	135	237	282	199	238	256	239	247	---	---	---

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	264	246	253	244	237	241	238	229	234
2	---	---	---	252	246	249	247	237	242	244	231	239
3	---	---	---	254	243	249	235	184	203	248	240	244
4	---	---	---	252	243	247	216	192	204	251	242	246
5	---	---	---	252	243	246	218	213	215	247	218	231
6	---	---	---	254	243	248	227	217	221	227	218	223
7	---	---	---	253	245	249	231	225	228	240	226	235
8	---	---	---	256	247	250	237	229	233	244	234	241
9	---	---	---	259	248	253	242	235	239	247	239	243
10	---	---	---	260	248	255	249	243	246	252	150	223
11	---	---	---	279	251	262	252	244	247	185	149	164
12	---	---	---	262	251	255	254	243	247	213	187	201
13	---	---	---	262	252	256	250	245	248	218	209	214
14	---	---	---	260	253	256	260	247	253	215	207	211
15	---	---	---	262	253	258	260	224	239	220	214	217
16	---	---	---	263	255	258	227	218	221	235	222	229
17	---	---	---	263	253	258	239	229	236	248	233	239
18	---	---	---	256	235	248	246	240	245	240	235	237
19	---	---	---	245	234	239	248	243	246	241	236	239
20	---	---	---	257	245	251	255	247	250	244	236	240
21	---	---	---	254	248	250	254	247	250	245	238	241
22	---	---	---	263	250	258	258	246	253	246	239	242
23	---	---	---	259	253	256	256	245	251	244	238	241
24	---	---	---	264	254	258	254	245	252	250	241	246
25	---	---	---	265	253	258	256	247	252	249	244	246
26	---	---	---	264	252	257	254	243	249	250	230	241
27	---	---	---	263	252	257	251	242	247	232	214	220
28	---	---	---	262	251	256	250	239	245	233	217	227
29	---	---	---	260	250	253	254	238	245	247	116	204
30	---	---	---	256	246	251	256	238	250	173	113	137
31	---	---	---	252	239	245	---	---	---	220	176	199
MONTH	---	---	---	279	234	253	260	184	240	252	113	226
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	212	207	210	253	245	249	277	258	269	257	245	252
2	234	213	226	255	247	251	264	243	254	265	254	260
3	238	214	235	262	252	257	270	243	256	268	258	263
4	232	213	226	262	255	258	284	266	270	280	259	269
5	239	233	236	265	255	260	322	261	273	272	258	266
6	241	235	237	256	190	224	263	206	240	278	268	271
7	245	235	241	238	200	221	223	203	213	280	272	277
8	246	235	239	257	239	248	235	211	222	282	272	278
9	243	198	223	264	255	259	267	236	253	288	276	282
10	233	210	223	276	245	259	---	---	---	288	276	282
11	242	233	239	256	245	251	---	---	---	285	274	279
12	245	238	242	261	248	252	---	---	---	290	278	283
13	248	240	244	248	200	224	---	---	---	297	285	287
14	250	240	244	227	201	211	---	---	---	311	287	293
15	240	174	199	245	228	239	---	---	---	299	284	290
16	222	195	209	251	243	247	248	235	244	288	277	281
17	235	223	232	251	247	249	260	248	256	287	271	279
18	244	234	240	258	249	253	261	254	258	283	270	276
19	233	183	206	259	252	256	263	253	259	306	281	290
20	229	202	219	261	253	255	269	257	262	306	301	303
21	237	230	234	263	255	259	268	255	261	316	302	307
22	245	234	241	267	252	260	264	203	244	330	230	280
23	245	240	243	265	252	257	216	197	206	246	224	233
24	248	240	244	259	254	256	239	218	232	271	237	255
25	248	243	245	262	255	259	249	228	243	286	271	278
26	251	245	248	263	254	259	253	246	249	296	284	290
27	260	247	252	271	259	264	260	248	256	302	294	297
28	252	245	248	268	261	264	262	252	257	303	284	295
29	254	245	250	268	260	264	262	254	259	306	292	296
30	253	245	249	271	264	267	255	223	239	298	291	295
31	---	---	---	276	261	267	246	232	239	---	---	---
MONTH	260	174	234	276	190	252	322	197	249	330	224	280

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	7.4	7.3	7.3	7.4	7.1	7.3	7.8	7.4	7.6	---	---	---
2	7.4	7.2	7.3	7.4	7.2	7.3	7.9	7.5	7.7	---	---	---
3	7.4	7.2	7.3	7.4	7.2	7.3	7.9	7.5	7.7	---	---	---
4	7.4	7.2	7.3	7.4	7.2	7.3	---	---	---	---	---	---
5	7.5	7.3	7.4	7.5	7.3	7.4	---	---	---	---	---	---
6	7.5	7.3	7.4	7.5	7.4	7.4	---	---	---	---	---	---
7	7.5	7.3	7.4	7.6	7.3	7.4	---	---	---	---	---	---
8	7.5	7.3	7.4	7.5	7.3	7.4	---	---	---	---	---	---
9	7.6	7.4	7.5	7.5	7.3	7.4	---	---	---	---	---	---
10	7.7	7.4	7.5	7.4	7.3	7.3	---	---	---	---	---	---
11	7.7	7.0	7.6	7.6	7.3	7.4	---	---	---	---	---	---
12	7.8	7.4	7.6	7.5	7.4	7.5	---	---	---	---	---	---
13	7.9	7.4	7.6	7.6	7.3	7.5	---	---	---	---	---	---
14	8.0	7.4	7.7	---	---	---	---	---	---	---	---	---
15	7.9	7.4	7.7	7.7	7.4	7.6	---	---	---	---	---	---
16	7.8	7.4	7.6	7.7	7.4	7.5	---	---	---	---	---	---
17	7.6	7.3	7.4	7.5	7.3	7.4	---	---	---	---	---	---
18	7.3	6.4	7.2	7.5	7.3	7.4	---	---	---	---	---	---
19	7.2	6.9	7.1	7.7	7.4	7.5	---	---	---	---	---	---
20	7.2	6.8	7.1	7.9	7.5	7.7	---	---	---	---	---	---
21	7.1	7.0	7.0	7.6	7.4	7.5	---	---	---	---	---	---
22	7.1	7.0	7.0	7.6	7.3	7.5	---	---	---	---	---	---
23	7.1	7.0	7.1	7.6	7.4	7.5	---	---	---	---	---	---
24	7.2	7.1	7.1	7.6	7.4	7.5	---	---	---	---	---	---
25	7.2	6.8	7.1	7.6	7.4	7.5	---	---	---	---	---	---
26	7.3	7.1	7.2	7.6	7.4	7.5	---	---	---	---	---	---
27	7.3	7.2	7.2	7.7	7.4	7.5	---	---	---	---	---	---
28	7.3	7.2	7.2	7.7	7.4	7.5	---	---	---	---	---	---
29	7.4	7.2	7.3	7.8	7.4	7.6	---	---	---	---	---	---
30	7.4	7.2	7.3	7.8	7.4	7.6	---	---	---	---	---	---
31	7.4	7.2	7.3	---	---	---	---	---	---	---	---	---
MONTH	8.0	6.4	7.3	7.9	7.1	7.5	7.9	7.4	7.7	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	8.2	7.6	7.9	8.1	7.3	7.7	7.7	7.2	7.4
2	---	---	---	8.2	7.5	7.9	8.4	7.2	7.7	7.7	7.2	7.4
3	---	---	---	8.6	7.5	8.0	8.0	7.1	7.3	7.5	7.2	7.3
4	---	---	---	8.7	7.6	8.2	7.2	7.1	7.1	7.4	7.1	7.2
5	---	---	---	8.7	7.7	8.3	7.6	7.0	7.3	7.3	7.1	7.2
6	---	---	---	8.6	7.6	8.2	7.5	7.1	7.3	7.4	7.1	7.2
7	---	---	---	8.5	7.6	8.1	7.8	7.2	7.4	7.7	7.1	7.3
8	---	---	---	8.5	7.6	8.1	8.2	7.2	7.6	8.1	7.1	7.5
9	---	---	---	8.4	7.6	8.1	8.4	7.2	7.7	8.0	7.2	7.6
10	---	---	---	8.6	7.4	8.0	8.6	7.3	7.9	7.5	7.0	7.2
11	---	---	---	8.6	7.4	8.1	8.2	7.3	7.7	7.2	7.1	7.1
12	---	---	---	8.8	7.4	8.2	8.5	7.3	7.8	7.4	7.2	7.3
13	---	---	---	8.8	7.5	8.4	8.7	7.5	8.1	7.4	7.3	7.3
14	---	---	---	8.8	7.7	8.4	8.8	7.5	8.2	7.5	7.2	7.4
15	---	---	---	8.6	7.6	8.2	8.7	7.3	7.7	7.6	7.3	7.4
16	---	---	---	8.4	7.4	7.9	8.3	7.2	7.6	7.5	7.3	7.4
17	---	---	---	7.8	7.3	7.4	8.1	7.3	7.5	7.6	7.3	7.4
18	---	---	---	7.5	7.2	7.3	8.3	7.2	7.6	7.6	7.3	7.4
19	---	---	---	7.5	7.2	7.3	8.3	7.4	7.8	7.7	7.3	7.5
20	---	---	---	7.4	7.2	7.3	8.5	7.3	7.8	7.6	7.2	7.4
21	---	---	---	8.0	7.3	7.6	8.4	7.2	7.6	7.4	7.2	7.3
22	---	---	---	8.2	7.4	7.7	8.3	7.1	7.5	7.6	7.2	7.3
23	---	---	---	8.5	7.4	7.9	8.3	7.2	7.7	7.5	7.2	7.4
24	---	---	---	8.4	7.5	7.9	8.2	7.2	7.7	7.6	7.2	7.4
25	8.0	7.2	7.6	8.6	7.4	8.0	8.1	7.2	7.6	7.7	7.2	7.4
26	7.8	7.3	7.5	8.8	7.6	8.3	8.0	7.1	7.6	7.4	7.2	7.2
27	7.9	7.2	7.5	8.8	7.8	8.4	7.9	7.3	7.6	7.3	7.1	7.2
28	8.2	7.5	7.7	8.8	7.8	8.4	7.8	7.3	7.5	7.4	7.1	7.2
29	---	---	---	8.8	7.9	8.5	7.6	7.2	7.4	7.3	6.9	7.1
30	---	---	---	8.8	7.5	8.1	7.3	7.2	7.2	7.0	6.8	6.9
31	---	---	---	8.4	7.3	7.8	---	---	---	7.1	7.0	7.0
MONTH	8.2	7.2	7.6	8.8	7.2	8.0	8.8	7.0	7.6	8.1	6.8	7.3

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.1	7.0	7.1	8.7	7.7	8.3	7.8	6.7	7.5	7.6	7.3	7.5
2	7.2	7.0	7.1	8.5	7.7	8.1	7.8	7.4	7.6	7.7	7.4	7.5
3	7.3	7.1	7.2	8.3	7.1	8.0	7.9	7.4	7.6	7.6	7.4	7.5
4	7.3	7.1	7.1	8.2	7.5	7.9	8.0	7.4	7.7	7.6	7.4	7.5
5	7.3	7.0	7.2	8.0	7.4	7.7	7.7	7.4	7.5	7.6	7.3	7.4
6	7.5	7.2	7.3	7.5	7.1	7.2	7.4	7.2	7.3	7.7	7.4	7.5
7	7.7	7.2	7.4	7.3	7.1	7.2	7.5	7.1	7.2	7.7	7.4	7.5
8	7.9	7.2	7.5	7.4	7.2	7.3	7.4	7.2	7.3	7.7	7.4	7.6
9	7.5	7.1	7.2	7.5	7.2	7.4	7.4	7.1	7.2	7.6	7.4	7.5
10	7.5	7.1	7.3	7.4	7.2	7.3	7.2	7.1	7.1	7.6	7.4	7.5
11	7.5	7.2	7.3	7.3	7.2	7.2	---	---	---	7.8	7.3	7.5
12	8.0	7.2	7.5	7.3	7.2	7.2	---	---	---	7.8	7.4	7.6
13	8.1	7.3	7.6	7.2	7.1	7.2	---	---	---	7.6	7.4	7.5
14	7.9	7.3	7.6	7.2	7.1	7.1	---	---	---	7.6	7.4	7.4
15	7.6	7.1	7.2	7.3	7.2	7.2	---	---	---	7.5	7.3	7.4
16	7.3	7.0	7.1	7.3	7.2	7.2	7.5	7.3	7.4	7.4	7.2	7.3
17	7.4	7.1	7.2	7.4	7.2	7.3	7.6	7.4	7.5	7.4	7.2	7.3
18	7.4	7.2	7.3	7.5	7.2	7.3	7.8	7.5	7.6	7.4	7.2	7.3
19	7.3	7.1	7.2	7.6	7.2	7.4	7.8	7.5	7.7	7.3	7.1	7.2
20	7.3	7.1	7.2	7.7	7.3	7.5	7.7	7.4	7.5	7.4	7.2	7.3
21	7.4	7.2	7.2	7.7	7.3	7.5	7.5	7.4	7.4	7.5	7.2	7.3
22	7.4	7.2	7.3	7.7	7.3	7.5	7.5	7.2	7.3	7.3	7.1	7.2
23	7.5	7.3	7.4	7.7	7.3	7.5	7.2	7.2	7.2	7.1	7.0	7.1
24	7.5	7.3	7.4	7.8	7.3	7.5	7.3	7.2	7.2	7.2	7.1	7.1
25	7.6	7.3	7.4	8.1	7.1	7.7	7.4	7.2	7.3	7.4	7.0	7.2
26	8.0	7.3	7.6	8.1	7.5	7.8	7.5	7.2	7.4	7.4	7.2	7.3
27	8.4	7.4	7.9	8.0	7.5	7.8	7.5	7.3	7.4	7.5	7.2	7.4
28	8.6	7.5	8.1	8.0	7.5	7.8	7.7	7.3	7.5	7.8	7.3	7.5
29	8.8	7.6	8.3	8.0	7.5	7.7	7.7	7.4	7.5	7.9	7.4	7.6
30	8.7	7.8	8.4	8.0	7.4	7.7	7.5	7.3	7.4	7.9	7.4	7.6
31	---	---	---	7.7	7.4	7.6	7.5	7.2	7.4	---	---	---
MONTH	8.8	7.0	7.4	8.7	7.1	7.5	8.0	6.7	7.4	7.9	7.0	7.4

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.0	15.0	15.5	16.0	14.0	15.0	4.5	4.0	4.5	---	---	---
2	17.5	16.0	16.5	14.0	12.0	12.5	4.5	3.0	3.5	---	---	---
3	18.5	17.0	17.5	12.0	11.0	11.5	4.0	2.0	3.5	---	---	---
4	17.0	14.5	15.5	10.5	9.0	9.5	---	---	---	---	---	---
5	14.5	13.0	14.0	9.5	8.0	9.0	---	---	---	---	---	---
6	15.0	13.5	14.0	10.5	9.5	10.0	---	---	---	---	---	---
7	16.0	15.0	15.5	12.0	10.0	11.0	---	---	---	---	---	---
8	15.0	13.0	13.5	13.5	12.0	12.5	---	---	---	---	---	---
9	12.5	11.5	12.0	14.5	13.5	14.0	---	---	---	---	---	---
10	11.5	10.0	11.0	13.5	10.5	12.0	---	---	---	---	---	---
11	13.0	11.5	12.0	10.5	9.0	9.5	---	---	---	---	---	---
12	13.5	11.5	12.5	10.5	9.5	10.0	---	---	---	---	---	---
13	15.0	13.0	14.0	10.0	8.5	9.5	---	---	---	---	---	---
14	15.5	14.5	15.0	---	---	---	---	---	---	---	---	---
15	17.0	15.0	16.0	15.0	12.0	13.5	---	---	---	---	---	---
16	18.5	16.5	17.5	16.0	13.5	15.0	---	---	---	---	---	---
17	18.5	18.0	18.0	13.5	9.0	11.0	---	---	---	---	---	---
18	18.0	15.5	17.0	9.0	6.5	7.5	---	---	---	---	---	---
19	15.0	12.0	13.5	6.5	5.5	6.0	---	---	---	---	---	---
20	13.5	12.0	13.0	8.5	6.0	7.0	---	---	---	---	---	---
21	13.0	11.5	12.0	9.0	6.5	8.0	---	---	---	---	---	---
22	12.5	11.0	11.5	6.5	5.5	6.0	---	---	---	---	---	---
23	12.5	11.0	12.0	6.0	3.5	4.5	---	---	---	---	---	---
24	12.5	11.0	12.0	3.5	2.0	2.5	---	---	---	---	---	---
25	12.5	11.0	12.0	3.5	2.0	2.5	---	---	---	---	---	---
26	13.5	11.5	12.5	6.0	3.5	5.0	---	---	---	---	---	---
27	14.0	12.0	13.0	7.0	5.5	6.0	---	---	---	---	---	---
28	14.5	13.0	14.0	9.0	7.0	8.0	---	---	---	---	---	---
29	15.0	13.5	14.5	8.5	6.0	7.5	---	---	---	---	---	---
30	15.0	13.5	14.5	6.0	4.5	5.0	---	---	---	---	---	---
31	16.0	15.0	15.5	---	---	---	---	---	---	---	---	---
MONTH	18.5	10.0	14.1	16.0	2.0	9.0	4.5	2.0	3.8	---	---	---



## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	5.5	3.5	4.5	9.0	8.5	9.0	20.0	16.5	18.0
2	---	---	---	5.5	4.0	4.5	10.5	9.0	9.5	20.0	18.0	19.0
3	---	---	---	8.5	5.5	7.0	10.5	9.5	10.0	18.5	16.0	17.0
4	---	---	---	8.0	6.0	7.0	9.5	8.5	9.0	16.0	14.5	15.0
5	---	---	---	7.0	5.0	6.0	11.5	8.0	9.5	16.0	13.5	14.5
6	---	---	---	6.5	5.5	6.0	11.5	10.0	10.5	17.0	14.5	16.0
7	---	---	---	5.5	3.5	4.5	10.0	8.5	9.0	17.5	15.0	16.5
8	---	---	---	5.5	3.0	4.0	9.5	7.0	8.5	20.0	16.0	18.0
9	---	---	---	6.5	4.5	5.0	11.5	7.5	9.5	20.0	18.5	19.0
10	---	---	---	8.5	6.5	7.5	14.0	10.5	12.0	19.0	17.5	18.5
11	---	---	---	10.0	8.0	9.0	14.0	12.5	13.5	17.5	15.5	16.5
12	---	---	---	14.0	10.0	11.5	12.5	10.0	11.0	16.5	14.5	15.0
13	---	---	---	17.0	13.0	15.0	11.5	8.0	10.0	15.5	14.5	15.0
14	---	---	---	17.5	15.5	16.5	12.0	9.5	11.0	19.0	15.0	16.5
15	---	---	---	17.5	15.5	17.0	13.5	11.5	12.5	19.0	16.5	18.0
16	---	---	---	18.5	16.5	17.5	15.5	12.0	13.5	19.0	18.0	18.5
17	---	---	---	18.5	17.5	18.0	15.0	12.5	14.0	20.5	18.0	19.0
18	---	---	---	17.0	14.5	16.0	13.0	10.0	11.5	20.0	18.0	19.0
19	---	---	---	14.5	12.0	13.0	14.0	10.5	12.5	19.0	16.5	18.0
20	---	---	---	12.5	9.0	11.0	15.5	12.0	13.5	19.0	17.5	18.5
21	---	---	---	10.0	7.5	9.0	15.5	14.0	14.5	18.5	15.5	17.0
22	---	---	---	12.0	8.5	10.0	17.0	13.0	15.0	16.5	14.5	15.5
23	---	---	---	13.5	11.0	12.5	19.0	15.0	17.0	16.5	15.0	16.0
24	---	---	---	12.5	8.5	10.5	19.5	16.5	18.0	17.5	15.0	16.5
25	---	---	---	9.0	7.5	8.0	19.0	16.5	17.5	19.5	16.5	17.5
26	---	---	---	9.5	7.0	8.5	22.0	17.0	19.0	19.0	16.5	18.0
27	---	---	---	9.5	7.5	8.5	23.5	20.5	22.0	18.5	15.5	17.0
28	---	---	---	9.5	7.0	8.5	24.0	21.5	23.0	19.5	17.0	18.5
29	---	---	---	9.5	8.5	9.0	24.0	19.0	21.5	19.5	16.0	17.5
30	---	---	---	9.5	8.5	9.0	19.0	17.0	17.5	17.5	15.0	16.0
31	---	---	---	8.5	8.0	8.5	---	---	---	18.0	15.0	16.5
MONTH	---	---	---	18.5	3.0	9.8	24.0	7.0	13.5	20.5	13.5	17.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	14.5	16.0	26.5	25.0	26.0	25.0	23.0	24.0	23.5	22.0	23.0
2	21.0	17.0	18.5	25.5	23.5	24.5	25.0	22.5	24.0	24.0	22.0	23.5
3	22.0	19.5	21.0	25.0	22.5	24.0	25.5	22.5	24.0	24.5	23.0	24.0
4	21.5	20.0	20.5	26.0	23.5	25.0	26.0	23.5	25.0	24.0	22.0	23.0
5	20.0	17.5	19.0	27.5	25.0	26.0	25.5	23.5	24.5	22.0	20.5	21.5
6	20.5	17.5	19.0	26.5	24.0	25.5	23.5	22.5	23.0	23.0	21.0	22.0
7	22.0	19.5	21.0	25.5	23.5	25.0	25.0	23.0	23.5	24.0	22.5	23.0
8	21.5	20.0	20.5	25.0	23.5	24.5	24.5	23.0	24.0	23.5	22.5	23.0
9	22.0	19.5	20.5	27.0	24.0	25.0	24.0	22.0	23.0	22.0	19.5	20.5
10	23.5	21.0	22.0	26.5	25.0	26.0	---	---	---	21.5	19.5	20.5
11	22.5	20.0	21.0	26.0	23.0	24.5	---	---	---	22.0	20.0	21.0
12	21.5	18.0	20.0	23.0	21.5	22.0	---	---	---	22.5	21.0	22.0
13	21.0	19.5	20.5	21.5	19.0	20.0	---	---	---	22.5	21.5	22.0
14	21.0	20.0	20.0	20.0	19.0	19.5	---	---	---	22.5	21.5	22.0
15	20.0	18.0	19.0	23.0	20.0	21.5	---	---	---	23.0	21.5	22.0
16	22.0	19.0	20.0	24.5	22.5	23.5	24.5	23.0	24.0	21.5	20.0	20.5
17	23.5	20.5	22.0	25.0	23.0	24.0	25.0	22.5	24.0	20.0	17.5	18.5
18	24.0	22.0	23.0	26.0	23.5	25.0	25.5	24.5	25.0	17.5	15.5	16.5
19	23.5	22.0	22.5	27.0	25.0	26.0	26.0	24.5	25.0	16.5	15.0	15.5
20	23.0	20.5	22.0	27.5	25.5	26.5	24.5	21.0	22.5	18.0	15.5	16.5
21	23.0	21.0	22.0	27.0	25.5	26.5	20.5	20.0	20.0	17.5	16.0	17.0
22	23.5	21.5	22.5	27.0	25.5	26.5	20.0	19.5	20.0	17.0	16.5	17.0
23	24.0	22.5	23.5	28.0	26.0	27.0	20.5	19.5	20.0	17.0	16.0	16.5
24	24.0	22.0	23.0	27.5	25.5	26.5	21.5	20.0	20.5	16.5	15.0	15.5
25	22.5	20.5	21.5	27.0	25.0	26.0	22.5	21.0	21.5	16.0	14.0	15.5
26	22.5	20.0	21.0	27.0	24.5	26.0	24.5	21.5	23.0	16.0	15.0	15.5
27	24.0	21.5	23.0	26.0	24.5	25.5	25.5	23.5	24.5	17.5	15.0	16.0
28	25.0	22.5	24.0	26.0	24.5	25.0	25.5	24.0	25.0	18.5	16.5	17.5
29	26.0	24.0	25.0	26.5	24.5	25.5	25.5	24.0	25.0	19.0	17.0	18.0
30	27.0	25.0	26.0	26.0	24.5	25.5	24.5	22.5	23.5	19.0	18.0	18.5
31	---	---	---	25.5	24.5	25.0	23.5	22.0	23.0	---	---	---
MONTH	27.0	14.5	21.3	28.0	19.0	24.8	26.0	19.5	23.3	24.5	14.0	19.6

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	11.7	11.0	11.3	11.3	9.9	10.6	15.1	13.5	14.2	---	---	---
2	11.2	10.0	10.6	12.1	10.7	11.3	15.2	13.7	14.4	---	---	---
3	10.3	9.9	10.0	11.6	10.9	11.3	15.1	13.5	14.3	---	---	---
4	11.0	9.8	10.5	12.9	11.5	12.2	---	---	---	---	---	---
5	11.5	10.7	11.0	13.3	12.1	12.7	---	---	---	---	---	---
6	11.3	10.6	10.9	12.4	11.7	12.0	---	---	---	---	---	---
7	11.3	10.3	10.8	12.7	11.4	12.0	---	---	---	---	---	---
8	11.9	10.7	11.2	11.6	10.8	11.2	---	---	---	---	---	---
9	12.4	11.2	11.7	10.6	10.0	10.2	---	---	---	---	---	---
10	12.9	11.6	12.3	11.4	10.3	10.9	---	---	---	---	---	---
11	12.6	11.4	12.0	12.2	11.3	11.7	---	---	---	---	---	---
12	12.7	11.1	11.8	12.0	11.1	11.6	---	---	---	---	---	---
13	12.9	10.9	11.9	12.6	11.4	11.9	---	---	---	---	---	---
14	13.1	10.8	11.8	---	---	---	---	---	---	---	---	---
15	12.6	10.6	11.6	12.0	10.7	11.3	---	---	---	---	---	---
16	12.0	10.1	11.0	10.7	9.7	10.2	---	---	---	---	---	---
17	10.6	9.5	9.9	12.2	10.5	11.4	---	---	---	---	---	---
18	9.8	9.4	9.6	13.3	12.0	12.7	---	---	---	---	---	---
19	11.0	9.7	10.3	14.3	13.0	13.6	---	---	---	---	---	---
20	11.0	8.9	10.5	13.9	12.8	13.4	---	---	---	---	---	---
21	11.0	10.1	10.8	12.9	11.6	12.3	---	---	---	---	---	---
22	11.3	11.0	11.1	13.8	12.7	13.2	---	---	---	---	---	---
23	11.7	11.1	11.4	14.7	13.0	13.8	---	---	---	---	---	---
24	11.9	11.3	11.6	15.1	14.0	14.6	---	---	---	---	---	---
25	12.0	11.1	11.5	15.2	14.2	14.7	---	---	---	---	---	---
26	11.6	10.9	11.2	14.3	13.4	13.8	---	---	---	---	---	---
27	11.7	10.8	11.2	14.1	12.9	13.5	---	---	---	---	---	---
28	11.7	10.8	11.2	13.4	12.4	12.9	---	---	---	---	---	---
29	11.8	10.7	11.2	14.0	12.0	13.0	---	---	---	---	---	---
30	11.9	10.6	11.2	14.8	13.1	13.9	---	---	---	---	---	---
31	11.0	10.3	10.6	---	---	---	---	---	---	---	---	---
MONTH	13.1	8.9	11.1	15.2	9.7	12.3	15.2	13.5	14.3	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	14.0	12.3	13.2	12.5	10.7	11.6	10.4	8.2	9.2
2	---	---	---	14.0	12.1	13.1	12.6	10.3	11.4	10.3	7.6	8.9
3	---	---	---	13.7	11.5	12.6	11.1	10.1	10.5	9.7	7.7	8.8
4	---	---	---	14.0	11.2	12.6	11.7	10.5	11.1	10.1	8.5	9.2
5	---	---	---	14.7	11.9	13.3	12.5	11.1	11.7	9.4	8.7	9.1
6	---	---	---	14.2	11.7	12.9	12.1	10.0	11.0	10.0	8.3	9.1
7	---	---	---	15.0	12.4	13.7	13.0	10.6	11.7	10.9	8.3	9.5
8	---	---	---	15.1	12.6	13.9	13.8	11.2	12.4	11.3	8.1	9.6
9	---	---	---	14.4	12.0	13.2	13.9	11.2	12.5	11.0	7.4	9.1
10	---	---	---	13.7	11.0	12.4	13.0	10.1	11.6	9.2	7.3	8.0
11	---	---	---	13.0	10.3	11.7	12.0	9.2	10.6	8.8	7.9	8.6
12	---	---	---	14.0	9.5	11.9	13.8	10.2	11.8	9.9	8.7	9.3
13	---	---	---	13.2	9.5	11.4	14.6	11.4	12.9	9.7	9.3	9.5
14	---	---	---	12.5	8.9	10.7	14.5	11.1	12.8	9.9	8.8	9.3
15	---	---	---	11.9	8.7	10.3	12.5	10.3	10.9	9.8	8.4	9.0
16	---	---	---	11.3	8.5	9.9	12.7	10.0	11.1	9.2	8.1	8.7
17	---	---	---	9.3	8.1	8.7	11.1	9.6	10.5	9.4	8.1	8.6
18	---	---	---	10.1	8.3	9.2	13.4	10.5	11.8	9.8	7.8	8.7
19	---	---	---	11.6	9.5	10.5	13.3	10.8	12.1	10.4	8.3	9.3
20	---	---	---	11.6	10.1	10.8	13.1	10.1	11.6	10.3	8.0	9.0
21	---	---	---	13.6	11.6	12.6	11.4	9.3	10.4	9.1	8.0	8.5
22	---	---	---	13.3	11.6	12.5	12.6	9.8	11.1	10.9	8.8	9.7
23	---	---	---	12.0	10.2	11.1	12.0	9.2	10.7	10.7	9.0	9.9
24	---	---	---	12.8	9.5	11.2	11.6	8.7	10.2	10.9	8.9	9.8
25	---	---	---	13.8	11.5	12.6	11.4	8.6	10.0	10.9	8.6	9.7
26	---	---	---	13.6	11.3	12.4	10.8	8.5	9.7	9.1	8.1	8.6
27	---	---	---	13.2	10.5	11.9	9.9	7.0	8.5	9.7	8.8	9.1
28	---	---	---	13.0	10.5	11.8	9.5	6.6	8.0	9.9	8.4	9.1
29	---	---	---	12.8	10.1	11.5	8.1	6.3	7.4	8.8	7.8	8.3
30	---	---	---	12.0	10.2	11.2	9.3	7.5	8.2	9.0	7.9	8.5
31	---	---	---	12.6	10.5	11.6	---	---	---	9.4	8.8	9.1
MONTH	---	---	---	15.1	8.1	11.8	14.6	6.3	10.9	11.3	7.3	9.1

## CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	9.9	9.1	9.5	9.5	6.2	8.0	9.1	7.6	8.2	9.0	7.8	8.4
2	9.1	8.5	8.9	9.7	6.5	8.1	9.2	7.2	8.1	9.0	7.8	8.3
3	8.8	8.1	8.4	9.9	6.7	8.3	9.4	7.4	8.4	8.6	7.4	8.0
4	8.9	7.8	8.3	9.6	6.7	8.1	9.5	7.3	8.4	8.9	7.5	8.1
5	9.8	8.6	9.1	8.8	6.2	7.3	8.0	7.1	7.5	9.1	7.8	8.4
6	10.2	8.8	9.4	6.6	5.8	6.2	7.8	7.2	7.5	9.2	7.9	8.5
7	10.3	8.3	9.2	7.2	6.1	6.6	8.0	7.2	7.5	8.9	7.6	8.2
8	10.9	8.2	9.4	8.1	6.6	7.2	8.4	7.1	7.6	9.1	7.5	8.2
9	9.1	7.7	8.3	8.0	6.7	7.2	7.6	7.0	7.3	9.1	8.0	8.5
10	9.2	7.6	8.2	7.4	6.2	6.7	---	---	---	9.5	8.2	8.7
11	9.4	7.6	8.5	7.2	6.2	6.7	---	---	---	9.8	8.0	8.7
12	10.7	8.3	9.3	7.7	7.1	7.3	---	---	---	9.5	8.0	8.7
13	10.5	8.0	9.3	8.1	7.6	8.0	---	---	---	9.3	7.8	8.5
14	10.5	8.0	9.1	8.3	7.9	8.1	---	---	---	9.1	7.8	8.3
15	9.1	8.1	8.5	8.1	7.5	7.9	---	---	---	8.8	7.5	8.1
16	8.8	8.1	8.4	7.9	7.2	7.5	8.0	7.1	7.6	9.4	7.7	8.3
17	8.9	7.8	8.3	8.0	7.1	7.5	8.2	7.2	7.7	9.2	8.2	8.6
18	8.9	7.4	8.0	8.4	7.2	7.7	8.4	7.7	7.9	10.1	8.8	9.3
19	7.6	7.2	7.4	8.5	7.0	7.7	8.5	7.0	7.7	10.0	9.1	9.5
20	8.0	7.3	7.6	8.5	6.8	7.6	7.8	7.2	7.5	10.3	9.0	9.5
21	8.2	7.3	7.7	8.3	6.7	7.4	8.8	7.7	8.2	10.3	8.8	9.5
22	8.4	7.4	7.8	8.3	6.6	7.4	8.5	8.1	8.3	9.2	8.7	8.8
23	8.3	7.0	7.6	9.2	7.2	8.2	8.4	8.2	8.3	9.2	8.6	8.9
24	8.6	7.1	7.8	9.0	7.1	8.0	8.4	8.1	8.2	9.7	8.8	9.2
25	9.4	7.5	8.4	9.0	7.2	7.9	8.5	8.0	8.2	10.2	9.1	9.4
26	10.2	7.9	8.9	8.6	6.5	7.6	8.6	7.7	8.1	10.0	9.0	9.4
27	10.4	7.7	9.0	8.8	6.7	7.7	8.5	7.3	7.9	10.3	9.1	9.6
28	10.9	7.2	8.9	9.0	7.1	8.1	8.5	7.1	7.8	10.4	8.8	9.5
29	10.9	6.8	8.9	9.1	7.1	8.1	8.4	7.1	7.7	10.5	8.8	9.5
30	10.2	6.5	8.4	9.4	7.0	8.1	7.9	7.3	7.6	10.4	8.6	9.3
31	---	---	---	8.8	7.2	8.0	8.7	7.5	8.0	---	---	---
MONTH	10.9	6.5	8.5	9.9	5.8	7.6	9.5	7.0	7.9	10.5	7.4	8.8

## CHRISTINA RIVER BASIN

## RESERVOIR IN CHRISTINA RIVER BASIN

01480684 MARSH CREEK RESERVOIR.--Lat 40°03'24", long 75°43'06", Chester County, Hydrologic Unit 02040205, on right bank at dam on Marsh Creek, 0.3 mi upstream from mouth and 3.2 mi north of Downingtown. DRAINAGE AREA, 20.1 mi<sup>2</sup>. PERIOD OF RECORD, November 1973 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Resources).

Reservoir formed by earthfill dam with concrete spillway at elevation 359.5 ft. Storage began November 1973. Total capacity 22,190 acre-ft at elevation 373 ft. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent contents above lowest gate sill at elevation 289.5 ft. Records furnished by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 16,380 acre-ft Jan. 25, 1979, elevation, 363.49 ft; minimum (after first filling), 10,410 acre-ft Mar. 3, 1976, elevation, 351.75 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 15,200 acre-ft, May 31, elevation, 361.35 ft; minimum, 12,610 acre-ft, Dec. 30, 356.40 ft.

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

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft <sup>3</sup> /s)
<u>01480684 Marsh Creek Reservoir</u>			
Sept. 30 .....	360.14	14,540	--
Oct. 31 .....	359.75	14,320	- 3.6
Nov. 30 .....	356.65	12,730	- 26.7
Dec. 31 .....	356.46	12,640	- 1.5
CAL YR 1989 .....	--	--	+ 2.5
Jan. 31 .....	358.38	13,600	+ 15.6
Feb. 28 .....	358.55	13,680	+ 1.4
Mar. 31 .....	360.14	14,540	+ 14.0
Apr. 30 .....	360.04	14,480	- 1.0
May 31 .....	361.35	15,200	+ 11.7
June 30 .....	360.00	14,460	- 12.4
July 31 .....	359.90	14,400	- 1.0
Aug. 31 .....	360.15	14,540	+ 2.3
Sept. 30 .....	359.93	14,420	- 2.0
WTR YR 1990 .....	--	--	- 0.2

## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Hydrologic Unit 02040205, on platform about 0.4 mi downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi<sup>2</sup> approximately.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

pH: February 1970 to current year.

WATER TEMPERATURE: February 1970 to current year.

DISSOLVED OXYGEN: February 1970 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1970.

REMARKS.--Interruptions in the daily record were due to malfunctions of the instrument.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 35,600 microsiemens, Nov. 15, 1978, minimum, 100 microsiemens, on several days in 1969, 1970, 1974, and 1979.

pH: Maximum, 8.9, Mar. 4, 1980; minimum, 5.4, Dec. 31, 1972.

WATER TEMPERATURE: Maximum 32.5°C, July 23, 1987; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 16, 19, 1976; minimum, 0.3 mg/L, Sept. 16, 17, 1971.

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	12300	4400	6910	19100	12700	15800
2	---	---	---	---	---	---	15100	5720	9100	15200	10500	13000
3	---	---	---	---	---	---	11100	5080	7820	14800	10300	12000
4	---	---	---	---	---	---	12500	4050	6370	17700	10000	13300
5	---	---	---	---	---	---	14300	4620	8830	16300	2570	8550
6	---	---	---	---	---	---	14500	5010	9710	3470	2840	3170
7	---	---	---	9100	2730	4330	14600	6100	9340	3780	1770	3240
8	---	---	---	9240	2640	4820	13600	6050	8530	4020	2250	3550
9	---	---	---	9120	2980	4950	15200	6700	10200	6810	3610	4360
10	---	---	---	8960	2940	4210	16200	7650	11700	---	---	---
11	15500	7410	9750	7100	2270	3380	17000	7800	11200	---	---	---
12	14800	6540	9940	4110	1690	2480	17200	8260	11100	---	---	---
13	13000	6460	9030	6140	1630	2670	17800	9030	12300	---	---	---
14	---	---	---	6960	1530	2940	17600	8340	12200	13400	6370	8600
15	---	---	---	6360	1730	2810	15800	8920	11400	13200	6180	8820
16	---	---	---	7040	2220	3700	12700	7680	10100	13100	6350	9020
17	---	---	---	4520	1700	2340	---	---	---	12500	6640	9530
18	---	---	---	2730	1400	1810	---	---	---	13000	6790	9500
19	---	---	---	4550	1230	1830	15400	7610	10900	11900	5600	7940
20	---	---	---	3420	1200	1690	15500	8290	12000	12900	5710	9260
21	---	---	---	2570	660	1220	16800	8330	12200	15000	6430	10500
22	---	---	---	10800	1550	5740	13500	8090	11000	17100	7390	12300
23	---	---	---	14100	5320	9930	---	---	---	16200	6970	11200
24	---	---	---	15900	6510	12100	---	---	---	17500	6750	11100
25	---	---	---	16300	6640	11500	---	---	---	16700	6770	10100
26	5000	1300	3130	13800	4980	8550	---	---	---	11900	4900	8290
27	6020	1490	2700	15600	6170	9790	---	---	---	9480	2460	4700
28	7060	1550	3020	15800	7270	10200	---	---	---	4530	1590	2880
29	7300	1660	2870	12200	5110	7540	---	---	---	8870	1570	3260
30	5200	1930	2860	13200	5200	8190	21000	14200	17200	8440	910	3260
31	---	---	---	---	---	---	21700	13700	17000	1730	790	1100
MONTH	15500	1300	5410	16300	660	5360	21700	4050	10800	19100	790	8090

## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	1120	510	763	8330	1710	4050	8490	2620	4310	7190	3190	4580
2	780	370	535	8450	1340	4290	9390	2810	4740	7000	3190	4430
3	600	350	471	5900	1210	2410	8690	2700	4290	8550	2970	4730
4	4090	400	1090	23400	1660	5420	9010	2520	4650	9160	2990	5110
5	5750	360	1560	25500	1390	6990	7190	410	1930	12500	3360	6780
6	6610	230	1840	9810	1770	3920	1970	320	758	14800	4500	7070
7	5910	360	1730	24800	2200	8810	2110	300	805	14100	4770	7970
8	6930	420	1840	22700	1250	6390	1400	220	645	13600	4680	7450
9	5720	520	1970	9160	2360	4480	1770	220	527	14200	4670	7330
10	3530	550	1130	10300	2400	4820	1460	220	478	14000	5270	7770
11	3940	390	1090	10200	2540	4950	1060	130	359	9860	2770	5130
12	1650	460	726	8030	2660	4580	1270	230	730	6780	2420	3510
13	1580	490	790	9010	2760	4730	3020	700	1240	6410	2000	3340
14	770	270	399	8720	2790	4600	6110	760	1680	4850	1390	2300
15	1200	330	574	10200	2810	5040	3370	680	1300	---	---	---
16	4070	440	998	8830	3180	5200	3580	690	1080	1150	710	960
17	610	240	364	9000	2620	5310	3490	490	1340	2860	730	1210
18	5510	270	2220	4960	1800	2980	5140	490	1470	3350	550	1200
19	7560	1660	4180	6120	1750	3210	6980	990	3770	3810	490	1360
20	7640	720	3190	6400	1840	3240	8410	2130	4580	6660	430	1940
21	9750	2350	6340	9540	1850	5640	8510	1690	3760	10600	840	3310
22	12200	3880	7320	11900	4670	8640	9580	1840	4010	9530	1270	3990
23	9890	2980	6340	11900	4740	8000	10800	2160	4530	8290	1240	3280
24	9530	2530	4330	10700	3360	6090	9590	3100	5380	9090	1250	3060
25	9430	1380	5470	10100	3610	6000	10800	3450	5710	7460	1200	2830
26	9470	1460	3980	10600	3130	5340	11200	2890	5440	6980	1410	2860
27	11300	1980	5400	7740	2510	4490	9140	2940	4770	5160	1410	2530
28	7070	1720	3530	8480	2510	4250	8700	2960	4650	6160	1330	2810
29	---	---	---	8080	2240	3620	8010	3200	4500	5000	1410	2560
30	---	---	---	8690	2370	4470	8180	3240	4960	2870	1020	1480
31	---	---	---	9320	2460	4960	---	---	---	3880	620	1320
MONTH	12200	230	2510	25500	1210	5060	11200	130	2950	14800	430	3810
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	4040	540	1210	11500	3680	6820	---	---	---	18100	7590	12100
2	4650	750	1570	14300	5130	8540	---	---	---	18100	7170	11600
3	4010	790	1630	12500	5170	9170	---	---	---	18100	7590	11000
4	4580	750	1450	13400	4240	8120	---	---	---	---	---	---
5	8700	800	2700	12600	3080	7650	---	---	---	15800	9300	12500
6	7830	1250	3710	14900	3200	7480	---	---	---	16500	8860	12000
7	7950	1390	3260	13000	5120	8390	---	---	---	17200	8760	12500
8	8890	1220	3230	15300	6040	9680	---	---	---	18000	8590	11800
9	8560	1880	3840	13700	4150	8490	---	---	---	17200	9200	13000
10	8300	2150	4060	10700	3930	6050	---	---	---	15900	9370	12200
11	8190	2390	4030	---	---	---	---	---	---	16900	8520	11400
12	10500	3020	6280	---	---	---	---	---	---	17100	8610	11800
13	13400	2880	7030	---	---	---	---	---	---	17500	8710	11900
14	10200	3070	5690	---	---	---	---	---	---	17300	9050	11700
15	10500	3310	5720	---	---	---	---	---	---	16300	9420	12300
16	9510	2940	5380	---	---	---	---	---	---	17400	8760	11400
17	10200	2940	5430	---	---	---	---	---	---	16200	8420	11500
18	9270	3460	5550	---	---	---	---	---	---	16200	8560	11600
19	9150	2500	4880	---	---	---	---	---	---	17400	8710	11800
20	10700	2850	5090	---	---	---	---	---	---	16800	8690	11500
21	10500	2650	5020	---	---	---	---	---	---	16300	8760	11400
22	10200	2290	4980	---	---	---	---	---	---	15500	8610	11900
23	10400	3200	5390	---	---	---	---	---	---	15200	8200	11100
24	11800	3450	5960	---	---	---	---	---	---	14100	7510	9850
25	10500	3350	5610	---	---	---	---	---	---	15100	7220	10400
26	10200	3380	5300	---	---	---	---	---	---	14200	7200	10500
27	9480	3410	5500	---	---	---	---	---	---	16500	6640	11000
28	8810	3200	4910	---	---	---	---	---	---	16300	8200	12200
29	9290	3040	5270	---	---	---	14600	6730	9700	17900	8100	12300
30	10100	3520	5700	---	---	---	15500	6150	11100	17700	7860	11900
31	---	---	---	---	---	---	16600	7150	12400	---	---	---
MONTH	13400	540	4510	15300	3080	8040	16600	6150	11100	18100	6640	11700

## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE-Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	7.7	7.5	7.6	7.8	7.7	7.8
2	---	---	---	---	---	---	7.7	7.6	7.6	7.8	7.7	7.7
3	---	---	---	---	---	---	7.7	7.6	7.6	7.7	7.6	7.7
4	---	---	---	---	---	---	7.8	7.6	7.6	7.7	7.6	7.7
5	---	---	---	---	---	---	7.8	7.6	7.7	7.7	7.5	7.7
6	---	---	---	---	---	---	7.8	7.6	7.7	7.8	7.7	7.8
7	---	---	---	7.7	7.5	7.5	7.8	7.6	7.7	7.9	7.7	7.8
8	---	---	---	7.7	7.5	7.6	7.8	7.6	7.7	7.9	7.7	7.8
9	---	---	---	7.6	7.4	7.5	7.8	7.6	7.7	7.9	7.7	7.7
10	---	---	---	7.6	7.4	7.5	7.8	7.6	7.7	7.9	7.6	7.7
11	7.9	7.7	7.8	7.6	7.3	7.4	7.8	7.6	7.7	---	---	---
12	7.9	7.7	7.8	7.4	7.1	7.3	7.8	7.6	7.7	---	---	---
13	7.8	7.7	7.8	7.5	7.2	7.3	7.8	7.6	7.7	---	---	---
14	---	---	---	7.4	7.0	7.2	7.8	7.6	7.7	---	---	---
15	---	---	---	7.4	7.0	7.1	7.8	7.6	7.7	7.8	7.6	7.7
16	---	---	---	7.4	7.2	7.3	7.7	7.6	7.7	7.8	7.6	7.7
17	---	---	---	7.4	7.1	7.2	7.7	7.6	7.6	7.8	7.6	7.7
18	---	---	---	7.2	7.1	7.2	7.7	7.6	7.7	---	---	---
19	---	---	---	7.4	7.1	7.2	7.8	7.6	7.7	7.7	7.5	7.6
20	---	---	---	7.3	7.1	7.2	7.8	7.7	7.7	7.7	7.5	7.6
21	---	---	---	7.4	7.2	7.3	7.8	7.6	7.7	7.7	7.5	7.6
22	---	---	---	7.7	7.4	7.5	7.6	6.9	7.3	7.8	7.5	7.7
23	---	---	---	7.7	7.3	7.7	---	---	---	7.7	7.5	7.6
24	---	---	---	7.8	7.3	7.7	---	---	---	7.7	7.2	7.5
25	---	---	---	7.8	7.6	7.7	---	---	---	7.7	7.5	7.5
26	7.4	7.5	7.3	7.7	7.5	7.6	---	---	---	7.5	7.4	7.5
27	7.5	7.3	7.4	7.7	7.5	7.6	---	---	---	7.5	7.3	7.4
28	7.5	7.3	7.4	7.7	7.6	7.6	---	---	---	7.4	7.2	7.3
29	7.5	7.3	7.4	7.7	7.5	7.6	---	---	---	7.5	7.2	7.3
30	7.7	7.3	7.4	7.7	7.5	7.6	---	---	---	7.5	7.1	7.3
31	---	---	---	---	---	---	---	---	---	7.2	7.1	7.2
MONTH	7.9	7.3	7.5	7.8	7.0	7.4	7.8	6.9	7.7	7.9	7.1	7.6
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	7.1	7.0	7.1	7.6	7.2	7.4	7.5	7.2	7.2	7.2	7.1	7.1
2	7.1	7.0	7.0	7.6	7.2	7.3	7.5	7.2	7.2	7.2	7.0	7.1
3	7.0	6.9	7.0	7.4	7.2	7.2	7.4	7.2	7.2	7.3	7.1	7.1
4	7.3	7.0	7.1	7.5	7.2	7.3	7.5	7.2	7.3	7.4	7.1	7.2
5	7.3	7.0	7.1	7.7	7.2	7.3	7.5	7.1	7.3	7.4	7.1	7.2
6	7.4	6.9	7.1	7.6	7.2	7.3	7.4	7.1	7.2	7.5	7.1	7.2
7	7.3	6.9	7.1	7.7	7.2	7.4	7.5	7.1	7.2	7.5	7.2	7.3
8	7.3	6.9	7.0	7.7	7.2	7.3	7.3	7.0	7.2	7.5	7.2	7.3
9	7.3	6.9	7.1	7.7	7.2	7.4	7.4	7.0	7.1	7.5	7.2	7.3
10	7.2	6.9	7.0	7.7	7.2	7.3	7.3	7.1	7.1	7.4	7.2	7.3
11	7.2	6.9	7.0	7.7	7.2	7.3	7.3	7.1	7.2	7.4	7.2	7.2
12	7.0	6.9	6.9	7.6	7.1	7.3	7.2	7.1	7.1	7.3	7.2	7.2
13	7.0	6.9	6.9	7.6	7.1	7.3	7.2	7.0	7.1	7.3	7.2	7.2
14	7.0	6.9	6.9	7.6	7.1	7.3	7.4	7.1	7.2	7.2	7.1	7.2
15	7.0	6.9	6.9	7.7	7.1	7.2	7.2	7.0	7.1	---	---	---
16	7.3	6.9	7.0	7.6	7.1	7.2	7.2	7.0	7.0	7.1	7.0	7.0
17	7.1	6.9	7.0	7.6	7.2	7.3	7.2	7.0	7.1	7.1	7.0	7.1
18	7.4	7.0	7.2	7.3	7.1	7.2	7.3	7.0	7.1	7.1	6.9	7.0
19	7.5	7.2	7.4	7.4	7.1	7.2	7.5	7.1	7.3	7.2	6.9	7.1
20	7.6	7.2	7.3	7.5	7.2	7.3	7.5	7.2	7.3	7.3	6.9	7.1
21	7.7	7.3	7.5	7.8	7.2	7.5	7.4	7.1	7.2	7.4	7.0	7.1
22	7.9	7.4	7.6	7.9	7.4	7.7	7.4	7.1	7.2	7.3	7.0	7.2
23	7.7	7.3	7.5	7.8	7.4	7.6	7.3	7.0	7.1	7.2	7.0	7.1
24	7.6	7.3	7.4	7.8	7.3	7.5	7.2	7.0	7.1	7.3	7.0	7.1
25	7.6	7.2	7.4	7.6	7.3	7.4	7.3	7.0	7.1	7.2	6.9	7.1
26	7.7	7.2	7.4	7.6	7.2	7.3	7.3	7.0	7.1	7.2	7.0	7.1
27	7.8	7.3	7.5	7.5	7.2	7.3	7.3	7.0	7.1	7.2	7.0	7.1
28	7.5	7.2	7.4	7.5	7.2	7.3	7.3	7.0	7.1	7.2	7.0	7.1
29	---	---	---	7.5	7.1	7.2	7.2	7.0	7.1	7.2	7.0	7.1
30	---	---	---	7.5	7.2	7.3	7.3	7.1	7.2	7.2	6.9	7.1
31	---	---	---	7.5	7.2	7.3	---	---	---	7.1	6.8	6.9
MONTH	7.9	6.9	7.2	7.9	7.1	7.3	7.5	7.0	7.2	7.5	6.8	7.1



## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.1	6.7	6.9	7.2	7.0	7.1	---	---	---	---	---	---
2	7.1	6.8	6.9	7.4	7.1	7.2	---	---	---	---	---	---
3	7.1	6.8	6.9	7.3	7.1	7.2	---	---	---	---	---	---
4	7.1	6.8	6.9	7.4	7.1	7.2	---	---	---	---	---	---
5	7.3	6.9	7.0	7.3	7.1	7.2	---	---	---	---	---	---
6	7.2	6.9	7.1	7.4	7.1	7.2	---	---	---	---	---	---
7	7.3	7.0	7.1	7.3	7.2	7.2	---	---	---	---	---	---
8	7.2	6.9	7.0	7.4	7.2	7.3	---	---	---	---	---	---
9	7.2	6.9	7.1	7.3	7.2	7.3	---	---	---	---	---	---
10	7.1	6.9	7.0	7.3	7.1	7.2	---	---	---	---	---	---
11	7.2	7.0	7.0	---	---	---	---	---	---	---	---	---
12	7.3	7.1	7.2	---	---	---	---	---	---	---	---	---
13	7.4	7.1	7.2	---	---	---	---	---	---	---	---	---
14	7.2	7.1	7.1	---	---	---	---	---	---	---	---	---
15	7.2	7.0	7.1	---	---	---	---	---	---	---	---	---
16	7.2	7.0	7.1	---	---	---	---	---	---	---	---	---
17	7.2	7.0	7.1	---	---	---	---	---	---	---	---	---
18	7.2	7.0	7.1	---	---	---	---	---	---	---	---	---
19	7.2	7.0	7.1	---	---	---	---	---	---	---	---	---
20	7.2	7.0	7.0	---	---	---	---	---	---	---	---	---
21	7.1	6.9	7.0	---	---	---	---	---	---	---	---	---
22	7.1	6.8	7.0	---	---	---	---	---	---	---	---	---
23	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
24	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
25	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
26	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
27	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
28	7.0	7.0	7.0	---	---	---	---	---	---	---	---	---
29	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
30	7.2	7.0	7.1	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	7.4	6.7	7.0	7.4	7.0	7.2	---	---	---	---	---	---

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	7.5	6.5	7.0	---	---	---
2	---	---	---	---	---	---	7.0	6.0	7.0	---	---	---
3	---	---	---	---	---	---	7.0	5.0	6.0	---	---	---
4	---	---	---	---	---	---	5.5	4.0	5.0	---	---	---
5	---	---	---	---	---	---	5.5	4.5	5.0	---	---	---
6	---	---	---	---	---	---	5.5	4.5	5.5	2.5	1.5	2.0
7	---	---	---	14.5	14.0	14.0	5.5	4.5	5.5	2.0	1.5	2.0
8	---	---	---	14.5	14.0	14.0	5.0	4.0	4.5	2.0	1.5	2.0
9	---	---	---	14.5	14.0	14.5	4.0	3.5	4.0	2.5	1.5	2.0
10	---	---	---	14.5	13.5	14.0	4.5	3.5	4.0	2.5	2.0	2.0
11	18.5	17.5	18.5	13.5	12.5	13.0	4.5	4.0	4.0	---	---	---
12	18.5	17.0	18.0	13.5	12.5	13.0	4.0	4.0	4.0	---	---	---
13	19.0	17.5	18.0	13.0	12.0	12.5	4.0	3.5	4.0	---	---	---
14	---	---	---	13.5	12.5	13.0	4.0	3.5	4.0	---	---	---
15	---	---	---	14.0	13.0	13.5	4.0	3.5	3.5	3.0	2.0	2.5
16	---	---	---	14.0	13.0	13.5	3.5	2.0	3.0	3.0	2.0	2.5
17	---	---	---	13.5	12.0	12.5	2.5	1.5	2.0	3.5	2.5	3.0
18	---	---	---	12.5	11.0	11.5	2.0	1.0	1.5	---	---	---
19	---	---	---	11.5	10.5	11.0	1.5	1.0	1.0	4.0	3.0	3.5
20	---	---	---	11.5	10.0	11.0	1.5	1.0	1.5	4.0	3.5	3.5
21	---	---	---	10.0	7.5	9.0	1.5	.5	1.0	4.5	4.0	4.0
22	---	---	---	9.5	8.0	9.0	.5	.5	.5	5.0	4.0	4.5
23	---	---	---	9.0	8.0	8.5	---	---	---	5.5	4.5	5.0
24	---	---	---	8.5	7.0	8.0	---	---	---	5.5	5.0	5.0
25	---	---	---	8.0	7.0	7.5	---	---	---	5.5	5.0	5.5
26	16.5	16.0	16.0	8.0	7.0	7.5	---	---	---	5.5	5.5	5.5
27	16.5	16.0	16.0	8.5	7.5	8.0	---	---	---	5.5	5.0	5.5
28	17.0	16.0	16.5	8.5	8.0	8.0	---	---	---	6.0	5.0	5.5
29	17.0	16.0	16.5	8.5	7.0	7.5	---	---	---	5.5	5.0	5.5
30	---	---	---	8.0	6.5	7.5	---	---	---	6.0	5.5	5.5
31	---	---	---	---	---	---	---	---	---	6.0	5.5	6.0
MONTH	19.0	16.0	17.1	14.5	6.5	10.9	7.5	.5	3.8	6.0	1.5	3.9

## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	6.5	6.0	6.0	5.5	4.5	5.5	9.5	9.5	9.5	17.5	16.5	17.0
2	7.0	6.5	6.5	5.5	5.0	5.5	10.0	9.0	9.5	18.0	17.0	17.0
3	7.0	6.5	6.5	6.0	5.5	5.5	10.0	9.0	9.5	17.5	16.5	17.0
4	7.0	6.5	7.0	5.5	5.0	5.5	9.5	9.0	9.0	17.0	16.0	16.5
5	7.0	6.0	6.5	6.0	5.5	5.5	10.5	9.0	9.5	17.0	16.0	16.5
6	7.5	6.0	6.5	6.0	5.0	5.5	9.5	9.0	9.5	17.5	16.0	16.5
7	7.5	6.5	6.5	6.0	4.5	5.0	9.5	9.0	9.0	17.5	16.0	16.5
8	7.5	6.5	7.0	6.5	5.0	5.5	10.0	8.5	9.0	18.0	16.5	17.0
9	7.5	6.5	7.0	6.5	5.5	6.0	10.0	9.0	9.5	18.0	16.5	17.5
10	7.5	7.0	7.5	7.0	6.0	6.5	10.5	9.0	10.0	18.0	17.0	17.5
11	7.5	6.5	7.0	7.5	6.5	6.5	10.5	10.0	10.5	18.0	17.5	18.0
12	7.0	6.5	7.0	8.0	7.0	7.5	10.5	9.5	10.0	18.0	17.0	17.5
13	7.5	6.5	7.0	9.0	7.5	8.0	11.0	9.5	10.0	17.5	17.0	17.5
14	7.5	7.0	7.0	9.5	8.5	9.0	10.5	9.5	10.0	18.5	17.5	18.0
15	7.0	7.0	7.0	10.0	9.0	9.5	11.0	10.5	11.0	---	---	---
16	8.5	7.5	8.0	10.5	9.5	10.0	12.0	10.5	11.5	19.0	18.5	18.5
17	8.0	7.0	8.0	11.5	10.5	11.0	12.5	11.0	11.5	19.5	18.0	19.0
18	7.5	6.5	7.0	11.5	11.0	11.5	12.0	11.0	11.5	19.5	18.5	19.0
19	8.0	7.0	7.5	11.5	11.0	11.0	12.5	11.0	11.5	20.0	19.0	19.5
20	7.5	6.5	7.0	11.5	10.0	11.0	13.0	11.0	12.0	20.5	19.0	19.5
21	7.5	6.0	7.0	10.5	9.5	10.0	13.0	12.0	12.5	19.5	18.5	19.0
22	8.0	6.5	7.0	11.5	10.0	10.5	14.0	12.0	13.0	19.0	18.5	19.0
23	8.5	7.5	8.0	12.0	10.5	11.0	14.5	13.0	13.5	19.5	18.5	19.0
24	8.0	7.5	8.0	11.0	10.0	10.5	14.5	13.5	14.0	19.5	18.5	19.0
25	8.0	5.5	6.5	10.5	10.0	10.0	15.0	13.5	14.5	20.0	19.0	19.5
26	6.5	4.5	5.5	11.0	10.0	10.0	16.0	14.0	15.0	19.5	19.0	19.0
27	6.0	5.0	5.5	10.5	9.0	10.0	17.0	15.0	16.0	20.0	18.5	19.0
28	6.0	5.0	5.5	10.5	9.5	10.0	17.5	15.5	16.5	20.0	19.0	19.5
29	---	---	---	10.0	9.5	10.0	17.0	16.5	16.5	19.5	19.0	19.5
30	---	---	---	9.5	9.5	9.5	17.0	16.0	16.5	19.5	19.0	19.5
31	---	---	---	9.5	9.5	9.5	---	---	---	20.5	19.0	19.5
MONTH	8.5	4.5	6.9	12.0	4.5	8.5	17.5	8.5	11.7	20.5	16.0	18.2
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	21.5	19.5	20.0	28.0	26.5	27.0	---	---	---	26.5	25.0	25.5
2	22.0	20.0	21.0	27.0	26.0	26.5	---	---	---	26.5	25.5	26.0
3	22.5	21.0	21.5	27.0	25.5	26.5	---	---	---	26.5	25.5	26.0
4	23.0	21.5	22.0	28.0	26.0	26.5	---	---	---	---	---	---
5	22.5	21.0	21.5	28.5	26.5	27.0	---	---	---	25.5	25.0	25.5
6	22.5	21.0	21.5	29.5	26.5	27.0	---	---	---	26.0	25.0	25.5
7	22.5	21.0	22.0	27.5	26.5	27.0	---	---	---	26.0	25.5	25.5
8	22.5	21.5	22.0	26.5	26.0	26.5	---	---	---	25.5	25.0	25.5
9	22.5	21.5	22.0	27.5	26.0	26.5	---	---	---	25.0	24.0	24.5
10	23.0	21.5	22.5	27.5	26.5	27.0	---	---	---	24.5	24.5	24.5
11	22.0	21.0	22.0	---	---	---	---	---	---	25.0	24.5	24.5
12	22.0	20.5	21.0	---	---	---	---	---	---	25.5	24.5	25.0
13	22.0	20.5	21.0	---	---	---	---	---	---	25.0	25.0	25.0
14	21.5	21.0	21.5	---	---	---	---	---	---	25.0	24.5	25.0
15	22.0	21.0	21.5	---	---	---	---	---	---	25.0	24.5	25.0
16	23.0	21.5	22.0	---	---	---	---	---	---	25.0	24.0	24.5
17	24.0	22.0	22.5	---	---	---	---	---	---	24.5	23.0	23.5
18	24.0	22.5	23.0	---	---	---	---	---	---	23.0	22.0	22.5
19	24.5	23.0	23.5	---	---	---	---	---	---	22.5	21.5	22.0
20	24.5	23.0	23.5	---	---	---	---	---	---	22.0	21.5	22.0
21	25.0	23.5	24.0	---	---	---	---	---	---	22.0	21.0	21.5
22	25.5	24.0	24.5	---	---	---	---	---	---	21.5	21.0	21.5
23	25.5	24.5	25.0	---	---	---	---	---	---	21.5	20.5	21.0
24	25.0	24.5	25.0	---	---	---	---	---	---	21.0	20.0	20.5
25	25.0	24.5	25.0	---	---	---	---	---	---	20.5	19.5	20.0
26	25.5	24.5	25.0	---	---	---	---	---	---	21.0	19.5	20.0
27	26.5	25.0	25.5	---	---	---	---	---	---	20.5	19.5	20.0
28	28.5	26.5	27.0	---	---	---	---	---	---	21.0	20.0	20.5
29	27.5	26.0	26.5	---	---	---	26.5	25.0	26.0	21.0	20.5	20.5
30	27.5	26.0	27.0	---	---	---	26.5	25.0	25.5	21.0	20.5	20.5
31	---	---	---	---	---	---	26.5	25.0	25.5	---	---	---
MONTH	28.5	19.5	23.1	29.5	25.5	26.7	26.5	25.0	25.7	26.5	19.5	23.2

## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	11.1	10.6	10.8	---	---	---
2	---	---	---	---	---	---	10.9	10.3	10.5	---	---	---
3	---	---	---	---	---	---	10.7	10.3	10.5	---	---	---
4	---	---	---	---	---	---	10.8	10.1	10.5	---	---	---
5	---	---	---	---	---	---	11.7	10.0	11.1	---	---	---
6	---	---	---	---	---	---	12.0	9.3	11.7	14.4	11.7	13.8
7	---	---	---	9.1	8.8	8.9	12.0	11.3	11.7	14.4	13.8	14.1
8	---	---	---	9.0	8.6	8.8	11.1	10.4	10.7	14.6	12.6	13.7
9	---	---	---	9.0	8.6	8.8	10.6	10.2	10.4	13.5	11.9	12.7
10	---	---	---	8.8	8.5	8.7	11.4	10.6	10.9	12.9	12.4	12.6
11	8.6	8.2	8.5	8.9	8.5	8.7	10.8	10.1	10.4	---	---	---
12	8.5	8.1	8.3	9.0	8.6	8.8	10.4	10.1	10.2	---	---	---
13	8.3	8.0	8.1	9.1	8.6	8.9	10.8	10.2	10.4	---	---	---
14	---	---	---	11.4	8.9	9.9	11.6	11.2	11.4	---	---	---
15	---	---	---	10.8	9.6	10.1	11.4	10.6	11.0	13.0	12.5	12.8
16	---	---	---	11.2	10.2	10.7	11.4	10.8	11.1	12.8	9.4	11.8
17	---	---	---	10.9	9.8	10.4	11.4	10.5	11.0	---	---	---
18	---	---	---	11.1	9.7	10.3	11.0	10.3	10.6	---	---	---
19	---	---	---	11.4	9.9	10.5	13.3	10.4	12.2	14.7	13.9	14.3
20	---	---	---	11.7	9.8	10.8	13.0	12.7	12.9	14.2	13.3	13.7
21	---	---	---	10.8	9.7	10.4	13.3	12.1	12.8	13.5	12.7	13.2
22	---	---	---	12.4	10.3	11.4	---	---	---	13.1	12.5	12.8
23	---	---	---	11.7	11.1	11.5	---	---	---	13.2	12.1	12.6
24	---	---	---	12.2	11.4	11.8	---	---	---	12.2	10.3	12.0
25	---	---	---	12.4	11.2	11.9	---	---	---	11.9	11.2	11.6
26	7.7	7.0	7.5	11.9	10.9	11.5	---	---	---	11.4	10.9	11.2
27	7.6	7.0	7.3	11.5	10.7	11.1	---	---	---	11.2	10.5	10.9
28	7.6	6.9	7.2	11.2	10.3	10.9	---	---	---	10.8	10.1	10.6
29	7.3	6.9	7.0	11.2	10.7	11.0	---	---	---	10.7	10.0	10.3
30	---	---	---	11.0	10.6	10.8	---	---	---	10.7	9.9	10.2
31	---	---	---	---	---	---	---	---	---	10.4	9.8	10.0
MONTH	8.6	6.9	7.7	12.4	8.5	10.3	13.3	9.3	11.1	14.7	9.4	12.2
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	10.2	9.8	9.9	12.6	11.8	12.2	9.3	8.5	8.8	7.7	7.3	7.5
2	10.2	9.8	10.0	12.8	12.2	12.4	9.2	8.5	8.9	7.7	7.4	7.5
3	10.3	10.0	10.1	12.5	12.0	12.3	9.2	8.6	8.8	7.7	7.3	7.5
4	10.8	10.2	10.4	12.4	12.1	12.2	9.3	8.7	8.9	8.0	7.4	7.7
5	11.0	10.6	10.8	12.2	12.0	12.1	10.6	8.8	9.7	7.9	7.6	7.8
6	11.2	10.6	11.0	12.2	11.7	11.9	10.3	9.7	10.0	---	---	---
7	11.4	11.0	11.1	12.2	11.7	11.9	9.8	9.3	9.5	8.0	7.5	7.7
8	11.3	10.8	11.0	12.4	11.4	11.9	9.7	9.1	9.3	7.8	7.5	7.7
9	11.0	10.7	10.8	12.6	11.8	12.1	9.7	9.1	9.2	8.0	7.4	7.6
10	10.9	10.4	10.7	12.5	11.6	12.0	9.8	9.1	9.4	7.9	7.3	7.6
11	11.0	10.6	10.8	12.4	11.7	11.9	10.4	9.5	10.0	8.0	7.4	7.6
12	11.0	10.5	10.8	12.0	11.2	11.6	10.9	9.8	10.4	7.8	7.5	7.7
13	10.8	10.6	10.7	12.1	11.0	11.4	10.6	10.1	10.4	7.8	7.3	7.6
14	11.1	10.9	10.9	11.8	10.8	11.2	10.4	10.1	10.2	7.6	7.3	7.4
15	11.2	10.7	11.0	11.9	10.7	11.3	10.2	9.9	10.1	---	---	---
16	11.2	10.8	11.1	12.0	10.6	11.1	10.1	9.7	9.8	8.3	7.9	8.1
17	11.3	10.8	11.1	11.4	10.4	10.7	9.8	9.1	9.5	8.4	7.7	8.0
18	11.3	11.0	11.1	10.5	10.1	10.3	9.7	9.3	9.5	8.2	7.8	8.0
19	11.5	11.1	11.3	10.3	10.0	10.1	9.8	9.3	9.5	8.4	7.9	8.2
20	11.6	11.3	11.4	11.7	10.1	11.0	9.6	9.2	9.4	8.5	7.9	8.2
21	11.5	11.0	11.3	11.7	10.8	11.3	9.5	9.0	9.3	8.6	8.0	8.3
22	11.6	11.0	11.3	11.4	10.8	11.1	9.2	9.0	9.1	8.7	8.1	8.3
23	11.6	10.9	11.3	11.0	10.4	10.8	9.0	8.7	8.8	8.5	8.0	8.2
24	11.4	10.9	11.2	10.7	10.2	10.4	8.8	8.4	8.7	8.4	7.8	8.1
25	11.7	10.9	11.2	10.3	9.9	10.1	8.6	8.3	8.5	7.9	7.5	7.7
26	11.8	11.1	11.6	10.3	9.6	9.9	8.7	8.1	8.4	8.2	7.5	7.8
27	12.1	11.7	11.8	10.1	9.7	9.9	8.4	7.8	8.0	7.9	7.4	7.7
28	12.1	11.7	11.9	10.2	9.6	9.8	8.1	7.6	7.8	7.5	7.0	7.3
29	---	---	---	9.9	9.1	9.5	7.9	7.4	7.7	7.6	7.0	7.3
30	---	---	---	9.9	9.3	9.6	7.9	7.5	7.7	7.6	7.2	7.5
31	---	---	---	9.9	8.9	9.4	---	---	---	7.6	6.9	7.3
MONTH	12.1	9.8	11.0	12.8	8.9	11.1	10.9	7.4	9.2	8.7	6.9	7.8

## DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.1	6.8	6.9	7.3	6.6	6.9	---	---	---	---	---	---
2	6.9	6.4	6.6	7.8	6.6	7.2	---	---	---	---	---	---
3	6.9	6.4	6.6	7.6	6.8	7.2	---	---	---	---	---	---
4	7.9	6.3	7.2	7.6	6.6	7.1	---	---	---	---	---	---
5	8.0	7.3	7.6	7.5	6.3	7.0	---	---	---	---	---	---
6	8.0	7.3	7.6	7.6	6.6	6.9	---	---	---	---	---	---
7	7.6	7.2	7.4	7.2	6.4	6.7	---	---	---	---	---	---
8	7.8	7.0	7.5	7.1	6.2	6.6	---	---	---	---	---	---
9	7.9	7.0	7.5	7.0	6.3	6.6	---	---	---	---	---	---
10	7.4	6.9	7.1	6.6	5.9	6.3	---	---	---	---	---	---
11	7.5	6.8	7.2	---	---	---	---	---	---	---	---	---
12	7.5	7.1	7.3	---	---	---	---	---	---	---	---	---
13	8.4	7.4	7.9	---	---	---	---	---	---	---	---	---
14	8.2	7.8	8.0	---	---	---	---	---	---	---	---	---
15	8.0	7.5	7.7	---	---	---	---	---	---	---	---	---
16	7.8	7.4	7.6	---	---	---	---	---	---	---	---	---
17	7.8	7.3	7.5	---	---	---	---	---	---	---	---	---
18	8.0	7.3	7.5	---	---	---	---	---	---	---	---	---
19	7.9	7.4	7.6	---	---	---	---	---	---	---	---	---
20	7.5	7.2	7.4	---	---	---	---	---	---	---	---	---
21	7.5	7.0	7.2	---	---	---	---	---	---	---	---	---
22	7.8	6.9	7.4	---	---	---	---	---	---	---	---	---
23	7.5	7.0	7.3	---	---	---	---	---	---	---	---	---
24	7.5	7.0	7.2	---	---	---	---	---	---	---	---	---
25	7.3	6.9	7.1	---	---	---	---	---	---	---	---	---
26	7.5	6.9	7.2	---	---	---	---	---	---	---	---	---
27	7.5	7.1	7.2	---	---	---	---	---	---	---	---	---
28	7.5	6.8	7.1	---	---	---	---	---	---	---	---	---
29	7.6	6.7	7.0	---	---	---	---	---	---	---	---	---
30	7.3	6.6	7.0	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	8.4	6.3	7.3	7.8	5.9	6.8	---	---	---	---	---	---

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record 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. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

## 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

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual Maximum Gage height (feet)	Discharge (ft <sup>3</sup> /s)
LACKAWAXEN RIVER BASIN							
01429300	Dyberry Creek above Reservoir near Honesdale, Pa.	Lat 41°39'26", long 75°17'12", Wayne County, on right bank 955 ft downstream from bridge on West Branch Dyberry Creek at Tanners Falls, 0.2 mi downstream from confluence of the east and west branches of Dyberry Creek, and 6 mi north of Dyberry. Datum of gage is 1,023.43 ft National Geodetic Vertical Datum of 1929. Peak of Record: 11.75 ft, 5,140 ft <sup>3</sup> /s, Sept. 27, 1985	45.8	1975-90	10-20-89	9.22	1,810
VANDERMARK CREEK BASIN							
01438300	Vandermark Creek at Milford, Pa.	Lat 41°19'35", long 74°47'50", Pike County, at stone bridge on Broad Street in Milford, and 0.4 mi above mouth. Datum of gage is 490.50 ft National Geodetic Vertical Datum of 1929. Peak of Record: 3.65 ft, 372 ft <sup>3</sup> /s, Sept. 25, 1975.	5.36	1962-90	10-20-89	3.04	170
BRODHEAD CREEK BASIN							
01440300	Mill Creek at Mountainhome, Pa.	Lat 41°09'50", long 75°16'00", Monroe County, at stone-arch bridge on macadam road 0.5 mi east of Mountainhome, and 1.5 mi above mouth. Peak of Record: 12.65 ft, 1650 ft <sup>3</sup> /s, July 28, 1969.	5.84	1961-90	4- 5-84 9-27-85 3-15-86 9-13-87 5-20-88 5- 6-89 10-20-89	11.38 7.76 6.94 9.85 6.72 8.04 6.90	1330b 455b 299b 931b 261b 521b 292
LEHIGH RIVER BASIN							
01451192	Lehigh River at Allentown, Pa.	Lat 40°36'23", long 75°27'17", Lehigh County, on upstream side of Hamilton Street Bridge, at Allentown, 200 ft downstream from lock and dam, and 0.7 mi upstream from Little Lehigh Creek. Peak of Record: 46.89 ft, 43,200 ft <sup>3</sup> /s, Sept. 9, 1987.	1,033	1977-81d 1982-90	5-17-90	43.34	26,400

b Revised.

d Operated as low-flow partial-record station.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual Maximum Gage height (feet)	Dis-charge (ft <sup>3</sup> /s)
LEHIGH RIVER BASIN--Continued							
01454651	Saucon Creek near Hellertown, Pa.	Lat 40°36'18", long 75°20'38", Northampton County, on downstream side of Fire Lane Bridge, near Hellertown, at Saucon Park. Peak of Record: 229.94 ft, 2,990 ft <sup>3</sup> /s, Sept. 20, 1989.	46.5	1989-90	9-20-89 5-29-90	229.94 229.81	2,990b 2,750
SCHUYLKILL RIVER BASIN							
01467500	Schuylkill River at Pottsville, Pa.	Lat 40°40'53", long 76°11'25", Schuylkill County, at bridge on State Highway 61 at Pottsville, and 1.7 mi downstream from Mill Creek. Peak of Record: 9.52 ft, 3,650 ft <sup>3</sup> /s, April 16, 1983.	53.4	1975-90	11-16-89	6.52	1,410
01467948	West Branch Schuylkill River near Cressona, Pa.	Lat 40°38'30", long 76°11'43", Schuylkill County, at bridge on Gordon-Nagle Trail, 0.75 mi upstream from Panther Creek, and 1.0 mi north of Cressona. Peak of Record: 6.74 ft, 2,940 ft <sup>3</sup> /s, Sept. 26, 1975.	52.5	1975-90	1-30-90	4.26	604
01470190	Little Schuylkill River at Port Clinton, Pa.	Lat 40°35'24", long 76°01'43", Schuylkill County, 0.65 mi upstream from Rattling Run and 0.7 mi north of Port Clinton. Peak of Record: 9.86 ft, 7,710 ft <sup>3</sup> /s, Jan. 24, 1979.	132	1975-90	11-16-89	7.32	3,430
01470766	Schuylkill River at Temple, Pa.	Lat 40°24'52", long 75°56'23", Berks County, at concrete bridge on State Highway Route 383, 0.7 mi downstream from mouth of Maiden Creek, 0.6 mi west of Temple. Peak of record: 20.36 ft, 29,700 ft <sup>3</sup> /s, April 16, 1983.	641	1978-90	11-16-89	12.20	12,700
01470810	Northkill Creek at Bernville, Pa.	Lat 40°26'22", long 76°07'12", Berks County, at bridge on State Highway 183, 0.3 mi upstream from Little Northkill Creek and 0.7 mi northwest of Bernville. Peak of Record: 10.39 ft, 2,480 ft <sup>3</sup> /s, Jan. 26, 1976.	18.8	1975-90	11-16-89	7.91	1,540
01470818	Little Northkill Creek near Bernville, Pa.	Lat 40°26'33", long 76°07'23", Berks County, at bridge on L.R. 06013, 1.5 mi west of Bernville and 1.6 mi upstream from mouth. Peak of Record: 9.88 ft, 2,130 ft <sup>3</sup> /s, Jan. 26, 1976.	21.2	1975-81 1983-90	11-16-89	7.43	1,510
01471660	Schuylkill River at Birdsboro, Pa.	Lat 40°16'04", long 75°48'40", Berks county, on Railroad Bridge, on right bank 1,000 feet upstream from Route 82 Bridge, crossing Schuylkill River in Birdsboro. Peak of Record: 158.72 ft, 30,700 ft <sup>3</sup> /s, April 16, 1983.	976	1981-90	5-17-89 1-30-90	156.67b 150.19	25,700 11,200

b Revised.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual Maximum Gage height (feet)	Dis-charge (ft <sup>3</sup> /s)
SCHUYLKILL RIVER BASIN-Continued							
01472162	Schuylkill River at Phoenixville, Pa.	Lat 40°08'11", long 75°30'41", Chester County, on the downstream end of the left bank wingwall of Reading Railroad bridge across the mouth of French Creek at Phoenixville. Peak of Record: 100.58 ft, 79,100 ft <sup>3</sup> /s, June 23, 1972.	1,280	1971-90	5-30-90	84.36	25,600
01473193	Schuylkill River at Port Kennedy, Pa.	Lat 40°06'29", long 75°25'16", Montgomery County, on left bank 200 ft upstream from Betzwood Bridge, and 4.0 mi downstream from Perkiomen Creek at Port Kennedy. Peak of Record: 75.64 ft, 65,500 ft <sup>3</sup> /s, Jan. 25, 1979.	1,691	1977-90	5-30-90	70.55	41,600
01473470	Stony Creek at Norristown, Pa.	Lat 40°07'38", long 75°20'43", Montgomery County, on right bank at culvert on Steiger Street in Norristown, 0.1 mi downstream from dam, 0.7 mi downstream from unnamed tributary, and 1.1 mi upstream from mouth. Peak of Record: 10.14 ft, 15,800 ft <sup>3</sup> /s, June 18, 1990.	20.4	1975-90	6-18-90	10.14	15,800
01473500	Schuylkill River at Norristown, Pa.	Lat 40°06'40", long 75°20'50", Montgomery County, on right bank at Conrail Bridge pier, 600 ft upstream from Dekalb Street Bridge in Norristown. Peak of Record: 63.34 ft, 44,800 ft <sup>3</sup> /s April 16, 1983.	1,760	1981-90	5-30-90	60.41	29,200
CHRISTINA CREEK BASIN							
01478200	Middle Branch White Clay Creek near Landenberg, Pa.	Lat 39°46'54", long 75°48'03", Chester County, at bridge on L.R. 15017, 1.4 mi above mouth, and 1.7 mi west of Landenberg. Peak of Record: 12.29 ft, 3,860 ft <sup>3</sup> /s, June 22, 1972.	12.7	1960-90	10-20-89	7.08 <sup>e</sup>	737 <sup>e</sup>
01480610	Sucker Run near Coatesville, Pa.	Lat 39°58'20", long 75°51'03", Chester County, at concrete bridge on South Park Avenue at State Highway 372, 1.6 mi above mouth, and 2 mi west of Coatesville. Peak of Record: 8.49 ft, 1,500 ft <sup>3</sup> /s, July 21, 1979.	2.57	1964-90	1-30-90	5.08	165

b Operated as low-flow partial-record station.

e Estimated.



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## 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 where 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 1989

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements Date	Discharge (ft <sup>3</sup> /s)
EQUINUNK CREEK BASIN						
01427200	Equinunk Creek near Equinunk, Pa.	Lat 41°50'15", long 75°13'55", Wayne County, at highway bridge 700 ft downstream from South Branch Equinunk Creek, and 1.4 mi above mouth and Equinunk.	56.3	1946-57 1978-90	6- 5-90 6-13-90 6-21-90 7-20-90 7-27-90 8-15 90 9-21-90	42.3 22.8 16.3 42.9 * 16.8 * 58.7 * 16.7 *
SHOHOLA CREEK BASIN						
01432500	Shohola Creek at Shohola, Pa.	Lat 41°27'20", long 74°55'25", Pike County, 1.7 mi upstream from mouth, and 1.4 mi south of Shohola. Prior to 1959 at highway bridge 0.4 mi upstream.	83.6	1920-28† 1957-80b 1981-90	5- 9-90 6-22-90 7-26-90 8- 9-90 9-19-90	123 * 96.5 * 86.5 * 101 * 19.5 *

α Operated as a continuous-record station.

b Operated as miscellaneous station.

\* Not base flow.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1990

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements Discharge Date (ft <sup>3</sup> /s)
LACKAWAXEN RIVER BASIN					
Wallenpaupack Creek	Lackawaxen River	Lat 41°20'90", long 75°20'26", Wayne County, at Bridge on Dirt Road, 2.6 mi south of intersection of Route 84 and 191, near East Sterling, Pa.	33.4	1978-81 1989	10-18-89 68.3 12-12-89 71.8 1-23-90 116 3-15-90 98.7 4- 5-90 222 5-23-90 166 7- 5-90 55.3 8- 8-90 41.8
Lackawaxen River	Delaware River	Lat 41°28'33", long 75°02'12", Pike County, at mouth, downstream from brige at SR0590, at Rowland, Pa.	596	1989	1-23-90 647 6-27-90 192
SCHUYLKILL RIVER BASIN					
Maiden Creek	Schuylkill River	Lat 40°26'21", long 75°55'37", Berks County, at Willeys Bridge 1 mile upstream from SR61.	215	1979-80 1989	10 -6-89 179 11- 2-89 23.1 2- 1-90 1200 3- 8-90 112 6-12-90 299 8-27-90 550
CHRISTINA RIVER BASIN					
White Clay Creek	Christina River	Lat 39°45'02", long 75°46'19", Chester County, at bridge on Sharpless Rd., 1.2 mi south of Landenberg.	60.0	1989	11- 7-89 32.2 12-14-89 15.5 1-30-90 161 3-15-90 29.4 5- 1-90 30.9 7- 3-90 18.6 8-14-90 32.3
Big Elk Creek	Elk River	Lat 39°43'50", long 75°50'55", Chester County, at bridge on Lewisville Rd., 9.2 mi north of Elkton, Md.		--	4-26-90 48.7 7- 3-90 33.6 8-14-90 75.8

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	TIME	DIS- CHARGE, INST CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)										
OCT 1989 11...	1430	10	167	7.7	15.0	12.5	0.50	11.8	55	23
01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)										
OCT 1989 11...	1000	2.3	248	7.5	13.0	12.5	0.70	10.9	77	33
01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)										
OCT 1989 23...	1030	32	123	7.3	12.0	9.5	1.0	11.8	44	12
01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)										
OCT 1989 23...	1430	19	188	7.2	19.5	12.5	1.5	9.3	66	10
01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)										
OCT 1989 24...	0930	60	149	7.2	7.5	9.0	1.1	12.1	51	0
014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)										
OCT 1989 24...	1430	123	189	7.3	20.0	11.5	1.0	11.9	66	22
01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)										
OCT 1989 05...	1400	2.4	232	6.9	16.5	14.5	1.3	12.1	77	27
01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)										
OCT 1989 05...	0915	7.3	195	7.3	12.0	10.5	1.1	10.6	74	28
014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)										
OCT 1989 04...	1530	26	198	7.2	13.5	13.5	0.80	10.5	72	26
014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)										
OCT 1989 04...	1105	33	202	7.6	10.5	12.5	1.3	10.5	73	24
01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)										
OCT 1989 06...	1530	35	215	7.5	20.5	15.5	0.70	7.4	76	19
01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)										
NOV 1989 06...	0945	8.4	530	7.8	11.5	11.0	0.30	11.4	220	59
01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)										
NOV 1989 06...	1445	17	585	8.2	15.5	11.5	0.60	11.9	250	39

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECAORD STATIONS

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
	01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1989 11...	14	4.9	8.5	0.5	24	1.8	32	18	9.1	17
	01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1989 11...	19	7.2	12	0.6	24	3.0	44	24	20	15
	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
OCT 1989 23...	11	4.0	5.2	0.3	20	1.5	32	13	6.2	15
	01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
OCT 1989 23...	17	5.6	7.3	0.4	19	2.4	56	16	11	19
	01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
OCT 1989 24...	13	4.6	6.0	0.4	19	2.0	54	13	8.2	17
	014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
OCT 1989 24...	17	5.8	8.1	0.4	20	2.1	44	19	10	17
	01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1989 05...	20	6.6	7.4	0.4	17	2.0	50	14	21	19
	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1989 05...	20	5.9	7.0	0.4	17	1.9	46	15	14	17
	014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1989 04...	19	6.0	7.5	0.4	18	2.2	46	15	15	17
	014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1989 04...	19	6.1	8.1	0.4	19	2.2	49	15	15	18
	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1989 06...	20	6.4	8.2	0.4	18	2.2	57	17	16	18
	01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1989 06...	57	19	26	0.8	20	2.0	162	31	44	6.8
	01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1989 06...	50	31	27	0.7	19	3.1	214	29	39	6.5

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
	01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1989 11...	105	2.79	0.010	2.80	0.010	0.40	0.40	0.050	0.030	0.030
	01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1989 11...	150	5.27	0.030	5.30	0.020	0.60	0.50	0.090	0.060	0.060
	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
OCT 1989 23...	79	--	<0.010	0.900	<0.010	0.30	<0.20	0.030	0.010	0.040
	01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
OCT 1989 23...	127	--	<0.010	3.30	0.010	0.50	<0.20	0.040	0.030	0.020
	01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
OCT 1989 24...	103	--	<0.010	1.60	<0.010	<0.20	0.40	0.030	0.020	0.020
	014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
OCT 1989 24...	115	--	<0.010	2.20	0.010	0.30	0.20	0.040	0.020	0.020
	01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1989 05...	132	2.59	0.010	2.60	0.020	0.50	0.40	0.020	<0.010	<0.010
	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1989 05...	120	2.49	0.010	2.50	0.020	0.30	0.20	0.020	0.010	<0.010
	014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1989 04...	117	--	<0.010	1.70	0.020	0.30	<0.20	0.030	0.020	0.020
	014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1989 04...	120	--	<0.010	1.50	0.020	0.40	0.30	0.030	0.010	0.010
	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1989 06...	130	--	<0.010	1.80	0.020	<0.20	0.50	0.030	0.010	0.010
	01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1989 06...	294	--	<0.010	2.50	0.020	<0.20	<0.20	0.010	<0.010	0.010
	01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1989 06...	326	2.58	0.020	2.60	0.020	0.20	0.50	<0.010	<0.010	<0.010

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
	01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1989 11...	<10	--	--	--	--	--	--	--	53	--
	01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1989 11...	<10	--	--	--	--	--	--	--	42	--
	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
OCT 1989 23...	30	--	--	--	--	--	--	--	140	--
	01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
OCT 1989 23...	20	--	--	--	--	--	--	--	140	--
	01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
OCT 1989 24...	20	--	--	--	--	--	--	--	120	--
	014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
OCT 1989 24...	20	<1	44	<0.5	<1	<5	<3	<10	110	<10
	01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1989 05...	10	--	--	--	--	--	--	--	180	--
	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1989 05...	<10	--	--	--	--	--	--	--	85	--
	014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1989 04...	20	--	--	--	--	--	--	--	130	--
	014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1989 04...	20	--	--	--	--	--	--	--	140	--
	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1989 06...	20	--	--	--	--	--	--	--	91	--
	01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1989 06...	<10	<1	24	<0.5	1	<5	<3	<10	4	<10
	01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1989 06...	<10	<1	28	<0.5	<1	<5	<3	<10	9	<10

## ANALYSES OF SAMPLES COLLECTED AT PARTIAL RECORD STATIONS

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

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1989 11...	26	--	--	--	--	--	--	--	--
01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1989 11...	32	--	--	--	--	--	--	--	--
01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
OCT 1989 23...	21	--	--	--	--	--	--	--	--
01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
OCT 1989 23...	33	--	--	--	--	--	--	--	--
01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
OCT 1989 24...	22	--	--	--	--	--	--	--	--
014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
OCT 1989 24...	23	<10	83	<6	<4	<0.1	<10	<1.0	9
01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1989 05...	48	--	--	--	--	--	--	--	--
01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1989 05...	32	--	--	--	--	--	--	--	--
014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1989 04...	25	--	--	--	--	--	--	--	--
014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1989 04...	22	--	--	--	--	--	--	--	--
01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1989 06...	8	--	--	--	--	--	--	--	--
01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1989 06...	6	<10	130	<6	9	<0.1	<10	<1.0	6
01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1989 06...	11	<10	76	<6	98	0.3	<10	3.0	6



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)										
OCT 1989 18...	1000	9.6	189	7.4	10.5	14.0	0.60	9.4	72	19
01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)										
NOV 1989 14...	0900	5.4	231	7.5	16.0	10.5	0.80	12.2	75	25
01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)										
NOV 1989 14...	1345	12	220	7.8	21.0	13.5	3.4	12.5	70	24
01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)										
OCT 1989 26...	1540	3.8	317	6.9	17.5	14.5	0.90	9.4	95	53
01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)										
OCT 1989 26...	1300	6.3	281	7.3	21.5	14.0	3.0	9.9	100	41
01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)										
OCT 1989 26...	0915	13	296	7.3	11.0	11.5	1.0	11.0	99	37
01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)										
OCT 1989 25...	1315	14	950	7.4	22.5	16.5	1.7	9.4	160	79
01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)										
OCT 1989 25...	0945	31	500	7.4	13.0	11.5	1.2	10.4	120	60
01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)										
OCT 1989 31...	1545	15	319	8.0	19.5	16.0	0.60	10.5	140	57
01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)										
OCT 1989 31...	0900	12	219	7.3	18.5	14.5	0.70	9.8	75	28
01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)										
OCT 1989 31...	1220	13	169	7.3	20.0	15.5	0.50	9.4	53	0
01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)										
OCT 1989 30...	0930	12	285	7.6	15.0	13.0	1.6	12.2	110	36
01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)										
OCT 1989 30...	1230	14	305	7.5	20.5	15.0	0.70	13.5	120	54

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)										
OCT 1989 18...	15	8.3	8.6	0.4	20	2.7	53	12	14	16
01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)										
NOV 1989 14...	15	9.1	12	0.6	25	1.6	50	14	21	8.9
01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)										
NOV 1989 14...	14	8.4	12	0.6	27	1.8	46	14	18	12
01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)										
OCT 1989 26...	20	11	18	0.8	29	1.4	42	16	43	7.9
01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)										
OCT 1989 26...	23	11	11	0.5	18	2.4	62	20	26	13
01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)										
OCT 1989 26...	23	10	11	0.5	19	2.9	62	21	27	15
01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)										
OCT 1989 25...	41	15	85	3	43	64	85	160	84	21
01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)										
OCT 1989 25...	29	12	33	1	33	21	62	60	42	18
01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)										
OCT 1989 31...	33	14	8.2	0.3	11	3.2	83	27	14	15
01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)										
OCT 1989 31...	17	7.8	8.6	0.4	19	3.6	47	15	14	14
01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA. (LAT 39 45 56N LONG 075 47 47W)										
OCT 1989 31...	13	5.1	7.9	0.5	23	3.7	310	15	11	13
01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)										
OCT 1989 30...	26	11	8.6	0.4	14	3.9	74	25	15	14
01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)										
OCT 1989 30...	30	11	10	0.4	15	4.0	66	35	17	17

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)
01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)										
OCT 1989 18...	115	1.39	0.010	1.40	0.020	0.30	0.40	0.030	0.030	0.020
01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)										
NOV 1989 14...	125	2.99	0.010	3.00	0.020	0.30	0.40	0.060	0.030	0.040
01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)										
NOV 1989 14...	124	3.49	0.010	3.50	0.010	0.30	0.50	0.200	0.140	0.140
01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)										
OCT 1989 26...	164	--	<0.010	4.70	0.040	0.80	0.40	0.020	0.010	0.020
01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)										
OCT 1989 26...	156	2.68	0.020	2.70	0.030	0.40	0.60	0.050	<0.010	<0.010
01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)										
OCT 1989 26...	162	3.09	0.010	3.10	0.020	0.30	0.30	0.190	0.160	0.140
01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)										
OCT 1989 25...	609	17.7	0.260	18.0	0.280	2.2	2.4	3.60	3.30	2.60
01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)										
OCT 1989 25...	287	6.99	0.210	7.20	0.160	1.4	1.1	0.890	0.800	0.700
01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)										
OCT 1989 31...	185	--	<0.010	4.70	<0.010	0.60	0.70	0.030	0.020	0.020
01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)										
OCT 1989 31...	132	--	<0.010	5.30	0.020	0.60	0.30	0.130	0.110	0.110
01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)										
OCT 1989 31...	270	--	<0.010	3.50	<0.010	0.40	0.40	0.020	0.010	0.010
01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)										
OCT 1989 30...	169	4.69	0.010	4.70	0.030	0.30	0.30	0.030	0.020	0.020
01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)										
OCT 1989 30...	181	3.88	0.020	3.90	<0.010	0.30	0.70	0.030	0.020	0.020

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

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

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)										
OCT 1989 18...	10	--	--	--	--	--	--	--	140	--
01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)										
NOV 1989 14...	<10	--	--	--	--	--	--	--	63	--
01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)										
NOV 1989 14...	10	--	--	--	--	--	--	--	66	--
01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)										
OCT 1989 26...	10	--	--	--	--	--	--	--	24	--
01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)										
OCT 1989 26...	<10	--	--	--	--	--	--	--	59	--
01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)										
OCT 1989 26...	10	<1	50	<0.5	<1	<5	<3	<10	97	<10
01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)										
OCT 1989 25...	10	<1	63	<0.5	<1	<5	4	20	56	<10
01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)										
OCT 1989 25...	20	3	64	<0.5	<1	<5	<3	<10	65	<10
01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)										
OCT 1989 31...	<10	--	--	--	--	--	--	--	31	--
01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)										
OCT 1989 31...	10	--	--	--	--	--	--	--	66	--
01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)										
OCT 1989 31...	10	--	--	--	--	--	--	--	57	--
01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)										
OCT 1989 30...	<10	<1	45	<0.5	<1	<5	<3	<10	53	<10
01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)										
OCT 1989 30...	<10	<1	53	<0.5	<1	<5	<3	<10	42	<10

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)									
OCT 1989 18...	22	--	--	--	--	--	--	--	--
01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)									
NOV 1989 14...	29	--	--	--	--	--	--	--	--
01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)									
NOV 1989 14...	25	--	--	--	--	--	--	--	--
01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)									
OCT 1989 26...	170	--	--	--	--	--	--	--	--
01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)									
OCT 1989 26...	40	--	--	--	--	--	--	--	--
01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)									
OCT 1989 26...	45	<10	120	<6	5	0.2	<10	<1.0	14
01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)									
OCT 1989 25...	56	20	180	<6	22	0.1	<10	<1.0	50
01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)									
OCT 1989 25...	71	<10	150	<6	14	<0.1	<10	<1.0	17
01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)									
OCT 1989 31...	21	--	--	--	--	--	--	--	--
01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)									
OCT 1989 31...	23	--	--	--	--	--	--	--	--
01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA. (LAT 39 45 56N LONG 075 47 47W)									
OCT 1989 31...	26	--	--	--	--	--	--	--	--
01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)									
OCT 1989 30...	48	<10	110	<6	<4	0.5	<10	3.0	<3
01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)									
OCT 1989 30...	19	<10	130	<6	<4	0.1	<10	<1.0	<3

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)											
OCT 1989 10...	1500	38	214	7.5	7.6	17.0	10.5	0.70	9.5	78	30
01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)											
NOV 1989 07...	0845	19	223	7.6	7.3	10.5	8.5	1.1	12.8	78	39
01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)											
NOV 1989 07...	1230	14	152	7.6	7.5	17.0	11.5	1.5	12.5	51	20
01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)											
OCT 1989 13...	1430	106	230	7.5	8.1	20.0	15.5	0.40	13.0	82	38
01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)											
OCT 1989 16...	1030	4.4	202	7.2	7.4	21.5	16.5	1.3	10.0	75	26
01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)											
NOV 1989 01...	1145	20	193	8.0	7.5	12.5	12.5	0.80	11.1	70	22
01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)											
OCT 1989 16...	1510	3.0	183	7.1	7.6	28.5	18.5	0.50	9.8	63	13
01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)											
OCT 1989 06...	1015	21	370	7.8	7.9	15.0	13.0	0.40	11.5	160	54
AUG 1990 17...	0950	12	369	--	7.9	24.0	19.0	0.40	10.2	150	54
SEP 06...	1310	8.6	350	9.1	8.9	27.5	20.5	1.0	14.8	160	59
01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)											
OCT 1989 13...	0915	113	293	7.5	7.6	14.5	13.0	0.80	10.9	110	35
01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)											
OCT 1989 17...	1030	278	260	7.3	7.6	18.5	17.5	0.70	8.7	92	--
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)											
OCT 1989 12...	1000	11	178	7.1	7.2	15.5	11.5	0.70	11.8	55	30
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)											
OCT 1989 12...	1445	9.7	179	7.7	7.9	19.5	14.5	0.70	12.9	55	32

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	ALKA- POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
	01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)										
OCT 1989 10...	19	--	7.5	8.0	0.4	18	2.6	48	17	15	16
	01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)										
NOV 1989 07...	19	--	7.5	8.1	0.4	18	2.1	39	16	15	7.8
	01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)										
NOV 1989 07...	12	--	5.2	5.1	0.3	17	1.7	31	10	10	9.5
	01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)										
OCT 1989 13...	20	--	7.7	10	0.5	20	3.0	44	20	17	10
	01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)										
OCT 1989 16...	19	--	6.6	7.1	0.4	16	3.4	49	13	12	15
	01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)										
NOV 1989 01...	18	--	6.0	7.8	0.4	19	3.0	48	13	12	17
	01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)										
OCT 1989 16...	18	--	4.3	9.4	0.5	24	1.7	50	9.0	10	26
	01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)										
OCT 1989 06...	36	--	16	12	0.4	14	2.4	102	38	23	7.5
AUG 1990 17...	33	<0.10	17	12	0.4	14	2.7	99	40	26	7.0
SEP 06...	34	<0.10	17	13	0.5	15	2.5	96	40	23	4.6
	01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)										
OCT 1989 13...	26	--	9.7	15	0.6	23	3.3	70	21	21	12
	01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)										
OCT 1989 17...	22	--	8.9	13	0.6	23	3.4	58	21	20	9.9
	01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1989 12...	12	--	6.0	6.9	0.4	20	3.5	25	10	12	11
	01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1989 12...	12	6.1	9.2	0.5	25	2.7	23	10	16	--	9.0



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
	01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)										
OCT 1989 10...	--	131	3.89	0.010	3.90	0.020	0.30	0.40	0.040	0.030	0.030
	01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)										
NOV 1989 07...	--	124	5.69	0.010	5.70	0.010	0.40	0.20	0.040	0.020	0.030
	01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)										
NOV 1989 07...	--	94	--	<0.010	4.90	0.030	0.40	0.30	0.030	<0.010	0.020
	01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)										
OCT 1989 13...	--	130	3.59	0.010	3.60	0.010	0.40	0.50	0.080	0.070	0.060
	01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)										
OCT 1989 16...	--	122	3.57	0.030	3.60	0.020	0.60	0.80	0.070	0.030	0.030
	01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)										
NOV 1989 01...	--	120	--	<0.010	3.20	0.030	0.30	0.40	0.030	<0.010	0.010
	01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)										
OCT 1989 16...	--	120	2.46	0.040	2.50	0.020	0.30	0.30	0.060	0.050	0.060
	01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)										
OCT 1989 06...	--	208	--	<0.010	2.70	0.010	0.30	<0.20	0.020	0.020	0.020
AUG 1990 17...	195	208	--	<0.010	2.50	<0.010	0.40	0.30	0.030	0.020	0.020
SEP 06...	248	202	--	<0.010	2.30	0.020	0.40	0.50	0.020	0.020	<0.010
	01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)										
OCT 1989 13...	--	165	3.18	0.020	3.20	0.020	0.70	0.50	0.330	0.320	0.300
	01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)										
OCT 1989 17...	--	147	3.08	0.020	3.10	0.020	0.50	0.60	0.210	0.170	0.170
	01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1989 12...	--	107	6.26	0.040	6.30	0.210	0.60	0.80	0.920	0.890	0.890
	01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1989 12...	--	103	5.38	0.020	5.40	0.010	0.50	0.30	0.090	0.070	0.080

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01020)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
	01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)										
OCT 1989 10...	10	--	--	--	--	--	--	--	--	64	--
	01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)										
NOV 1989 07...	<10	--	--	--	--	--	--	--	--	42	--
	01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)										
NOV 1989 07...	<10	--	--	--	--	--	--	--	--	30	--
	01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)										
OCT 1989 13...	10	<1	25	<0.5	--	<1.0	<5	<3	<10	41	<10
	01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)										
OCT 1989 16...	10	--	--	--	--	--	--	--	--	48	--
	01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)										
NOV 1989 01...	20	--	--	--	--	--	--	--	--	92	--
	01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)										
OCT 1989 16...	10	--	--	--	--	--	--	--	--	46	--
	01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)										
OCT 1989 06...	10	--	--	--	--	--	--	--	--	14	--
AUG 1990 17...	--	--	--	--	20	--	<1	--	--	9	--
SEP 06...	--	--	--	--	20	--	<1	--	--	20	--
	01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)										
OCT 1989 13...	10	<1	38	<0.5	--	<1.0	<5	<3	<10	99	<10
	01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)										
OCT 1989 17...	10	--	--	--	--	--	--	--	--	69	--
	01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1989 12...	<10	<1	25	<0.5	--	<1.0	<5	<3	<10	43	<10
	01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1989 12...	20	<1	21	<0.5	1.0	--	<5	<3	<10	33	<10

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)										
OCT 1989 10...	21	--	--	--	--	--	--	--	--	--
01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)										
NOV 1989 07...	22	--	--	--	--	--	--	--	--	--
01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)										
NOV 1989 07...	14	--	--	--	--	--	--	--	--	--
01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)										
OCT 1989 13...	23	<10	91	<6	4	--	0.2	<10	<1.0	<3
01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)										
OCT 1989 16...	28	--	--	--	--	--	--	--	--	--
01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)										
NOV 1989 01...	19	--	--	--	--	--	--	--	--	--
01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)										
OCT 1989 16...	5	--	--	--	--	--	--	--	--	--
01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)										
OCT 1989 06...	7	--	--	--	51	--	--	--	--	--
AUG 1990 17...	10	--	88	--	21	0.050	--	--	--	--
SEP 06...	5	--	97	--	28	0.050	--	--	--	--
01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)										
OCT 1989 13...	22	<10	120	<6	6	--	<0.1	<10	<1.0	4
01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)										
OCT 1989 17...	20	--	--	--	--	--	--	--	--	--
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1989 12...	18	<10	82	<6	<4	--	<0.1	<10	<1.0	8
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1989 12...	12	<10	89	<6	<4	--	0.2	<10	<1.0	6

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)										
AUG 1990										
16...	0900	0.10	78	--	7.1	27.0	16.5	6.5	9.2	20
SEP										
05...	0800	0.10	68	7.1	7.2	22.0	15.0	7.3	9.0	17
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)										
AUG 1990										
16...	1000	0.24	547	--	7.9	29.0	21.5	3.9	8.6	190
SEP										
05...	0700	0.21	590	8.0	7.9	22.0	16.5	1.0	7.4	210
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)										
AUG 1990										
16...	1100	0.57	445	--	7.9	23.5	18.0	1.1	9.4	190
SEP										
05...	0900	0.57	460	8.1	8.0	22.5	15.5	0.50	9.4	200
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)										
AUG 1990										
16...	1210	0.33	350	--	8.0	25.5	14.5	5.0	10.2	210
SEP										
06...	0715	0.25	310	8.1	8.0	18.5	12.5	7.1	8.5	210
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREET NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)										
AUG 1990										
16...	1300	0.85	422	--	7.6	26.5	19.5	2.0	9.0	180
SEP										
06...	0800	0.84	490	7.9	7.9	21.5	17.0	1.0	8.6	210
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)										
AUG 1990										
16...	1425	2.3	403	--	7.8	26.5	19.0	7.3	9.6	180
SEP										
05...	1030	1.6	400	8.1	7.9	19.0	18.0	6.4	8.6	180
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)										
AUG 1990										
16...	1530	0.77	370	--	8.0	26.5	18.5	2.7	9.2	140
SEP										
05...	1000	1.3	295	8.2	7.9	19.0	15.5	2.1	9.7	150
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)										
AUG 1990										
16...	1620	1.2	330	--	7.9	27.0	22.5	0.80	9.3	130
SEP										
05...	1130	1.1	340	8.9	8.5	23.5	18.0	1.1	10.3	140
400116075383800 WVC-9 VALLEY CREEK NEAR WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)										
AUG 1990										
17...	1400	3.6	419	--	8.0	34.0	20.0	41	10.0	170
SEP										
05...	1230	3.2	430	8.4	8.2	21.5	18.0	1.0	11.1	190

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO SODIUM PERCENT (00931) (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)										
AUG 1990										
16...	6	3.3	2.8	4.5	0.4	31	1.6	14	4.6	9.3
SEP										
05...	3	2.7	2.4	4.5	0.5	35	1.5	14	5.0	8.3
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)										
AUG 1990										
16...	59	47	18	27	0.8	23	2.2	133	20	70
SEP										
05...	43	48	22	47	1	32	2.0	168	26	100
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)										
AUG 1990										
16...	57	57	12	13	0.4	13	1.5	135	19	43
SEP										
05...	66	61	12	13	0.4	12	1.3	136	19	44
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)										
AUG 1990										
16...	26	41	25	3.2	0.1	3	1.6	179	15	9.0
SEP										
06...	55	41	25	3.3	0.1	3	1.6	150	14	9.5
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREET NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)										
AUG 1990										
16...	54	49	14	16	0.5	16	2.1	126	17	38
SEP										
06...	56	56	16	17	0.5	15	1.6	150	21	50
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)										
AUG 1990										
16...	40	44	16	14	0.5	15	1.9	136	17	28
SEP										
05...	43	46	15	15	0.5	15	1.5	134	19	34
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)										
AUG 1990										
16...	38	37	11	17	0.6	21	1.4	100	21	32
SEP										
05...	47	40	11	18	0.7	21	1.5	98	19	32
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)										
AUG 1990										
16...	36	30	13	13	0.5	18	2.9	93	15	35
SEP										
05...	56	32	14	15	0.6	19	2.6	82	18	36
400116075383800 WVC-9 VALLEY CREEK NEAR WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)										
AUG 1990										
17...	38	43	16	14	0.5	15	2.0	135	18	30
SEP										
05...	43	45	18	16	0.5	16	1.9	144	19	34

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)										
AUG 1990										
16...	8.7	46	47	--	<0.010	0.800	0.020	<0.20	<0.20	0.040
SEP										
05...	8.8	42	45	--	<0.010	0.800	0.030	<0.20	0.30	0.020
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)										
AUG 1990										
16...	6.6	315	285	2.09	0.010	2.10	0.030	0.50	0.60	0.040
SEP										
05...	5.2	419	367	2.18	0.020	2.20	0.020	0.30	0.60	0.020
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)										
AUG 1990										
16...	9.6	264	245	--	<0.010	1.90	0.010	0.30	0.30	0.010
SEP										
05...	9.1	280	250	--	<0.010	1.90	0.020	0.20	0.30	0.010
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)										
AUG 1990										
16...	8.0	215	238	--	<0.010	6.10	0.020	0.40	0.40	0.040
SEP										
06...	8.3	235	218	--	<0.010	5.80	0.030	0.40	0.60	0.030
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREE NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)										
AUG 1990										
16...	7.4	249	228	--	<0.010	1.80	0.010	0.20	0.40	0.020
SEP										
06...	6.9	292	268	--	<0.010	1.90	0.030	0.30	0.30	0.010
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)										
AUG 1990										
16...	6.7	263	220	2.28	0.020	2.30	0.030	0.50	0.50	0.050
SEP										
05...	6.6	250	229	2.48	0.020	2.50	0.050	0.50	0.30	0.010
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)										
AUG 1990										
16...	8.2	186	197	--	<0.010	2.10	0.020	0.30	<0.20	0.020
SEP										
05...	8.3	191	198	--	<0.010	2.00	0.020	<0.20	0.40	<0.010
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)										
AUG 1990										
16...	13	189	190	--	<0.010	2.70	<0.010	0.40	0.20	0.220
SEP										
05...	10	193	186	--	<0.010	2.00	<0.010	0.50	0.40	0.140
400116075383800 WVC-9 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)										
AUG 1990										
17...	8.2	256	223	2.29	0.010	2.30	0.020	0.30	0.30	0.040
SEP										
05...	5.3	265	236	2.29	0.010	2.30	0.020	0.50	0.40	0.030

## ANALYSES OF SAMPLES COLLECTED AT MISECELLANEOUS SITES

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

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)										
AUG 1990										
16...	0.020	0.010	<0.10	<10	0.020	<1	49	9	17	9
SEP										
05...	<0.010	<0.010	<0.10	<10	0.030	<1	47	8	22	<4
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)										
AUG 1990										
16...	<0.010	<0.010	0.30	80	1.8	2	10	27	160	3000
SEP										
05...	<0.010	<0.010	0.10	80	2.0	4	16	7	120	4100
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)										
AUG 1990										
16...	0.030	0.010	0.30	10	0.070	<1	9	5	160	6
SEP										
05...	<0.010	<0.010	<0.10	20	0.080	<1	90	5	170	6
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)										
AUG 1990										
16...	0.030	0.030	0.30	<10	0.020	<1	6	5	24	<4
SEP										
06...	0.020	0.010	<0.10	10	0.030	<1	7	6	21	4
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREE NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)										
AUG 1990										
16...	0.030	0.010	0.30	30	0.15	<1	36	6	130	270
SEP										
06...	0.010	<0.010	<0.10	30	0.34	<1	6	6	150	620
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)										
AUG 1990										
16...	0.020	<0.010	0.30	20	0.090	<1	19	36	100	110
SEP										
05...	<0.010	<0.010	<0.10	20	0.14	<1	14	35	100	190
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)										
AUG 1990										
16...	0.020	0.010	<0.10	20	0.050	<10	15	9	97	4
SEP										
05...	<0.010	<0.010	<0.10	20	0.060	<1	24	9	110	5
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)										
AUG 1990										
16...	0.200	0.170	<0.10	20	0.040	5	12	14	140	6
SEP										
05...	0.120	0.120	<0.10	20	0.050	<1	15	36	160	5
400116075383800 WVC-9 VALLEY CREEK NEAR WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)										
AUG 1990										
17...	0.040	0.030	<0.10	20	0.070	<1	10	13	100	60
SEP										
05...	0.020	0.010	<0.10	20	0.090	<1	12	11	120	83



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)										
AUG 1990										
16...	1715	0.60	370	--	7.9	27.0	19.5	2.0	8.8	140
SEP										
05...	1315	0.48	370	8.2	8.0	23.0	17.0	1.1	9.4	150
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)										
AUG 1990										
17...	1200	6.4	399	--	8.0	29.5	19.0	3.5	9.5	170
SEP										
06...	1015	5.1	415	8.1	8.0	21.0	17.5	1.0	9.3	180
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL RD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)										
AUG 1990										
17...	1315	0.08	725	--	8.0	29.5	23.0	1.1	8.2	310
SEP										
06...	0915	0.06	710	8.0	7.9	21.0	16.0	1.4	7.2	330
395854075394600 WVC-14 BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON, PA (LAT 39 58 54N LONG 075 39 46W)										
AUG 1990										
17...	1050	2.7	321	--	7.9	25.5	18.0	5.0	9.6	77
SEP										
06...	1215	2.7	250	8.0	8.0	28.5	18.0	0.30	9.6	76
DATE		HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)										
AUG 1990										
16...	39	36	11	18	0.7	22	1.7	96	21	36
SEP										
05...	50	41	12	20	0.7	22	1.5	102	18	33
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)										
AUG 1990										
17...	42	43	16	14	0.5	15	1.9	131	16	29
SEP										
06...	60	45	16	15	0.5	15	1.8	118	17	29
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)										
AUG 1990										
17...	59	78	28	24	0.6	14	3.4	251	53	51
SEP										
06...	100	81	30	26	0.6	15	3.5	224	54	52
395854075394600 WVC-14 BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON, PA (LAT 39 58 54N LONG 075 39 46W)										
AUG 1990										
17...	21	17	8.3	12	0.6	25	1.3	56	15	25
SEP										
06...	26	17	8.2	13	0.6	27	1.3	50	18	23

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)										
AUG 1990										
16...	7.5	192	201	--	<0.010	2.80	<0.010	0.40	0.60	0.020
SEP										
05...	7.5	231	208	--	<0.010	3.00	<0.010	0.60	0.60	0.160
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)										
AUG 1990										
17...	7.9	214	217	--	<0.010	2.30	<0.010	0.30	0.40	0.040
SEP										
06...	5.8	233	210	--	<0.010	2.10	0.020	0.20	0.30	0.030
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)										
AUG 1990										
17...	7.5	464	409	2.99	0.010	3.00	0.030	0.30	0.30	0.020
SEP										
06...	7.2	479	400	2.59	0.010	2.60	0.020	0.30	0.40	0.020
DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
395854075394600 WVC-14 BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON, PA (LAT 39 58 54N LONG 075 39 46W)										
AUG 1990										
17...	9.7	131	136	--	<0.010	3.10	<0.010	0.20	0.30	0.030
SEP										
06...	9.1	157	134	--	<0.010	3.10	0.010	0.60	0.30	0.020
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)										
AUG 1990										
16...	0.010	<0.010	<0.10	30	0.080	2	7	9	96	26
SEP										
05...	0.020	<0.010	<0.10	30	0.090	2	5	10	110	28
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)										
AUG 1990										
17...	0.030	0.030	<0.10	20	0.070	<1	7	12	100	42
SEP										
06...	<0.010	<0.010	<0.10	30	0.080	<1	10	7	110	72
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)										
AUG 1990										
17...	0.020	0.020	0.10	20	0.060	<1	4	16	130	7
SEP										
06...	0.020	0.020	<0.10	20	0.050	<1	15	20	130	8
395854075394600 WVC-14 BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON, PA (LAT 39 58 54N LONG 075 39 46W)										
AUG 1990										
17...	0.020	0.010	<0.10	10	0.050	1	11	6	110	<4
SEP										
06...	<0.010	<0.010	<0.10	20	0.050	<1	14	6	100	4

## BERKS COUNTY

402615075530501. Local number, BE 623.

LOCATION.--Lat 40°26'15", long 75°53'05", Hydrologic Unit 02040203, at Wesner Road, Blandon.  
 Owner: Maiden Creek Township Water Authority.

AQUIFER.--Dolomite of Leithsville Formation of Early and Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 385 ft, casing information not available.

INSTRUMENTATION.--Synergetics and data collection platform.

DATUM.--Altitude of land-surface datum is 430 ft. Measuring point: Top of plywood shelf, 1.30 ft above land-surface datum. Prior to Apr. 30, 1981, top of casing, 1.30 ft above land-surface datum.

REMARKS.--Missing record due to DCP downline failure.

PERIOD OF RECORD.--January 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 113.55 ft below land-surface datum, June 6, 1984; lowest, 140.82 ft below surface datum, Dec. 23, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133.35	133.49	134.37	135.69	133.05	130.17	131.30	130.22	129.24	129.60	132.07	132.94
2	133.31	133.49	134.37	135.69	132.47	130.06	131.28	130.40	129.14	129.74	132.13	133.00
3	133.42	133.59	134.37	135.61	132.25	130.12	131.24	130.48	129.04	129.78	132.25	133.14
4	133.46	133.63	134.39	135.60	131.88	130.24	130.89	130.44	129.08	129.81	132.33	133.16
5	133.53	133.67	134.45	135.69	131.75	130.32	130.68	130.18	129.12	129.95	132.41	133.12
6	133.59	133.69	134.49	135.69	131.50	130.46	130.68	130.08	129.10	130.13	132.39	133.16
7	133.73	133.75	134.71	135.69	131.35	130.49	130.58	130.10	129.17	130.21	132.45	133.36
8	133.77	133.77	134.71	135.63	131.28	130.42	130.58	130.12	129.17	130.22	132.51	133.46
9	133.87	133.81	134.59	135.69	131.11	130.35	130.56	130.16	129.13	130.26	132.55	133.46
10	133.89	133.85	134.65	135.73	130.90	130.46	130.40	130.10	128.95	130.40	132.57	133.54
11	134.01	133.85	134.73	135.73	130.88	130.46	130.28	130.06	129.09	130.50	132.45	133.62
12	134.05	133.95	134.77	135.73	130.87	130.48	130.39	130.06	129.13	130.60	132.39	133.66
13	134.15	133.95	134.85	135.85	130.77	130.58	130.42	129.85	129.15	130.60	132.41	133.72
14	134.19	---	134.89	135.85	130.64	130.66	130.34	129.86	129.15	130.53	132.47	133.72
15	134.27	133.85	134.93	135.73	130.61	130.72	130.14	129.85	129.24	130.58	132.51	133.84
16	134.29	133.89	135.01	135.75	130.37	130.74	130.06	129.79	129.30	130.65	132.59	133.98
17	134.41	133.99	135.03	135.75	130.62	130.74	130.14	129.66	129.34	130.69	132.66	134.10
18	134.49	134.03	135.03	135.81	130.60	130.88	130.20	129.70	129.32	130.74	132.70	134.10
19	134.47	134.03	135.04	135.85	130.35	130.88	130.24	129.72	129.16	130.80	132.86	134.08
20	134.21	133.79	135.11	135.79	130.45	130.80	130.14	129.72	129.00	130.86	132.86	134.28
21	133.85	134.07	135.11	135.67	130.45	130.92	129.98	129.81	129.03	130.98	132.82	134.30
22	133.51	134.07	---	135.65	130.35	130.92	130.00	129.81	129.03	131.02	132.80	134.26
23	133.49	134.05	---	135.69	130.07	131.06	129.98	129.83	129.01	131.16	132.66	134.40
24	133.39	134.13	---	135.61	130.09	131.08	130.04	129.93	129.17	131.26	132.60	134.48
25	133.31	134.11	---	135.61	130.42	131.04	130.04	129.97	129.25	131.40	132.60	134.50
26	133.29	134.17	---	135.49	130.42	131.12	130.02	129.95	129.25	131.46	132.59	134.62
27	133.31	134.21	---	135.30	130.27	131.18	130.07	129.97	129.30	131.56	132.58	134.68
28	133.31	134.21	---	134.87	130.15	131.22	130.12	130.01	129.38	131.63	132.70	134.74
29	133.33	134.27	135.53	134.69	---	131.28	130.22	130.01	129.40	131.67	132.76	134.75
30	133.35	134.25	135.55	134.29	---	131.28	130.17	129.74	129.44	131.75	132.86	134.84
31	133.33	---	135.55	133.73	---	131.24	---	129.39	---	131.93	132.90	---
MEAN	133.69	133.86	134.80	135.44	130.83	130.67	130.31	129.91	129.13	130.67	132.53	133.86/
MAX	134.49	134.27	135.55	135.85	133.05	131.28	131.30	130.48	129.44	131.93	132.90	134.84
MIN	133.23	133.35	134.09	133.07	129.99	129.96	129.92	129.22	128.88	129.44	131.93	130.44

WTR YR 1990 MEAN 132.10 HIGH 128.88 JUNE 03 LOW 135.85 JAN 19

## BUCKS COUNTY

402643075150501. Local number, BK 929.

LOCATION.--Lat 40°26'43", long 75°15'05", Hydrologic Unit 02040105, at Nockamixon State Park.  
Owner: U.S. Geological Survey.

AQUIFER.--Shale of Brunswick Formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 116 ft, cased to 27 ft, open hole.

INSTRUMENTATION.--Digital recorder.

DATUM.--Altitude of land-surface datum is 490 ft. Measuring point: Top of plywood shelf, 3.00 ft above land-surface datum. Prior to Mar. 17, 1980, to top of casing, 1.05 ft above land-surface datum. Prior to June 1970, land surface datum was approximately 16 feet lower.

REMARKS.--Missing record due to float hanging up.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.22 ft below land-surface datum, May 17, 1990; lowest, 59.75 ft below land-surface datum, Nov. 26, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42.02	41.24	41.27	---	---	40.40	---	39.88	40.19	40.15	42.93	44.52
2	41.81	41.33	41.27	---	---	40.13	---	40.31	40.07	40.42	43.03	44.40
3	41.51	41.16	40.71	42.40	---	39.84	---	40.45	39.85	40.50	43.08	44.81
4	41.51	41.28	40.82	42.38	---	---	---	40.43	39.71	40.45	43.27	44.87
5	41.45	41.29	40.78	---	---	---	---	39.99	39.83	40.56	43.28	44.64
6	41.35	41.16	40.81	---	---	---	---	40.01	39.89	40.87	43.22	44.58
7	41.42	41.06	41.49	---	---	---	---	40.08	39.94	41.11	43.39	44.64
8	41.42	40.94	41.49	---	---	---	---	40.13	40.06	41.18	43.49	44.95
9	41.59	40.82	41.22	---	40.29	---	---	40.08	39.85	41.08	43.56	44.95
10	41.67	41.09	41.05	42.08	39.90	---	---	39.92	39.90	41.15	43.50	44.85
11	41.59	41.16	41.14	42.08	---	---	---	40.08	40.18	41.30	43.53	44.96
12	41.59	41.46	41.19	41.83	---	---	---	40.20	40.31	41.32	43.69	45.01
13	41.55	41.47	41.09	42.57	---	---	---	39.96	40.35	41.52	43.69	45.03
14	41.59	41.18	---	42.58	---	---	---	39.82	40.29	41.52	43.66	44.98
15	41.63	41.03	---	42.55	---	---	---	39.83	40.31	41.46	43.74	44.75
16	41.63	40.69	---	42.38	---	---	---	39.83	40.43	41.72	43.74	44.97
17	41.58	41.04	---	42.34	---	---	---	39.48	40.45	41.82	43.82	45.39
18	41.78	41.28	---	41.97	---	---	---	39.46	40.35	41.81	43.84	45.39
19	41.77	41.33	---	42.16	---	---	---	39.57	40.06	41.81	43.98	45.31
20	41.55	40.85	---	42.14	---	---	---	39.58	40.08	41.77	44.05	45.35
21	41.30	40.92	---	41.59	---	---	---	39.66	40.03	41.91	44.06	45.39
22	41.56	41.08	---	41.51	---	---	---	39.70	40.00	41.94	44.05	45.23
23	41.59	41.02	---	41.65	39.71	---	---	39.70	39.76	42.04	44.04	45.28
24	41.50	41.22	41.89	41.47	39.83	---	---	39.88	39.90	42.21	44.06	45.43
25	41.35	41.20	41.74	41.42	40.71	---	---	39.99	40.08	42.39	44.13	45.45
26	41.21	41.01	41.58	41.08	40.83	---	---	39.92	40.15	42.53	44.13	45.43
27	41.15	41.18	---	---	40.82	---	---	39.83	40.07	42.56	44.08	45.63
28	41.08	40.89	---	---	40.38	---	---	39.98	40.13	42.78	44.01	45.70
29	41.07	41.09	---	41.08	---	---	---	39.98	40.12	42.75	44.08	45.68
30	41.03	41.06	---	---	---	---	---	40.06	40.06	42.75	44.35	45.61
31	40.93	---	---	---	---	---	---	40.15	---	42.69	44.46	---
MEAN	41.39	40.96	41.10	41.82	---	---	---	39.82	40.00	41.53	43.68	45.01
MAX	42.02	41.47	41.89	42.58	---	---	---	40.45	40.45	42.78	44.46	45.70
MIN	40.53	40.07	40.48	40.22	---	---	---	39.22	39.47	39.97	42.70	44.33

WTR YR MEAN 41.66 HIGH 39.22 MAY 17 LOW 45.70 SEPT 28

## BUCKS COUNTY

401157075032001. Local number, BK 1020

LOCATION.--Lat 40°11'55", long 75°03'07", Hydrologic Unit 02040201, at Naval Air Development Center, in Warminster Township.  
Owner: United States Navy.

AQUIFER.--Sandstone and shale of Stockton formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 400 ft, cased to 57 ft, open hole.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 370 ft. Measuring point: Top of plywood shelf, 1.92 ft above land-surface datum.

REMARKS.--Missing record due to DCP downlink malfunction and float problems. Operated by Bucks County Planning Commission Sept. 1975 to March 1988.

PERIOD OF RECORD.--September 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.98 ft below land-surface datum, May 13, 14, 1989:  
lowest, 41.36 ft below land-surface datum, September 26, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	28.87	31.05	33.18	28.19	29.26	30.30	29.96	28.53	30.84	33.15	31.75
2	---	29.00	31.06	33.12	27.90	29.32	30.30	30.07	28.54	30.93	33.20	31.83
3	29.33	29.13	31.13	33.16	27.72	29.40	30.29	30.15	28.51	31.03	33.25	31.92
4	29.35	29.24	31.22	33.20	27.66	29.52	30.23	30.23	28.51	31.13	33.34	32.02
5	29.37	29.39	31.28	33.26	27.59	29.59	30.18	30.25	28.53	31.23	33.38	32.09
6	29.41	29.48	31.32	33.30	27.59	29.71	30.15	30.37	28.57	31.33	33.40	32.15
7	29.49	29.60	31.43	33.30	27.63	29.79	30.15	30.43	28.65	31.46	33.40	32.24
8	29.56	29.70	31.52	33.33	27.69	29.87	30.11	30.57	28.75	31.54	33.28	32.33
9	29.66	29.72	31.58	33.33	27.75	29.97	30.07	30.65	28.81	31.64	33.33	32.43
10	29.71	29.72	31.63	33.33	27.76	30.06	30.06	30.71	28.89	31.76	33.34	32.50
11	29.81	29.78	31.73	33.10	27.73	30.10	29.98	30.65	29.04	31.86	33.19	32.62
12	29.87	29.87	31.79	32.85	27.73	30.17	29.91	30.63	29.21	31.97	32.51	32.74
13	29.95	29.91	31.89	32.70	27.74	30.25	29.89	30.62	29.33	31.97	32.33	32.82
14	30.06	---	31.95	32.64	27.79	30.38	29.89	30.57	29.39	32.01	32.24	32.88
15	30.18	29.97	31.99	32.61	27.83	30.47	29.87	30.51	29.42	32.05	32.06	32.99
16	30.24	30.06	32.09	32.58	27.88	30.57	29.69	30.54	29.53	32.09	31.96	33.09
17	30.35	30.12	32.15	32.58	28.04	30.61	29.67	30.50	29.63	32.18	31.82	33.22
18	30.41	30.19	32.24	32.58	28.08	30.61	29.63	---	29.74	32.28	---	33.29
19	30.43	---	32.29	32.51	28.19	30.56	29.61	---	29.73	32.32	31.68	33.34
20	30.32	30.22	32.40	32.51	28.32	30.58	29.55	---	29.77	32.42	31.63	33.46
21	29.77	30.35	32.46	32.48	28.38	30.51	29.48	---	29.84	32.51	31.60	33.51
22	29.04	30.43	32.57	32.44	28.41	30.46	29.43	---	29.95	32.53	31.53	33.53
23	28.78	30.49	32.61	32.40	28.51	30.41	29.43	---	29.95	32.53	31.51	33.56
24	28.62	30.59	32.69	32.30	28.62	30.41	29.45	---	30.11	32.62	31.50	33.67
25	28.52	30.64	32.75	32.28	28.80	30.38	29.49	29.57	30.23	32.67	31.49	33.78
26	28.46	30.72	32.83	31.90	28.94	30.33	29.58	29.59	30.31	32.74	31.50	33.87
27	28.46	30.80	32.91	30.78	29.11	30.32	29.63	29.63	30.41	32.80	31.51	33.93
28	28.50	30.83	32.98	30.31	29.15	30.32	29.71	29.65	30.51	32.88	31.52	34.02
29	28.57	30.92	33.07	30.04	---	30.32	29.81	29.65	30.63	32.96	31.57	34.11
30	28.69	30.98	33.17	29.71	---	30.32	29.89	29.35	30.71	33.00	31.65	34.19
31	28.75	---	33.18	28.71	---	30.32	---	28.68	---	33.11	31.69	---
MEAN	29.38	29.98	32.06	32.29	28.05	30.12	29.82	30.09	29.42	32.03	32.27	32.95
MAX	30.43	30.98	33.18	33.33	29.15	30.61	30.30	30.71	30.71	33.11	33.40	34.19
MIN	28.45	28.74	30.96	28.17	27.58	29.15	29.43	28.53	28.47	30.71	31.49	31.69

WTR YR 1990 MEAN 30.74 HIGH 27.58 FEB 6, 7 LOW 34.19 SEPT 30

## CARBON COUNTY

410123075425401. Local number, CB 104.

LOCATION.--Lat 41°01'23", long 75°42'54", Hydrologic Unit 02040106, at Hickory Run State Park.  
Owner: U.S. Geological Survey.

AQUIFER.--Shale of Lower Member of Mauch Chunk Formation of Late Mississippian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 125 ft, cased to 20 ft, open hole.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 1,305 ft. Measuring point: Top of plywood shelf, 3.12 ft above land-surface datum. Prior to May 28, 1980, top of casing, 3.00 ft above land-surface datum.

REMARKS.--Missing record due to float hanging up on casing, and instrument problems.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.44 ft below land-surface datum, Apr. 17, 1983; lowest, 90.58 ft below land-surface datum, Jan. 31, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	71.75	45.04	62.24	27.93	38.82	41.80	---	30.44	52.09	50.25	46.09
2	---	71.68	45.12	62.49	27.03	39.27	42.44	---	31.13	52.43	50.97	46.76
3	---	71.35	45.65	62.64	27.15	40.04	---	47.86	31.92	52.46	51.70	47.57
4	---	71.10	46.06	62.64	27.32	40.86	---	---	33.08	52.47	52.41	48.15
5	---	70.70	46.61	62.70	27.31	41.60	39.51	---	34.22	52.66	---	48.81
6	---	70.14	47.09	62.52	26.99	42.46	37.94	---	---	53.00	---	---
7	---	69.66	48.00	62.33	27.69	43.06	37.82	---	---	53.34	54.63	---
8	---	69.08	48.38	61.62	28.41	43.56	37.72	44.74	36.61	53.64	55.28	---
9	---	68.34	48.82	60.88	29.15	---	37.71	---	---	54.05	55.87	---
10	---	68.18	48.82	59.99	30.18	---	37.70	---	---	54.54	---	---
11	---	67.88	48.82	59.45	30.87	---	37.68	---	---	55.03	56.79	---
12	---	67.31	50.89	58.53	31.65	---	37.82	---	---	55.45	56.97	---
13	---	67.02	51.57	57.99	32.14	---	38.00	---	38.68	55.40	57.06	---
14	---	66.44	52.19	57.46	33.10	---	38.22	---	---	52.08	---	---
15	---	65.94	52.58	56.80	33.71	---	38.64	---	---	48.49	46.46	---
16	---	65.40	53.42	56.33	34.22	---	39.19	---	---	46.61	40.46	---
17	---	---	54.06	55.97	---	---	39.94	---	---	45.62	---	---
18	---	---	54.72	55.48	---	48.16	40.66	---	42.96	45.12	---	---
19	---	---	55.16	55.38	---	47.08	41.22	---	43.78	44.95	---	---
20	---	48.82	55.84	55.10	---	45.26	---	---	---	45.16	---	---
21	---	45.74	56.50	54.53	---	43.32	---	---	---	45.50	---	---
22	---	44.36	57.22	54.07	36.70	41.38	---	---	45.74	45.64	---	49.01
23	---	43.18	57.73	52.18	37.50	39.50	---	---	46.48	45.79	39.40	48.67
24	---	42.74	---	49.98	38.02	38.60	43.54	---	47.15	45.97	---	48.61
25	---	42.68	58.54	48.31	38.35	38.14	---	---	---	46.30	41.24	48.59
26	73.52	42.91	59.31	46.72	38.35	38.17	44.19	---	48.69	46.69	---	---
27	73.26	43.14	59.66	43.10	38.20	38.61	---	---	---	47.14	42.78	48.94
28	72.78	43.61	60.33	38.79	38.44	39.20	---	---	50.14	47.62	43.53	49.09
29	72.48	44.01	60.77	36.53	---	39.79	---	---	50.76	48.19	44.21	---
30	72.19	44.47	61.26	34.70	---	---	46.06	---	51.42	48.77	44.91	---
31	71.94	---	61.50	30.32	---	41.09	---	30.62	---	49.47	45.53	---
MEAN	---	58.51	52.79	53.56	31.94	40.90	39.68	---	41.09	49.93	48.44	48.02
MAX	---	71.75	61.50	62.70	38.44	48.16	46.06	---	51.42	55.45	57.06	49.09
MIN	---	42.50	44.47	27.95	26.84	37.88	37.64	---	30.18	40.63	38.04	45.33

WTR YR 1990 MEAN 47.93 HIGH 26.84 FEB 6 LOW 73.52 OCT 26

## CHESTER COUNTY

395450075485401. Local number, CH 10.

LOCATION.--Lat 39°54'50", long 75°48'54", Hydrologic Unit 02040205, at intersection of Routes 82 and 841, Doe Run.  
Owner: Robert J. Kleberg, Jr.

AQUIFER.--Cockeysville Marble of Paleozoic age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 34 ft, casing information not available.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 300 ft. Measuring point: Top of plywood shelf, 5.23 ft above land-surface datum. Prior to June 24, 1981, top of casing, 1.00 ft above land-surface datum.

REMARKS.--Missing record due to DCP failure.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.19 ft below land-surface datum, July 20, 1989; lowest, 16.22 ft below land-surface datum, Nov. 3, 1963.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.73	10.71	11.59	12.24	---	11.02	11.96	12.03	10.89	12.37	13.17	12.92
2	10.73	10.74	11.60	11.88	---	11.03	11.96	12.09	10.95	12.43	13.20	12.96
3	10.31	10.80	11.63	11.70	---	11.09	11.91	12.13	11.01	12.48	13.22	13.01
4	10.37	10.86	11.66	11.64	---	11.19	11.51	12.15	11.13	12.52	13.23	13.05
5	10.45	10.90	11.68	11.62	---	11.24	11.43	12.11	11.25	12.58	13.24	13.07
6	10.53	10.95	11.72	11.62	9.95	11.31	11.42	12.08	11.31	12.58	13.24	13.11
7	10.64	10.99	11.80	11.62	10.06	11.35	11.42	12.15	11.42	12.61	13.23	13.16
8	10.71	11.03	11.82	11.63	10.15	11.39	11.40	12.19	11.50	12.63	13.19	13.21
9	10.83	11.01	11.81	11.60	10.20	11.40	11.44	12.23	11.49	12.66	13.21	13.22
10	10.87	10.98	11.83	11.42	10.20	11.43	11.44	12.23	11.57	12.69	13.15	13.26
11	10.93	11.00	11.85	11.16	9.99	11.46	11.41	11.75	11.66	12.74	13.04	13.30
12	10.98	11.09	11.87	11.04	10.09	11.49	11.49	11.60	11.73	12.77	13.00	13.32
13	11.03	11.12	11.89	11.16	10.13	11.56	11.55	11.60	11.79	12.77	13.00	13.35
14	11.07	11.14	11.91	11.22	10.25	11.60	11.55	11.60	11.83	12.71	12.86	13.36
15	11.14	11.17	11.94	11.24	10.28	11.65	11.55	11.65	11.84	12.67	12.56	13.38
16	11.19	11.16	11.97	11.27	10.33	11.68	11.37	11.68	11.67	12.72	12.54	13.40
17	11.22	11.20	12.00	11.29	10.53	11.68	11.38	11.75	11.71	12.75	12.59	13.44
18	11.25	11.25	12.03	11.31	10.55	11.67	11.46	11.83	11.75	12.77	12.65	13.45
19	11.23	11.27	12.04	11.37	10.60	11.63	11.51	11.90	11.69	12.80	12.75	13.46
20	10.77	11.25	12.05	---	10.71	11.63	11.53	11.96	11.68	12.83	12.79	13.49
21	9.87	11.35	12.09	11.22	10.76	11.67	11.57	12.03	11.76	12.87	12.84	13.51
22	10.01	11.40	12.15	---	10.77	11.69	11.62	12.06	11.81	12.89	12.85	13.51
23	10.10	11.43	12.17	---	10.70	11.77	11.68	12.13	11.86	12.94	12.74	13.46
24	10.17	11.47	12.19	---	10.72	11.79	11.77	12.21	11.94	12.97	12.64	13.45
25	10.25	11.48	12.20	---	10.88	11.81	11.81	12.25	12.02	12.99	12.61	13.47
26	10.32	11.48	12.23	---	10.92	11.86	11.87	12.25	12.07	13.02	12.63	13.49
27	10.38	11.49	12.23	---	10.94	11.90	11.93	12.23	12.13	13.05	12.68	13.52
28	10.46	11.47	12.28	---	10.98	11.93	11.99	12.25	12.21	13.07	12.75	13.55
29	10.51	11.51	12.30	---	---	11.97	12.03	12.25	12.25	13.09	12.80	13.56
30	10.59	11.53	12.30	---	---	11.98	12.03	11.17	12.31	13.12	12.85	13.57
31	10.61	---	12.30	---	---	11.96	---	10.80	---	13.14	12.90	---
MEAN	10.60	11.15	11.96	11.42	10.43	11.56	11.60	11.90	11.64	12.77	12.88	13.32
MAX	11.25	11.53	12.30	12.24	10.98	11.98	12.03	12.25	12.31	13.14	13.24	13.57
MIN	9.82	10.61	11.54	11.02	9.92	10.99	11.33	10.77	10.80	12.31	12.52	12.90
WTR YR	1990	MEAN	11.81	HIGH	9.82 OCT 21	LOW	13.57 SEPT 30					



## DELAWARE COUNTY

395040075341801. Local number, DE 3.

LOCATION.--Lat 39°50'40", long 75°34'18", Hydrologic Unit 02040205, at Birmingham Township.  
 Owner: Mrs. Hope W. Ebert.

AQUIFER.--Oligoclase-mica schist of Wissahickon Formation (age uncertain, Early Paleozoic to Precambrian).

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 42 in, depth 18.4 ft, (formerly reported as 22 ft), cased with stone.

INSTRUMENTATION.--Daily observer readings with chalked steel tape.

DATUM.--Altitude of land-surface datum is 280 ft. Measuring point: Top of concrete base, 1.80 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.90 ft below land-surface datum, Aug. 22, 1955;  
 lowest measured, dry many times since 1964.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.37	13.80	14.60	15.32	13.45	13.31	14.48	13.38	12.87	14.07	15.60	16.50
2	15.34	13.80	14.63	15.39	13.23	13.32	14.49	13.43	12.80	14.14	15.65	16.53
3	15.19	13.75	14.60	15.40	13.10	13.35	14.44	13.51	12.71	14.20	15.70	16.56
4	15.16	13.80	14.66	15.40	12.88	13.45	14.29	13.54	12.65	14.25	15.74	16.59
5	15.15	13.79	14.67	15.42	12.87	13.52	14.29	13.50	12.63	14.31	15.77	16.60
6	15.12	13.76	14.71	15.43	12.77	13.56	14.31	13.60	12.63	14.36	15.80	16.63
7	15.11	13.79	14.76	15.46	12.70	13.64	14.27	13.65	12.63	14.43	15.83	16.65
8	15.10	13.79	14.81	15.47	12.69	13.69	14.25	13.70	12.73	14.49	15.87	16.68
9	15.09	13.78	14.82	15.49	12.64	13.69	14.20	13.75	12.75	14.52	15.91	16.72
10	15.08	13.84	14.82	15.45	12.55	13.78	14.10	13.77	12.80	14.59	15.93	16.73
11	15.05	13.90	14.85	15.47	12.60	13.78	13.98	13.42	12.89	14.64	15.94	16.76
12	15.04	13.92	14.88	15.43	12.57	13.84	13.97	13.53	12.99	14.69	15.97	16.72
13	15.01	14.00	14.89	15.49	12.64	13.89	13.93	13.48	13.08	14.75	16.00	16.81
14	15.00	14.00	14.93	15.52	12.61	13.93	13.96	13.43	13.14	14.79	16.02	16.84
15	14.99	14.02	14.96	15.50	12.67	13.99	13.75	13.39	13.13	14.83	16.06	16.84
16	14.98	14.00	14.96	15.51	12.64	14.02	13.66	13.32	13.14	14.89	16.09	16.88
17	14.96	14.11	15.01	15.52	12.70	14.07	13.59	13.23	13.23	14.94	16.13	16.91
18	14.97	14.16	15.03	15.48	12.83	14.09	13.58	13.20	13.30	14.99	16.15	16.95
19	14.95	14.22	15.05	15.52	12.76	14.15	13.54	13.18	13.35	15.04	16.18	16.97
20	14.85	14.18	15.07	15.52	12.88	14.15	13.48	13.15	13.44	15.07	16.21	16.99
21	14.55	14.22	15.09	15.38	12.95	14.20	13.39	13.12	13.50	15.11	16.24	17.01
22	14.48	14.32	15.14	15.34	12.96	14.25	13.35	13.12	13.58	15.18	16.25	17.03
23	14.45	14.32	15.18	15.32	12.90	14.25	13.32	13.12	13.61	15.22	16.28	17.06
24	14.36	14.40	15.18	15.26	12.96	14.32	13.31	13.15	13.68	15.29	16.30	17.09
25	14.25	14.43	15.18	15.24	13.21	14.35	13.30	13.19	13.76	15.31	16.33	17.12
26	14.15	14.42	15.18	14.90	13.21	14.36	13.27	13.19	13.82	15.36	16.35	17.14
27	14.07	14.48	15.25	14.61	13.21	14.41	13.29	13.23	13.86	15.40	16.38	17.17
28	14.00	14.45	15.25	14.39	13.24	14.44	13.31	13.30	13.92	15.44	16.39	17.20
29	13.93	14.53	15.30	14.17	---	14.46	13.35	13.31	13.97	15.48	16.41	17.22
30	13.88	14.54	15.31	13.87	---	14.45	13.36	12.84	14.02	15.53	16.44	17.24
31	13.82	---	15.33	13.65	---	14.46	---	12.92	---	15.56	16.48	---
TOTAL	457.45	422.52	464.10	471.32	360.42	433.17	413.81	413.65	396.61	460.87	498.40	506.14
MEAN	14.76	14.08	14.97	15.20	12.87	13.97	13.79	13.34	13.22	14.87	16.08	16.87
MAX	15.37	14.54	15.33	15.52	13.45	14.46	14.49	13.77	14.02	15.56	16.48	17.24
MIN	13.82	13.75	14.60	13.65	12.55	13.31	13.27	12.84	12.63	14.07	15.60	16.50

WTR YR 1990 TOTAL 5298.46 MEAN 14.52 HIGH 12.55 FEB 10 LOW 17.24 SEPT 30

## DELAWARE COUNTY

395512075293701, Local number, DE 723.

LOCATION.--Lat 39°55'12", long 75°29'37", Hydrologic Unit 02040203, at Glen Mills School, in Thornbury Township.  
Owner: Glen Mills School.

AQUIFER.--Felsic Hornblende bearing Gneiss of Precambrian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in, depth 300 ft, casing information not available.  
INSTRUMENTATION.--Digital recorder.

DATUM.--Altitude of land-surface datum is 280 ft. Measuring point: Top of plywood shelf, 2.66 ft above land-surface datum. Prior to May 11, 1984, top of plywood shelf, 1.20 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.78 ft below land-surface datum, April 25, 1983; lowest, 9.95 ft below land-surface datum, Aug. 3, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.60	6.55	6.75	6.94	5.73	6.39	6.63	6.52	5.46	6.38	6.74	6.59
2	6.60	6.56	6.75	6.71	5.89	6.40	6.63	6.54	5.64	6.42	6.76	6.62
3	6.08	6.56	6.76	6.76	5.97	6.45	6.56	6.54	5.70	6.42	6.77	6.68
4	6.26	6.57	6.76	6.78	6.03	6.47	6.04	6.54	5.81	6.44	6.78	6.69
5	6.39	6.57	6.76	6.83	6.09	6.48	6.18	6.54	5.91	6.47	6.78	6.69
6	6.46	6.59	6.77	6.84	6.15	6.51	6.26	6.53	5.94	6.47	6.74	6.70
7	6.53	6.60	6.82	6.84	6.19	6.53	6.26	6.54	6.02	6.49	6.38	6.72
8	6.56	6.60	6.82	6.84	6.24	6.53	6.18	6.55	6.05	6.50	6.51	6.76
9	6.61	6.60	6.82	6.64	6.24	6.54	6.24	6.56	6.06	6.51	6.53	6.76
10	6.64	6.60	6.82	6.49	6.24	6.56	6.27	6.56	6.10	6.52	6.54	6.80
11	6.65	6.59	6.82	6.27	5.95	6.56	6.35	5.90	6.14	6.52	6.53	6.81
12	6.66	6.64	6.83	6.37	6.04	6.56	6.43	6.07	6.16	6.52	6.53	6.81
13	6.67	6.64	6.83	6.49	6.08	6.57	6.45	6.13	6.27	6.52	6.56	6.82
14	6.67	6.65	6.84	6.54	6.15	6.57	6.45	6.10	6.25	6.49	6.60	6.82
15	6.75	6.65	6.84	6.57	6.18	6.57	6.45	6.20	6.24	6.47	6.61	6.84
16	6.75	6.65	6.87	6.59	6.21	6.58	6.23	6.23	5.99	6.38	6.62	6.85
17	6.75	6.57	6.87	6.59	6.31	6.58	6.31	6.31	6.10	6.42	6.65	6.89
18	6.75	6.60	6.87	6.58	6.31	6.57	6.37	6.36	6.13	6.47	6.67	6.89
19	6.74	6.64	6.87	6.59	6.32	6.50	6.40	6.38	5.80	6.50	6.68	6.89
20	5.92	6.64	6.89	6.59	6.35	6.51	6.42	6.41	5.91	6.52	6.69	6.92
21	5.77	6.67	6.92	6.36	6.36	6.49	6.44	6.42	6.04	6.53	6.71	6.92
22	6.03	6.70	6.93	6.39	6.36	6.51	6.46	6.44	6.09	6.53	6.71	6.92
23	6.18	6.74	6.94	6.47	6.34	6.55	6.47	6.45	6.15	6.55	6.24	6.72
24	6.27	6.76	6.94	6.54	6.33	6.56	6.48	6.47	6.20	6.59	6.42	6.78
25	6.35	6.76	6.94	6.54	6.35	6.56	6.47	6.48	6.26	6.61	6.46	6.80
26	6.43	6.76	6.96	5.50	6.36	6.57	6.49	6.48	6.27	6.64	6.10	6.82
27	6.45	6.76	6.96	5.52	6.36	6.59	6.51	6.48	6.28	6.67	6.31	6.85
28	6.47	6.76	6.97	5.75	6.37	6.60	6.51	6.50	6.32	6.68	6.42	6.85
29	6.49	6.74	6.97	5.82	---	6.64	6.52	6.50	6.32	6.68	6.50	6.88
30	6.51	6.74	6.98	5.50	---	6.64	6.52	4.84	6.35	6.68	6.53	6.89
31	6.51	---	6.98	5.60	---	6.64	---	5.23	---	6.71	6.56	---
MEAN	6.40	6.64	6.86	6.35	6.17	6.53	6.36	6.25	6.01	6.51	6.52	6.78
MAX	6.75	6.76	6.98	6.94	6.37	6.64	6.63	6.56	6.35	6.71	6.78	6.92
MIN	5.30	6.51	6.74	5.20	5.61	6.37	5.93	4.43	5.24	6.32	5.75	6.56

WTR YR 1990 MEAN 6.45 HIGH 4.43 MAY 30 LOW 6.98 DEC 30, 31

## LEBANON COUNTY

402207076180801. Local number, LB 372.

LOCATION.--Lat 40°22'07", long 76°18'08", Hydrologic Unit 02040203, at Myerstown.  
Owner: Kohl Brothers, Inc.

AQUIFER.--Dolomite of Ontelaunee Formation of Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in, depth 80 ft, casing information not available, open hole.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 444 ft. Measuring point: Top of plywood shelf, 2.70 ft above land-surface datum. Prior to Apr. 22, 1981, measuring point was 3.50 ft. above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--July 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.02 ft below land-surface datum, Jan. 27, 1976; lowest, 11.32 ft below land-surface datum, Jan. 23, 30, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.21	8.53	8.16	8.71	6.83	7.87	8.37	8.51	7.45	8.71	9.51	9.86
2	9.21	8.60	8.20	8.50	6.93	7.91	8.37	8.55	7.54	8.74	9.53	9.85
3	9.15	8.61	8.25	8.57	7.03	7.96	8.05	8.57	7.61	8.76	9.55	9.82
4	9.21	8.66	8.30	8.60	7.02	8.01	7.86	8.57	7.71	8.79	9.58	9.85
5	9.24	8.71	8.36	8.63	7.15	8.10	7.84	8.43	7.80	8.84	9.58	9.88
6	9.26	8.75	8.38	8.69	7.25	8.19	7.87	8.61	7.87	8.87	9.39	9.92
7	9.29	8.79	8.44	8.71	7.35	8.21	7.88	8.65	7.95	8.89	9.39	9.97
8	9.30	8.84	8.49	8.77	7.43	8.23	7.89	8.61	7.99	8.89	9.49	9.98
9	9.34	8.80	8.51	8.79	7.49	8.27	7.94	8.70	7.95	8.95	9.53	9.98
10	9.38	8.70	8.55	8.77	7.49	8.27	7.99	8.65	7.91	8.99	9.53	10.03
11	9.42	8.75	8.58	8.59	7.45	8.29	7.95	8.07	8.01	9.00	9.39	10.05
12	9.44	8.80	8.61	8.61	7.53	8.35	8.03	8.13	8.07	9.98	9.49	10.06
13	9.46	8.85	8.65	8.67	7.59	8.40	8.07	8.15	8.11	8.74	9.56	10.08
14	9.48	8.89	8.69	8.71	7.67	8.45	8.09	8.11	8.17	8.83	9.59	10.09
15	9.48	8.92	8.73	8.77	7.67	8.49	8.09	8.19	8.21	8.82	9.66	10.12
16	9.51	8.93	8.75	8.81	7.67	8.51	8.05	8.21	8.23	8.95	9.69	10.14
17	9.52	6.92	8.77	8.81	7.73	8.52	8.11	8.23	8.27	8.99	9.73	10.18
18	9.36	7.13	8.81	8.79	7.76	8.15	8.17	8.31	8.31	9.07	9.73	10.20
19	9.26	7.23	8.85	8.81	7.83	8.27	8.21	8.32	8.31	9.09	9.74	10.20
20	8.08	7.31	8.91	8.82	7.91	8.09	8.23	8.33	8.35	9.17	9.75	10.18
21	7.38	7.45	8.95	8.64	7.92	8.10	8.23	8.33	8.41	9.16	9.63	10.20
22	7.65	7.52	9.01	8.60	7.93	8.15	8.25	8.41	8.47	9.14	9.59	10.20
23	7.83	7.59	9.01	8.65	7.92	8.20	8.29	8.43	8.49	9.19	9.25	10.05
24	7.96	7.67	---	8.69	7.60	8.21	8.35	8.47	8.49	9.23	9.41	10.14
25	8.06	7.74	9.01	8.69	7.73	8.23	8.37	8.51	8.51	9.27	9.53	10.19
26	8.18	7.83	9.13	8.27	7.79	8.29	8.41	8.51	8.57	9.29	9.61	10.21
27	8.28	7.88	9.14	7.62	7.82	8.35	8.47	8.41	8.57	9.33	9.69	10.23
28	8.34	7.94	9.16	7.74	7.84	8.39	8.51	8.48	8.62	9.33	9.76	10.25
29	8.40	8.03	9.19	7.79	---	8.41	8.51	8.49	8.68	9.35	9.78	10.27
30	8.44	8.09	9.25	6.31	---	8.41	8.51	7.05	8.69	9.41	9.80	10.27
31	8.47	---	9.25	6.65	---	8.39	---	7.31	---	9.48	9.86	---
MEAN	8.76	8.13	8.71	8.37	7.51	8.22	8.13	8.26	8.14	9.01	9.54	10.06
MAX	9.52	8.93	9.25	8.82	7.93	8.52	8.51	8.70	8.69	9.48	9.86	10.27
MIN	6.75	6.21	8.09	5.81	6.65	7.84	7.75	6.55	7.31	8.49	8.97	9.73

WTR YR 1990 MEAN 8.58 HIGH 5.81 JAN 30 LOW 10.27 SEPT 29, 30.

## LEHIGH COUNTY

403429075392401. Local number, LE 644.

LOCATION.--Lat 40°34'29", long 75°39'24", Hydrologic Unit 02040106, at Haafsville.  
 Owner: Charles J. Haaf.

AQUIFER.--Beekmantown Group of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 10 in, depth 184 ft, cased to 63 ft, open hole.  
 INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 470 ft. Measuring point: Top of plywood shelf, 2.65 ft above land-surface datum. Prior to Mar. 18, 1981, top of casing, 1.45 ft above land-surface datum.

REMARKS.--Water-quality records for 1973-75 are available in files of district office.

PERIOD OF RECORD.--January 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.65 ft below land-surface datum, June 27, 1972; lowest, 93.42 ft below land-surface datum, Feb. 6, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.58	61.81	63.55	67.72	61.52	59.58	62.67	63.27	60.97	61.70	65.27	64.57
2	63.58	61.84	63.51	67.56	60.95	59.55	62.78	63.49	60.79	61.96	65.48	64.53
3	63.38	61.97	63.43	67.55	60.65	59.64	62.70	63.63	60.58	62.16	65.65	64.74
4	63.40	62.04	63.49	67.67	60.22	59.74	62.22	63.60	60.35	62.29	65.86	64.97
5	63.44	62.09	63.84	67.79	60.17	59.87	61.99	63.48	60.42	62.37	65.86	65.17
6	63.56	62.17	64.21	67.87	60.13	60.07	61.97	63.60	60.42	62.36	65.63	65.34
7	63.73	62.26	64.59	67.85	60.17	60.14	61.91	63.69	60.50	62.54	65.38	65.58
8	63.84	62.36	64.72	67.88	60.16	60.18	61.89	63.81	60.59	62.54	65.31	65.83
9	64.02	62.33	64.91	67.94	59.85	60.28	61.87	63.91	60.45	62.64	65.41	65.84
10	64.13	62.38	64.89	67.96	59.85	60.45	61.79	63.88	59.81	62.85	65.42	66.04
11	64.30	62.38	64.81	67.93	59.85	60.50	61.75	63.63	59.61	63.01	65.07	66.23
12	64.43	62.61	64.82	67.79	59.89	60.62	61.89	63.50	59.69	63.06	64.53	66.39
13	64.63	62.60	64.92	67.96	59.89	60.78	61.95	63.12	59.71	62.96	64.23	66.62
14	64.75	62.58	65.26	67.97	59.96	60.89	61.93	63.17	59.74	62.52	64.07	66.72
15	64.92	62.58	65.51	68.00	59.96	61.02	61.86	63.18	59.83	62.44	63.87	66.72
16	65.04	62.51	65.86	68.06	59.88	61.10	61.80	63.26	59.89	62.47	63.81	66.72
17	65.08	62.51	65.95	68.08	60.13	61.10	61.93	63.19	59.88	62.56	63.84	67.03
18	65.09	62.64	66.13	68.14	60.13	61.14	62.05	63.24	59.89	62.67	63.82	67.20
19	65.10	62.70	66.21	68.19	59.98	61.19	62.14	63.23	59.86	62.85	63.76	67.30
20	64.53	62.61	66.39	67.92	60.15	61.23	62.12	63.18	60.02	63.03	63.71	67.53
21	63.50	62.89	66.64	67.65	60.20	61.44	62.12	63.16	60.19	63.22	63.80	67.64
22	62.61	62.97	66.96	67.51	60.17	61.47	62.08	63.27	60.29	63.33	63.80	67.64
23	62.20	63.05	67.04	67.60	60.02	61.74	62.29	63.46	60.28	63.59	63.70	67.59
24	61.88	63.16	---	67.55	59.92	61.86	62.50	63.61	60.38	63.81	63.70	67.67
25	61.76	63.19	67.08	67.53	59.70	61.90	62.62	63.77	60.70	64.11	63.68	67.91
26	61.73	63.35	67.33	67.14	59.64	62.11	62.77	63.75	60.89	64.36	63.65	68.10
27	61.69	63.44	67.41	66.19	59.42	62.30	62.91	63.50	61.11	64.50	63.66	68.36
28	61.66	63.52	67.66	65.34	59.53	62.45	63.08	63.49	61.31	64.61	63.86	68.60
29	61.65	63.64	67.77	65.02	---	62.58	63.08	63.44	61.43	64.67	64.04	68.67
30	61.65	63.64	67.89	64.17	---	62.63	63.19	62.79	61.60	64.84	64.28	68.82
31	61.65	---	---	62.53	---	62.63	---	61.41	---	65.04	64.50	---
MEAN	63.32	62.58	65.48	67.12	59.98	60.96	62.19	63.27	60.29	63.04	64.38	66.63
MAX	65.10	63.64	67.89	68.19	61.52	62.63	63.19	63.91	61.60	65.04	65.86	68.82
MIN	61.49	61.62	63.27	61.53	59.28	59.50	61.61	60.98	59.47	61.59	63.47	64.39

WTR YR 1990 MEAN 63.29 HIGH 59.28 FEB 27 LOW 68.82 SEPT 30

## MONROE COUNTY

411223075234901. Local number, MO 190.

LOCATION.--Lat 41°12'23", long 75°23'49", Hydrologic Unit 02040106, at Tobyhanna 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 98 ft, cased to 59 ft, open hole.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 1,990 ft. Measuring point: Top of plywood shelf, 2.96 ft above land-surface datum. Prior to Mar. 28, 1980, top of plywood cover, 2.57 ft above land-surface datum.

REMARKS.--Missing record due to instrument malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.83 ft below land-surface datum, Apr. 5, 1984; lowest, 16.87 ft below land-surface datum, Oct. 24, 25, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.31	9.56	10.05	11.83	9.01	9.19	9.79	9.82	8.43	10.66	11.42	11.76
2	11.31	9.56	10.05	11.83	---	9.21	9.72	9.97	8.57	10.54	11.57	11.84
3	11.18	9.60	10.11	11.88	---	9.30	9.65	10.01	8.73	10.56	11.62	11.90
4	11.15	9.63	10.19	11.88	---	9.39	9.01	10.01	9.01	10.69	11.70	11.90
5	11.19	9.67	10.27	11.88	---	9.50	8.85	9.80	9.20	10.85	11.78	11.90
6	11.23	9.74	10.35	11.88	---	9.61	8.83	9.42	9.34	10.99	11.66	11.96
7	11.28	9.78	10.52	---	8.55	9.65	8.86	9.41	9.42	11.07	11.64	12.05
8	11.30	9.84	10.52	11.89	8.59	9.64	9.00	9.46	9.54	11.14	11.69	12.09
9	11.35	9.84	10.57	11.92	8.54	9.71	9.06	9.51	9.54	11.19	11.71	12.16
10	11.37	9.75	10.67	11.92	---	9.78	9.04	9.51	9.44	11.29	11.71	12.18
11	11.40	9.71	10.76	11.92	8.27	9.78	8.84	8.57	9.42	11.32	11.63	12.24
12	11.43	9.86	10.78	11.90	---	9.75	8.77	8.34	9.53	11.32	11.66	12.28
13	11.50	9.86	10.89	11.96	---	9.73	8.83	8.24	9.63	10.86	11.68	12.35
14	11.52	9.90	10.95	11.98	---	9.79	8.86	8.11	9.74	10.49	11.52	12.38
15	11.60	9.92	10.98	12.03	---	9.85	8.86	8.25	9.90	10.36	11.41	12.38
16	11.64	9.92	11.10	12.04	---	9.87	8.92	8.27	10.00	10.16	11.40	12.20
17	11.64	---	11.17	12.04	---	9.83	9.08	7.92	10.12	10.02	11.48	12.25
18	11.58	---	11.24	11.93	---	9.53	9.16	7.96	10.16	10.04	---	12.30
19	11.58	---	11.25	11.81	8.64	9.38	9.24	8.26	10.08	10.14	11.59	12.30
20	10.93	9.26	11.34	---	8.95	9.25	9.24	8.39	9.99	10.26	11.64	12.31
21	9.85	9.44	11.40	---	9.01	9.21	9.24	8.48	10.01	10.27	11.64	12.37
22	9.53	9.50	11.45	---	9.02	9.21	9.27	8.58	10.08	10.37	11.65	12.37
23	9.44	9.58	---	---	8.89	9.27	9.37	---	10.19	10.47	11.65	12.37
24	9.31	9.68	---	11.37	8.77	9.31	9.47	8.91	10.30	10.61	11.65	12.44
25	9.26	9.68	11.57	---	8.91	9.36	9.51	9.06	10.42	10.72	11.59	12.45
26	9.25	9.79	11.69	---	8.94	9.54	9.58	9.14	10.48	10.86	11.59	12.49
27	9.30	9.84	---	---	8.94	9.62	9.63	9.31	10.58	11.03	11.61	12.52
28	9.37	9.83	11.83	10.03	9.11	9.71	9.70	9.49	10.69	11.07	11.72	12.61
29	9.48	9.87	11.87	---	---	9.78	9.78	9.49	10.77	11.20	11.65	12.62
30	9.55	9.95	11.92	---	---	9.79	9.78	8.75	10.80	11.26	11.66	12.68
31	9.55	---	11.92	---	---	9.79	---	8.25	---	11.33	11.75	---
MEAN	10.63	9.69	10.94	11.78	8.76	9.52	9.19	8.87	9.75	10.69	11.59	12.23
MAX	11.64	9.95	11.92	12.04	9.11	9.87	9.79	10.01	10.80	11.33	11.78	12.68
MIN	9.24	9.15	9.95	9.93	8.27	9.09	8.70	7.70	8.25	10.02	11.33	11.75

WTR YR 1990 MEAN 10.33 HIGH 7.70 MAY 17 LOW 12.68 SEPT 30

## MONTGOMERY COUNTY

400808075210401. Local number, MG 225.

LOCATION.--Lat 40°08'08", long 75°21'04", Hydrologic Unit 02040203, at Willow and Locust Street, Norristown.  
Owner: Norristown State Hospital.

AQUIFER.--Sanstone of Stockton Formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in, depth 300 ft, casing information not available.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 165 ft. Measuring point: Top of plywood shelf, 2.35 ft above land-surface datum. Prior to Mar. 17, 1981, top of casing, 0.75 ft above land-surface datum.

REMARKS.--Missing record due to instrument failure.

PERIOD OF RECORD.--September 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.00 ft below land-surface datum, May 31, 1984; lowest, 60.25 ft below land-surface datum, Nov. 5, 6, 1963.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.77	19.63	21.82	24.08	17.24	18.36	19.31	18.38	16.74	17.83	19.22	21.29
2	17.75	19.67	---	23.84	17.16	18.32	---	18.56	16.85	17.99	19.79	21.30
3	17.45	19.84	---	23.74	---	18.35	19.25	18.66	16.90	18.09	20.07	21.43
4	17.37	19.96	21.87	---	17.28	18.51	18.86	18.68	17.09	18.17	20.25	21.48
5	17.34	20.07	21.98	23.72	17.36	18.61	18.78	18.60	17.22	18.31	20.37	21.48
6	17.32	20.17	22.05	---	17.37	---	18.80	18.72	17.29	18.48	20.38	21.52
7	17.41	20.27	---	---	17.44	---	18.77	18.80	17.43	18.60	20.35	21.61
8	17.44	20.38	22.36	23.77	17.48	---	18.73	18.88	17.51	18.68	20.45	21.72
9	17.55	20.35	22.38	23.72	---	---	18.67	18.94	17.52	18.72	20.51	21.72
10	17.61	20.16	---	23.17	17.39	---	18.57	18.90	17.61	18.05	20.54	21.78
11	17.66	20.18	22.64	22.55	---	---	18.32	18.69	17.76	17.50	20.57	21.84
12	17.69	20.41	22.69	---	17.18	---	18.32	18.74	17.86	17.38	20.60	21.88
13	17.78	20.42	22.80	---	---	---	18.33	18.66	17.93	17.30	20.63	21.94
14	17.84	---	22.89	---	---	---	18.28	18.71	17.98	17.15	20.55	21.97
15	17.94	20.48	22.89	---	17.28	---	18.19	18.70	17.97	17.09	20.52	21.95
16	17.98	---	22.97	---	---	---	17.83	18.68	17.83	17.14	20.59	22.03
17	18.03	---	23.03	22.43	---	19.41	17.71	18.70	17.91	17.19	20.65	22.43
18	18.05	---	---	---	---	19.44	17.75	18.79	17.98	17.22	20.70	22.29
19	18.06	---	23.14	---	---	19.45	17.77	18.87	17.10	17.27	20.83	23.29
20	17.51	20.78	23.26	---	17.85	19.41	17.74	18.93	16.58	17.20	20.90	23.96
21	16.63	21.01	---	---	---	19.19	17.70	19.04	16.73	17.29	20.95	24.33
22	16.42	21.06	23.31	---	---	19.16	17.75	19.10	16.84	17.36	20.95	24.34
23	16.47	21.19	---	21.89	---	19.18	17.79	19.16	16.90	17.45	20.95	24.42
24	16.50	21.25	---	21.81	---	19.22	17.89	19.27	17.09	17.52	20.99	24.63
25	17.89	---	---	21.79	---	19.19	17.96	19.36	17.24	17.62	21.03	24.75
26	18.45	---	---	21.01	---	19.24	17.99	19.34	17.32	17.69	21.06	24.95
27	18.59	---	---	19.38	---	19.30	18.08	19.38	17.41	17.73	21.07	25.05
28	---	---	24.02	---	---	19.34	18.14	19.46	17.52	17.77	21.14	25.22
29	---	21.65	---	---	---	19.40	18.27	19.44	17.58	17.82	21.16	25.37
30	19.29	24.60	---	---	---	19.36	18.31	17.50	17.68	17.87	21.19	25.52
31	19.38	---	24.19	17.50	---	19.30	---	16.60	---	17.95	21.25	---
MEAN	17.58	20.44	22.73	22.13	17.31	19.04	18.22	18.70	17.31	17.66	20.58	22.82
MAX	19.38	24.60	24.19	24.08	17.85	19.45	19.31	19.46	17.98	18.72	21.25	25.52
MIN	16.35	19.39	21.64	17.37	17.06	18.27	17.62	16.51	16.45	17.05	17.95	21.21

WTR YR 1990 MEAN 19.42 HIGH 16.35 OCT 21 LOW 25.52 SEPT 30

## MONTGOMERY COUNTY

401310075181702. Local number, MG 884

LOCATION.--Lat 40°13'10", long 75°18'17", Hydrologic Unit 02040203, at Upper Gwyned Township, near West Point.  
Owner: Merck, Sharp, and Dohme, Inc.

AQUIFER.--Shale of Brunswick Formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in to 10 in, depth 600 ft, casing information not available.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 351 ft. Measuring point: Top of plywood shelf, 2.55 ft above land-surface datum. Prior to May 1, 1981, top of casing, 1.30 ft above land-surface datum.

REMARKS.--Well originally drilled to 300 ft. Water-level data for August 1956 to December 1965 published in U.S. Geological Survey Water-Supply Papers under local number MG-127. Well deepened to 600 ft in December 1965 and assigned local number MG-884. Missing record due DCP malfunction.

PERIOD OF RECORD.--March 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.03 ft below land-surface datum, Apr. 29, 1987; lowest, 93.17 ft below land-surface datum, Oct. 20, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	49.97	48.82	49.88	49.55	48.44	47.50	47.40	43.71	42.64	---	51.56
2	---	49.96	48.82	49.97	49.22	48.16	47.50	47.82	43.37	42.91	---	51.03
3	---	49.85	48.38	49.89	---	48.03	47.39	47.95	42.94	42.92	---	50.63
4	---	49.94	48.49	---	49.15	48.38	47.34	47.88	42.43	42.92	---	50.61
5	---	49.43	48.43	50.05	49.34	48.90	47.74	47.41	42.50	42.93	---	50.20
6	---	49.27	48.45	---	49.22	---	47.84	47.66	42.34	---	---	50.20
7	---	49.23	48.93	---	---	---	47.94	47.77	42.18	---	---	50.04
8	---	49.12	48.93	50.13	49.11	48.58	48.09	47.89	42.18	---	---	50.02
9	---	49.06	48.57	50.31	---	---	48.15	47.91	41.75	---	51.88	49.90
10	---	49.23	48.44	50.28	48.78	---	47.46	47.78	41.52	---	51.94	49.48
11	---	49.23	48.50	50.11	---	---	46.27	47.68	41.51	---	52.11	49.45
12	50.78	49.28	48.53	---	49.01	---	46.70	47.74	41.53	---	52.24	49.95
13	50.75	49.28	48.43	---	---	---	46.97	47.26	41.50	---	52.25	50.46
14	50.79	---	48.50	---	---	---	46.98	47.18	41.42	---	52.41	50.55
15	50.79	48.69	48.56	---	48.76	---	46.74	47.24	41.56	---	52.48	51.04
16	50.79	---	48.54	---	---	---	46.80	47.14	41.68	---	52.59	51.39
17	50.77	---	48.65	50.57	---	47.99	47.01	46.88	41.73	---	52.68	51.92
18	50.96	---	48.71	---	---	48.45	47.37	46.99	41.62	---	52.76	51.95
19	50.91	---	48.71	---	---	48.46	47.47	47.07	41.44	---	53.02	51.96
20	50.67	48.59	48.57	50.57	48.90	48.21	47.34	47.04	41.57	---	53.06	52.42
21	50.63	48.92	48.73	49.97	---	---	46.96	47.10	41.94	---	53.06	52.50
22	50.87	49.05	48.93	---	---	48.26	47.04	47.12	41.96	---	53.09	52.49
23	50.90	48.92	48.97	50.30	---	48.32	47.05	46.54	41.81	---	52.74	52.88
24	50.77	49.03	---	50.13	---	48.40	47.21	46.08	42.12	---	52.32	53.07
25	50.62	48.99	48.63	50.13	48.99	48.08	47.24	45.84	42.38	---	52.02	53.13
26	50.49	48.81	48.89	50.05	49.07	---	47.14	45.38	42.42	---	51.76	53.31
27	50.39	48.95	49.03	50.17	48.81	48.09	47.24	44.90	42.40	---	51.41	53.54
28	---	48.65	49.10	---	---	---	47.30	44.73	42.53	---	51.06	53.64
29	---	48.78	---	---	---	48.05	47.48	44.46	42.55	---	50.83	53.70
30	50.09	48.72	49.38	---	---	47.49	47.43	43.92	42.52	---	51.01	53.84
31	49.93	---	49.38	49.68	---	47.38	---	43.93	---	---	51.45	---
MEAN	50.59	49.01	48.50	50.01	48.92	48.05	47.16	46.62	42.01	---	52.07	51.42
MAX	50.96	49.97	49.38	50.57	49.55	48.90	48.15	47.95	43.71	---	53.09	53.84
MIN	49.53	47.87	48.08	48.99	48.34	47.05	46.14	43.71	41.32	---	50.60	49.34
WTR YR	1990	MEAN	48.22	HIGH	41.32	JUNE	19	LOW	53.84	SEPT	30	



## NORTHAMPTON COUNTY

403511075210001. Local number, NP 83.

LOCATION.--Lat 40°35'11", long 75°21'00", Hydrologic Unit 02040106, at Bethlehem.  
Owner: Lehigh University.

AQUIFER.--Dolomite of Leithsville Formation of Early and Middle Cambrian area.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in, depth 106 ft.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 288 ft. Measuring point: Top of casing, 4.55 ft above land-surface datum.

REMARKS.-- No missing record. Well does not drop below 34.00 ft due to stream (Saucon Creek) at that elevation.  
PERIOD OF RECORD.--November 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.-- Highest water level, 30.43 ft below land-surface datum, May 30, 1989; lowest, 33.89 ft below land-surface datum, Sept. 30, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.43	33.40	33.58	33.65	33.04	33.38	33.48	33.57	32.94	33.43	33.71	33.70
2	33.43	33.40	33.58	33.69	33.15	33.36	33.47	33.60	33.03	33.45	33.72	33.72
3	33.37	33.40	33.59	33.72	33.20	33.37	33.46	33.61	33.08	33.46	33.73	33.74
4	33.40	33.41	33.65	33.73	33.20	33.41	33.23	33.60	33.15	33.47	33.73	33.75
5	33.43	33.42	33.61	33.75	33.19	33.43	33.35	33.53	33.18	33.49	33.74	33.75
6	33.44	33.43	33.61	33.75	33.24	33.45	33.39	33.46	33.20	33.48	33.64	33.75
7	33.47	33.43	33.66	33.76	33.28	33.47	33.39	33.51	33.24	33.51	33.36	33.76
8	33.48	33.46	33.66	33.76	33.30	33.45	33.43	33.55	33.26	33.51	33.52	33.79
9	33.50	33.44	33.66	33.77	33.29	33.43	33.45	33.56	33.23	33.52	33.57	33.79
10	33.52	33.42	33.66	33.75	33.28	33.44	33.44	33.56	33.10	33.54	33.58	33.79
11	33.52	33.44	33.67	33.56	33.19	33.44	33.43	33.34	33.18	33.54	33.58	33.81
12	33.52	33.48	33.67	33.66	33.24	33.44	33.47	33.43	33.22	33.52	33.62	33.82
13	33.54	33.48	33.68	33.73	33.25	33.46	33.49	33.44	33.24	33.40	33.64	33.83
14	33.54	33.48	33.69	33.76	33.30	33.47	33.49	33.49	33.25	33.38	33.52	33.83
15	33.55	33.48	33.71	33.75	33.30	33.48	33.48	33.51	33.25	33.45	33.58	33.81
16	33.55	33.46	33.72	33.77	33.26	33.49	33.44	33.51	33.28	33.49	33.62	33.83
17	33.55	33.44	33.75	33.74	33.34	33.48	33.47	33.38	33.29	33.52	33.65	33.85
18	33.41	33.48	33.75	33.70	33.35	33.38	33.50	33.45	33.30	33.54	33.66	33.86
19	33.42	33.49	33.76	33.73	33.34	33.43	33.51	33.49	33.20	33.55	33.68	33.86
20	33.11	33.48	33.75	33.74	33.38	33.43	33.50	33.51	33.27	33.56	33.64	33.86
21	32.97	33.53	33.77	33.67	33.38	33.45	33.49	33.53	33.30	33.57	33.64	33.86
22	33.15	33.53	33.80	33.59	33.34	33.46	33.48	33.54	33.31	33.57	33.63	33.86
23	33.23	33.53	33.81	33.65	33.25	33.49	33.50	33.55	33.33	33.60	33.58	33.79
24	33.27	33.55	33.80	33.66	33.18	33.50	33.53	33.57	33.36	33.62	33.59	33.84
25	33.31	33.55	33.79	33.66	33.34	33.50	33.53	33.58	33.39	33.64	33.62	33.85
26	33.34	33.54	33.81	32.97	33.38	33.53	33.53	33.58	33.39	33.66	33.63	33.86
27	33.36	33.55	33.83	33.26	33.36	33.55	33.54	33.57	33.41	33.67	33.64	33.88
28	33.36	33.54	33.83	33.38	33.37	33.55	33.55	33.58	33.42	33.67	33.66	33.88
29	33.38	33.55	33.84	33.40	---	33.55	33.57	33.58	33.43	33.68	33.66	33.88
30	33.39	33.56	33.83	32.59	---	33.54	33.56	32.33	33.42	33.68	33.68	33.89
31	33.40	---	33.82	32.93	---	33.47	---	32.76	---	33.69	33.70	---
MEAN	33.35	33.46	33.71	33.52	33.24	33.44	33.44	33.36	33.22	33.52	33.60	33.81
MAX	33.55	33.56	33.84	33.77	33.38	33.55	33.57	33.61	33.43	33.69	33.74	33.89
MIN	32.31	33.30	33.56	31.43	32.94	33.26	33.02	30.42	32.55	32.90	32.56	33.66

WTR YR 1990 MEAN 33.48 HIGH 30.43 MAY 30 LOW 33.89 SEPT 30

## PHILADELPHIA COUNTY

395342075102101. Local number, PH 12.

LOCATION.--Lat 39°53'42", long 75°10'21", Hydrologic Unit 02040202, at Barracks and East Fourth Streets, Philadelphia. Owner: U.S. Naval Base.

AQUIFER.--Middle Sand Unit of Potomac-Raritan-Magothy aquifer system of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in, depth 104 ft, cased to 94 ft, screened 94-104 ft.

INSTRUMENTATION.--Digital recorder.

DATUM.--Altitude of land-surface datum is 8.64 ft. Measuring point: Top of casing, 1.80 ft above land-surface datum.

REMARKS.--Mean daily fluctuation caused by tidal loading, 0.20 ft. Missing record due to malfunction of digital recorder.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.39 ft below land-surface datum, Nov. 16, 1989; lowest, 39.60 ft below land-surface datum, July 20, 1955.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.25	13.20	13.53	13.88	13.68	13.73	---	13.13	13.47	---	13.61	14.97
2	14.05	13.25	13.52	14.07	13.36	13.52	---	13.37	13.46	---	13.73	14.90
3	13.99	13.19	13.11	14.06	13.61	13.22	---	13.55	13.31	---	13.74	15.13
4	14.11	13.32	13.37	13.99	13.37	13.56	---	13.51	13.26	---	13.75	15.19
5	14.15	13.28	13.20	13.83	13.50	13.69	---	13.01	13.53	---	13.75	14.99
6	14.07	13.12	13.19	13.80	13.41	13.72	---	13.15	13.54	---	13.58	14.82
7	14.17	12.98	13.71	13.86	13.35	13.91	---	13.26	13.55	---	13.68	14.82
8	14.23	12.88	13.80	13.67	13.52	13.72	---	13.39	13.62	---	13.70	15.16
9	14.34	12.60	13.52	13.71	13.29	13.40	---	13.41	13.44	---	13.80	15.16
10	14.40	12.91	13.25	13.45	13.14	13.34	---	13.25	13.43	---	14.04	14.94
11	13.89	13.10	13.24	13.55	13.29	13.25	---	13.55	13.74	---	14.14	15.13
12	13.80	13.35	13.21	13.32	13.49	13.20	---	13.71	13.74	---	14.30	15.14
13	13.59	13.50	13.14	14.04	13.50	13.18	---	13.49	13.70	---	14.32	15.10
14	13.59	13.16	13.29	14.16	13.52	13.25	---	13.49	13.57	---	14.41	15.01
15	13.44	13.02	13.36	14.05	13.54	13.27	---	13.50	13.46	---	14.50	14.66
16	13.43	12.74	13.59	13.90	13.24	13.24	---	13.34	13.50	---	14.56	14.79
17	13.31	13.18	13.84	13.90	13.90	---	---	13.05	13.51	---	14.66	15.22
18	13.49	13.39	13.98	13.76	14.04	---	---	13.06	13.39	---	14.71	15.29
19	13.44	13.49	14.02	14.10	13.57	---	---	13.16	13.12	---	14.76	15.16
20	13.24	13.09	13.65	14.10	13.96	---	---	13.24	13.26	---	14.83	15.17
21	12.99	13.62	13.77	13.56	14.03	---	---	13.15	13.27	---	14.75	15.22
22	13.28	13.77	14.13	13.57	13.71	---	---	13.13	13.31	---	14.62	15.02
23	13.41	13.19	14.25	13.71	13.03	---	---	13.09	13.09	---	14.56	14.92
24	13.31	13.30	14.05	13.62	13.33	---	---	13.19	13.27	---	14.56	15.13
25	13.21	13.24	13.67	13.60	14.30	---	13.31	13.22	13.52	---	14.63	15.16
26	13.20	13.16	13.72	13.68	14.44	---	13.13	13.15	13.52	---	14.64	15.02
27	13.21	13.34	14.05	13.98	14.20	---	13.21	13.04	13.42	---	14.62	15.19
28	13.18	13.00	13.97	13.84	13.71	---	13.20	13.07	13.44	13.70	14.56	15.23
29	13.19	13.37	14.09	13.83	---	---	13.30	13.02	13.41	13.61	14.55	15.20
30	13.17	13.34	13.88	13.50	---	---	13.26	13.15	13.31	13.52	14.80	15.14
31	13.00	---	13.84	13.67	---	---	---	13.33	---	13.40	14.93	---
MEAN	13.51	13.04	13.48	13.64	13.42	13.24	13.13	13.14	13.34	13.52	14.24	14.96
MAX	14.40	13.77	14.25	14.16	14.44	13.91	13.31	13.71	13.74	13.70	14.93	15.29
MIN	12.63	12.39	12.72	12.96	12.79	13.05	13.00	12.53	12.96	13.38	13.38	14.53

WTR YR 1990 MEAN 13.61 HIGH 12.39 NOV 16 LOW 15.29 SEPT 18

## PIKE COUNTY

410940074583401. Local number, PI 200.

LOCATION.--Lat 41°09'40", long 74°58'34", Hydrologic Unit 02040104, at Pocono Mountain Lake Estates.  
 Owner: Pocono Mountain Lake Estates.

AQUIFER.--Sandstone and siltstone of Towamensing Member of Catskill Formation of Late Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 799 ft, cased to 86 ft, open hole.

INSTRUMENTATION.--Digital recorder.

DATUM.--Altitude of land-surface datum is 1,180 ft. Measuring point: Top of plywood shelf, 1.40 ft above land-surface datum.

REMARKS.--Missing record due to float hanging up on casing.

PERIOD OF RECORD.--July 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.88 ft below land-surface datum, Apr. 18, 1983; lowest, 64.57 ft below land-surface datum, June 28, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.63	54.35	---	49.53	---	43.42	33.58	35.35	---	39.94	41.19	35.23
2	49.10	57.15	---	47.78	---	44.43	33.56	35.22	---	40.11	41.43	35.57
3	48.99	59.07	---	48.10	---	44.56	33.33	35.29	---	40.19	41.54	35.88
4	48.28	60.01	---	46.88	---	43.14	32.12	35.35	---	40.27	41.59	36.17
5	47.94	58.53	---	44.61	---	40.18	30.53	35.31	---	40.36	41.97	36.28
6	48.54	51.18	44.79	42.97	---	38.24	30.07	33.25	---	40.54	41.97	36.44
7	50.59	46.38	45.10	41.74	---	37.09	30.26	31.80	---	40.79	41.94	37.91
8	53.08	43.01	49.57	40.84	---	36.44	---	31.40	---	41.01	41.67	38.86
9	54.49	40.36	50.92	40.13	---	36.25	---	31.73	---	41.09	41.49	38.88
10	54.55	38.00	49.89	39.61	---	---	---	31.81	---	41.20	41.30	38.88
11	54.30	35.33	46.13	39.04	---	---	---	30.93	---	41.42	41.08	38.73
12	53.61	34.13	51.69	38.35	---	---	---	28.19	---	41.43	40.81	38.27
13	53.31	33.55	55.57	37.64	---	---	---	27.37	---	41.30	40.57	36.55
14	54.54	33.22	58.07	37.36	---	---	---	27.66	---	40.85	40.26	35.67
15	56.53	---	59.23	37.19	---	---	---	---	---	40.40	38.85	35.53
16	57.14	---	59.50	36.93	---	---	---	---	---	39.86	37.55	34.57
17	57.17	---	56.27	36.74	---	---	---	---	---	39.72	36.76	35.05
18	56.41	---	50.34	36.52	---	35.64	---	27.07	---	39.72	36.51	35.46
19	55.42	---	49.54	35.72	---	33.35	---	26.18	---	39.71	36.61	---
20	52.67	---	50.34	34.91	---	---	33.48	---	---	39.40	36.74	---
21	48.75	---	51.23	34.36	---	---	33.68	---	---	39.22	36.96	---
22	51.89	---	52.09	---	---	34.10	33.79	---	---	39.30	37.06	---
23	53.16	---	52.75	---	---	32.84	33.86	---	---	39.35	37.18	---
24	53.22	---	51.48	---	---	31.61	33.98	---	---	39.42	37.23	---
25	53.05	---	47.81	---	---	31.35	34.06	---	---	39.60	37.01	---
26	50.77	---	45.19	---	---	31.47	34.25	---	---	39.79	36.40	---
27	49.56	---	45.32	---	---	---	34.88	---	38.73	39.94	36.01	---
28	50.51	---	49.08	---	42.13	---	35.18	---	38.86	40.13	35.86	---
29	49.51	---	52.15	---	---	32.88	35.35	---	39.36	40.72	35.82	---
30	45.87	---	53.36	---	---	33.26	35.35	---	39.81	41.03	35.42	---
31	50.09	---	53.00	---	---	33.57	---	---	---	41.13	35.15	---
MEAN	51.59	---	49.96	39.86	---	36.02	33.23	31.16	---	40.17	38.62	36.33
MAX	57.17	---	59.50	49.53	---	44.56	35.35	35.35	---	41.43	41.97	38.88
MIN	44.07	---	43.33	33.85	---	31.24	30.00	26.11	---	39.13	35.07	33.31

WTR YR 1990 MEAN 39.61 HIGH 26.11 MAY 19 LOW 60.01 NOV 04

## SCHUYLKILL COUNTY

404708076070701. Local number, SC 296.

LOCATION.--Lat 40°47'08", long 76°07'07", Hydrologic Unit 02040203, at Locust Lake State Park.  
 Owner: U.S. Geological Survey.

AQUIFER.--Mauch Chunk Formation of Early Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 242 ft, cased to 40 ft, open hole.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 1,290 ft. Measuring point: Top of plywood shelf, 2.78 ft above land-surface datum. Prior to June 26, 1980, top of casing, 2.30 ft above land-surface datum.

REMARKS.--Missing record due to DCP downlink failure.

PERIOD OF RECORD.--July 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.27 ft below land-surface datum, May 18, 1989; lowest, 55.86 ft below land-surface datum, Nov. 14, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.40	42.11	40.69	45.69	31.55	39.78	40.34	42.96	37.99	43.98	46.09	43.11
2	47.13	42.52	41.11	45.00	31.66	39.93	40.35	43.25	38.27	44.29	46.24	43.09
3	47.03	42.74	41.58	45.23	32.33	39.97	---	43.27	38.36	44.29	46.24	43.46
4	47.17	43.09	41.91	45.23	32.84	40.38	---	43.34	38.60	44.32	46.56	43.54
5	47.17	43.31	42.14	45.03	33.22	40.67	38.51	43.27	38.98	44.46	46.55	43.56
6	47.32	43.47	42.24	44.43	33.90	41.03	38.38	42.54	39.26	44.74	45.90	43.72
7	47.52	43.50	42.49	44.18	34.66	41.45	38.34	42.63	39.72	44.85	45.67	43.72
8	47.67	43.50	42.73	44.24	35.48	41.53	38.41	42.63	40.06	45.16	46.20	43.94
9	47.95	43.57	42.89	43.98	36.13	41.78	38.58	42.60	40.01	45.11	46.26	44.13
10	47.95	42.83	43.21	43.96	36.18	42.00	---	42.51	38.33	44.93	46.28	44.25
11	47.91	42.90	43.29	43.40	36.51	42.26	38.29	35.82	38.59	45.05	45.41	44.41
12	48.02	43.13	43.55	43.01	37.12	42.43	38.38	34.21	38.65	45.18	45.46	44.70
13	48.19	43.14	43.76	43.04	37.48	42.52	38.66	33.00	38.66	44.76	45.63	44.84
14	48.18	---	44.14	43.10	37.86	42.69	---	32.29	38.65	44.70	44.03	44.92
15	48.11	43.18	44.29	42.92	38.10	42.92	39.05	32.30	38.78	44.81	43.91	44.92
16	48.32	43.01	44.42	42.85	---	43.03	39.17	32.33	38.89	45.00	44.34	43.57
17	48.29	35.58	44.47	42.59	38.15	---	39.64	31.56	39.09	45.26	44.52	44.07
18	47.93	35.09	44.47	42.53	38.42	42.82	39.83	30.24	39.32	45.44	44.69	44.26
19	47.66	34.60	44.66	42.48	38.81	42.39	40.13	30.27	39.71	45.49	44.69	44.32
20	42.02	34.30	44.66	---	39.09	42.31	40.37	30.90	39.95	45.51	44.66	44.46
21	39.11	34.51	45.06	42.47	39.29	40.41	40.44	31.73	40.35	45.65	44.37	44.49
22	40.19	34.94	45.18	41.29	39.48	40.17	40.87	32.61	40.69	45.74	44.18	44.49
23	40.63	35.64	45.17	41.12	39.53	39.87	41.12	33.72	41.71	45.79	42.88	44.22
24	40.68	36.49	---	41.17	39.36	39.61	41.44	34.79	42.50	45.79	42.64	44.19
25	40.73	37.17	44.89	41.17	39.18	39.02	41.72	35.90	42.88	45.78	42.71	44.25
26	40.63	38.06	45.13	40.57	39.34	38.98	42.11	36.72	43.08	45.91	42.76	44.33
27	40.62	38.81	45.17	37.11	39.34	38.98	42.26	37.53	43.18	46.05	42.89	44.33
28	40.81	39.31	45.34	37.02	39.55	39.26	42.25	38.30	43.29	46.07	42.98	44.50
29	40.84	39.78	---	36.86	---	39.44	42.43	38.62	43.72	46.09	42.95	44.51
30	41.44	40.22	45.56	34.49	---	39.64	42.61	37.59	43.82	46.11	43.07	44.63
31	41.76	---	---	31.90	---	39.98	---	37.62	---	46.08	43.02	---
MEAN	44.77	39.70	43.56	41.64	36.64	40.78	40.02	36.62	39.97	45.15	44.46	44.03
MAX	48.32	43.57	45.56	45.69	39.55	43.03	42.61	43.34	43.82	46.11	46.56	44.92
MIN	38.11	34.15	40.19	31.57	31.31	38.94	38.09	29.94	37.63	43.84	42.57	42.99

WTR YR 1990 MEAN 41.50 HIGH 29.94 MAY 18, 19 LOW 48.32 OCT. 16

## WAYNE COUNTY

414333075153201. Local number, WN 64.

LOCATION.--Lat 41°43'33", long 75°15'32", Hydrologic Unit 02040103, at State Game Land Number 159.  
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Glacial Outwash of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 52 ft, cased to 52 ft, open end.

INSTRUMENTATION.--Synergetics data collection platform.

DATUM.--Altitude of land-surface datum is 1,350 ft. Measuring point: Top of plywood shelf, 2.63 ft above land-surface datum. Prior to Apr. 30, 1980, top of plywood cover, 2.57 ft above land-surface datum.

REMARKS.--Missing record due to DCP downlink malfunction and renovation of gaging station.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.88 ft below land-surface datum, Nov. 17, 1972; lowest, 32.77 ft below land-surface datum, Oct. 24, 25, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.67	27.41	26.90	29.41	---	26.31	26.41	26.88	25.30	29.12	29.61	27.39
2	29.61	27.41	---	29.41	---	26.35	26.39	27.04	25.34	29.16	29.65	27.37
3	29.55	27.29	---	29.43	---	26.53	26.27	27.14	25.38	29.19	29.69	27.45
4	29.49	27.31	27.00	29.43	---	26.73	25.65	27.16	25.66	29.25	29.75	27.45
5	29.43	27.27	27.18	29.48	---	26.85	25.69	27.06	25.90	29.29	29.77	27.43
6	29.39	27.21	27.32	29.48	---	27.05	25.73	26.98	26.12	29.35	29.65	27.41
7	29.37	27.21	27.56	29.48	---	27.13	25.71	26.90	26.44	29.43	29.48	27.51
8	29.37	27.21	27.64	29.44	---	27.15	25.77	26.78	26.62	29.49	29.41	27.65
9	29.37	27.13	27.72	29.44	---	27.21	25.81	26.72	26.78	29.55	29.33	27.73
10	29.39	27.09	27.81	29.42	---	27.29	25.77	26.60	26.96	29.59	29.23	27.79
11	29.37	27.01	27.95	29.42	---	27.31	25.63	26.22	27.18	29.65	28.95	27.83
12	29.37	26.85	28.05	29.39	---	27.31	25.58	26.10	27.36	29.65	28.61	27.87
13	29.37	26.85	28.15	29.43	---	27.07	25.55	25.66	27.52	29.59	28.38	27.91
14	29.37	---	28.21	29.47	---	26.89	25.47	25.08	27.68	29.57	28.16	27.91
15	29.39	26.69	28.27	29.45	---	26.71	25.39	24.54	27.86	29.55	27.91	27.91
16	29.37	---	28.39	29.49	---	26.61	25.45	24.40	28.00	29.48	27.77	28.01
17	29.35	---	28.47	29.49	---	26.47	25.65	23.94	28.12	29.44	27.67	28.11
18	29.31	---	28.56	29.41	---	26.51	25.79	23.70	28.18	29.42	27.63	28.15
19	29.25	---	28.62	29.37	---	26.51	25.85	23.78	28.30	29.38	27.69	28.17
20	28.89	---	28.72	29.17	---	26.35	25.85	23.86	28.42	29.36	27.77	28.25
21	28.35	---	28.82	28.93	---	26.10	25.91	23.90	28.52	29.32	27.77	28.27
22	28.07	---	28.92	28.89	26.17	26.10	25.97	23.88	28.58	29.32	27.77	28.27
23	27.94	---	28.99	28.81	26.07	25.98	26.09	23.84	28.68	29.30	27.77	28.31
24	27.69	---	---	28.63	25.97	25.98	26.23	24.06	28.74	29.32	27.72	28.37
25	27.54	---	29.04	28.61	26.31	25.94	26.31	24.22	28.84	29.38	27.65	28.43
26	27.45	---	29.12	28.41	26.27	26.02	26.41	24.38	28.90	29.42	27.59	28.47
27	---	---	29.15	28.36	26.07	26.14	26.49	24.68	28.98	29.45	27.51	28.51
28	---	---	29.22	27.95	26.23	26.28	26.62	24.96	29.06	29.49	27.51	28.59
29	---	---	---	27.89	---	26.39	26.72	25.06	29.12	29.53	27.43	28.69
30	27.43	26.76	29.33	27.53	---	26.39	26.78	25.22	29.12	29.57	27.41	28.73
31	27.41	---	29.32	27.47	---	26.41	---	25.28	---	29.59	27.41	---
MEAN	28.86	27.07	28.27	28.98	26.08	26.52	25.90	25.26	27.52	29.41	28.33	27.97
MAX	29.67	27.41	29.33	29.49	26.31	27.31	26.78	27.16	29.12	29.65	29.77	28.73
MIN	27.33	26.66	26.76	27.23	25.87	24.70	25.33	23.52	25.28	29.10	27.39	27.37
WTR YR	1990	MEAN	27.63	HIGH	23.52	MAY 17	LOW	29.77	AUG 05			

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

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

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



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