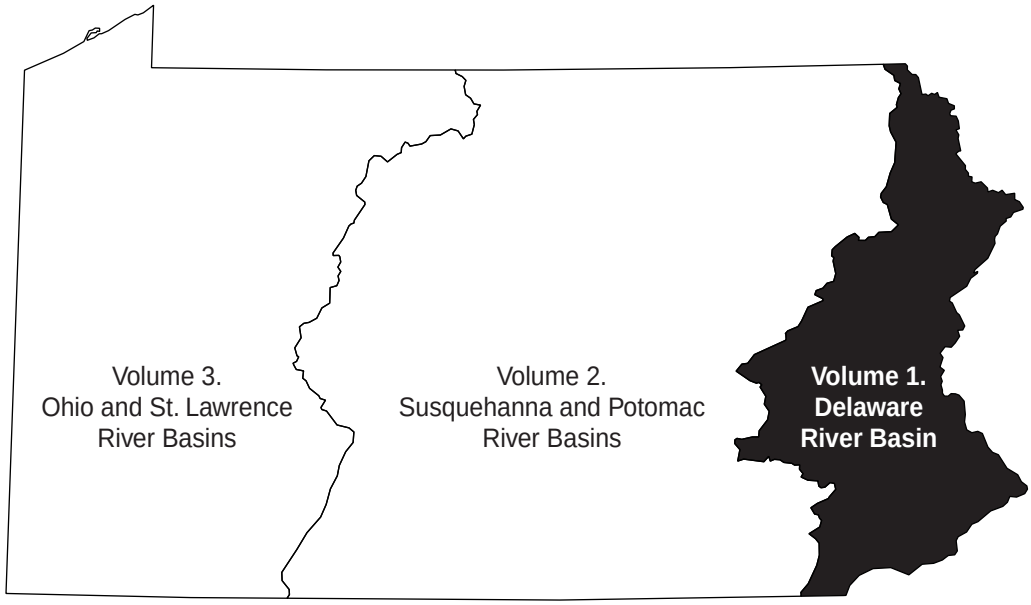
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Pennsylvania Water Year 2004

Volume 1. Delaware River Basin

By R.R. Durlin and W.P. Schaffstall

Water-Data Report PA-04-1



Prepared in cooperation with the Pennsylvania Department of Environmental Protection, the Philadelphia District of the U.S. Army Corps of Engineers, the Chester County Water Resources Authority, and with other State, municipal, and Federal agencies.

U.S. DEPARTMENT OF THE INTERIOR

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2005

PREFACE

This volume of the annual hydrologic data report of Pennsylvania is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Pennsylvania are contained in 3 volumes.

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

Volume 1 was prepared in cooperation with the Commonwealth of Pennsylvania and other agencies under the general supervision of Patricia L. Lietman, Director, USGS Pennsylvania Water Science Center ; Robert A. Hainly, Assistant Director for Hydrologic Surveillance and Data Management; Randall R. Durlin, Chief of the Hydrologic Surveillance Program, New Cumberland, and William P. Schaffstall, Chief, Williamsport Office. It is the product of a team effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized these 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 these data:

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13. ABSTRACT *(Maximum 200 words)*

Water resources data for the 2004 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 contains (1) discharge records for 79 continuous-record streamflow-gaging stations, 8 partial-record stations, 19 special-study and miscellaneous streamflow sites; (2) elevation and contents records for 13 lakes and reservoirs, and water-quality records for 6 lakes and reservoirs; (3) water-quality records for 38 gaging stations and 12 ungaged streamsites; (4) water-quality records for 82 special-study stations; (5) water-level records for 52 network observation wells; and (6) water-quality analyses of ground water from 16 ground-water wells. Site locations are shown in figures 6-18. Additional water data collected at various sites not involved in the systematic data-collection program are also presented. 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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*Pennsylvania, *Hydrologic data, *Ground water, *Surface water, *Water quality, Gaging stations, Streamflow, Flow rates, Lakes, Reservoirs, Chemical analysis, Sediments, Water temperature, Water analysis, Water levels, Water wells, Data collection sites

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TABLES

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station name designate type of data: (d) discharge, (c) chemical, (sc) specific conductance, (t) water temperature, (do) dissolved oxygen, (%) dissolved oxygen, percent saturation, (b) biological, (turb) turbidity, (e) elevation, gage heights, or contents.]

NORTH ATLANTIC SLOPE BASINS

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

NORTH ATLANTIC SLOPE BASINS--Continued

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

NORTH ATLANTIC SLOPE BASINS--Continued

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

[Letters after local well number designate type of data: (l) water level.]

GROUND-WATER RECORDS

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

GROUND WATER RECORDS--Continued

The following continuous-record surface-water discharge stations (listed by downstream order) have been discontinued. Daily streamflow records were collected and published for the period of record shown for each station. Discontinued stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the USGS Pennsylvania Water Science Center office at the address given on the back of the title page of this report.

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
DELAWARE RIVER BASIN			
North Branch Calkins Creek near Damascus	01427650	7.02	1965-73
Lackawanna River at West Hawley	01430500	206	1922-37
Middle Creek near Hawley	01431000	78.4	1945-59
Stevens Creek near Sterling	01431620	0.68	1992-94
Ariel Creek near Ledgedale	01431673	15.6	1992-94
Unnamed tributary to Purdy Creek near Lakeville	01431683	0.34	1992-94
Purdy Creek at Lakeville	01431685	8.18	1992-94
Shohola Creek near Shohola	01432500	83.6	1920-28
Delaware River below Tocks Island Damsite, near Delaware Water Gap	01440200	3,850	1964-96
McMichaels Creek at Stroudsburg	01441000	65.3	1912-37
Pocono Creek near Stroudsburg	01441500	41.0	1912-19
Lehigh River at Tannery	01448000	322	1919-58
Martins Creek near East Bangor	01446600	10.4	1962-77
Delaware River at Easton	01446700	4,636	1967-77
Dilldown Creek near Long Pond	01448500	2.39	1949-96
Wild Creek at Hatchery	01449500	16.8	1941-78
Pohopoco Creek near Parryville	01450000	109	1941-69
Little Lehigh Creek near East Texas	01451420	51.2	1987-94
East Branch Monocacy Creek near Bath	01452300	5.35	1963-68
Saucon Creek at Lanark	01453500	12.1	1948-53
South Branch Saucon Creek at Friedensville	01454000	10.3	1948-53
Saucon Creek at Friedensville	01454500	26.6	1948-53
Cooks Creek at Durham Furnace	01457790	29.4	1991-93
Tinicum Creek near Ottsville	01458900	14.7	1991-93
Tohickon Creek at Point Pleasant	01460000	107	1884-98, 1901-12
Paunnacussing Creek at Carversville	01460800	6.49	1991-93

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS —Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Pine Run at Chalfont	01464710	11.6	1990-92
Cooks Run at New Britain	01464741	3.08	1985-89
Little Neshaminy Cr. at Walton Road near Jacksonville	01464984	40.1	1986-92
Neshaminy Creek at Rushland	01465000	134	1885-1912, 32-33
Mill Creek near Wycombe	01465050	14.0	1990-93
Poquessing Creek at Trevose Road, Philadelphia	01465780	13.2	1965-70
Walton Run at Philadelphia	01465785	2.17	1965-77
Byberry Creek at Chalfont Road, Philadelphia	01465790	5.34	1966-77
Byberry Creek at Grant Avenue, Philadelphia	01465795	7.13	1965-70
Pennypack Creek at Pine Road, Philadelphia	01467042	37.9	1965-80
Pennypack Creek below Verree Road, Philadelphia	01467045	42.8	1965-70
Wooden Bridge Run at Philadelphia	01467050	3.35	1966-80
Tacony Creek near Jenkintown	01467083	5.25	1973-78
Rock Creek above Curtis Arboretum near Philadelphia	01467084	1.15	1972-78
Jenkintown Creek at Elkins Park	01467085	1.17	1974-78
Tacony Creek above Adams Avenue, Philadelphia	01467086	16.7	1966-86
Frankford Creek at Torresdale Avenue, Philadelphia	01467089	33.8	1967-80
Schuylkill River at Pottsville	01467500	53.4	1944-69
Little Schuylkill River at Drehersville	01470000	122	1948-50, 1964-65
Maiden Creek tributary at Lenhartsville	01470720	7.46	1966-79
Maiden Creek at Virginville	01470756	159	1973-94
Pickering Creek near Chester Springs	01472174	5.98	1967-82
Perkiomen Creek near Frederick	01472500	152	1885-1912
Skippack Creek near Collegeville	01473120	53.7	1966-94
Wissahickon Creek at Bells Mill Road, Philadelphia	01473950	53.6	1966-70, 1974-81
Wissahickon Creek at Livezey Lane, Philadelphia	01473980	59.2	1967-70
Schuylkill River above Passayunk Ave. at Philadelphia	01474505	1,900	1979-93
Darby Creek at Waterloo Mills near Devon	01475300	5.1	1972-97
Darby Creek near Darby	01475510	37.4	1964-90
Cobbs Creek at US Highway No. 1 at Philadelphia	01475530	4.78	1965-80

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS —Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Cobbs Creek below Indian Creek near Upper Darby	01475540	10.6	1965-73
Naylor Creek at West Chester Pike near Philadelphia	01475545	1.10	1974-78
Cobbs Creek at Darby	01475550	22.0	1964-90
Crum Creek at Woodlyn	01476000	33.3	1932-37
Ridley Creek at Moylan	01476500	31.9	1932-54
Marsh Creek near Lyndell	01480680	17.8	1961-69
East Branch Brandywine Creek at Downingtown	01480800	81.6	1958-68
Valley Creek at Ravine Road near Downingtown	01480887	14.5	1990-97

The following continuous-record water-quality stations (listed by downstream order) have been discontinued. Daily records were collected and published for the period shown for each constituent. Discontinued stations with less than 3 years of record, or stations with data collection less than daily, have not been included. If a station had one constituent with 3 or more years of record, all constituents having daily values will be listed for that station regardless of the length of record. Information regarding these stations may be obtained from the USGS Pennsylvania Water Science Center office at the address given on the back of the title page of this report.

The following abbreviations are used in this table: --- (not determined); SC (specific conductance); pH; Temp (water temperature); DO (dissolved oxygen); Sed (sediment concentration and discharge); Biol (biological).

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Type of Record	Period of record (water years)
DELAWARE RIVER BASIN				
Delaware Bay at Ship John Shoal Light, N.J.	01412350	---	SC, Temp	1968-86
Delaware River at Lordville, N.Y.	01427207	1,590	Temp	1968-71, 1973-96
Delaware River at Narrowsburg, N.Y.	01427740	2,023	SC, pH	1948-51
Delaware River at Port Jervis, N.Y.	01434000	3,070	Temp	1957-60, 1973-94
Delaware River at Montague, N.J.	01438500	3,480	Temp SC, pH	1956-57 1956-73
Delaware River at Dingmans Ferry	01439000	3,542	Temp, SC, pH	1950-53
Delaware River near East Stroudsburg	01440090	3,830	SC, DO, Temp pH	1966-78 1972-78
Delaware River at Dunnfield, N.J.	01442750	4,150	Sed	1964-75
Delaware River near Richmond	01444800	4,378	Temp SC	1944-47, 1962-63 1962-63
Delaware River at Easton	01446700	4,636	SC, DO, Temp, pH	1967-77
Lehigh River at Walnutport	01451000	889	Sed	1948-53
Jordan Creek near Schnecksville	01451800	53.0	Sed	1967-69
Jordan Creek at Allentown	01452000	75.8	Sed	1967-69
Lehigh River at Bethlehem	01453000	1,279	SC, pH	1906-07, 1956-72
Delaware River at Burlington-Bristol Bridge	01464600	7,163	Temp DO SC, pH	1954-75, 1979-80 1961-75, 1978-80 1967-75, 1978-80
Neshaminy Creek near Langhorne	01465500	210	Sed	1956-58, 1965-69

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS —Continued

Station name	Station number	Drainage area (mi^2)	Type of Record	Period of record (water years)
Poquessing Creek at Trevose Road, Philadelphia	01465770	5.08	Sed	1965-69
Poquessing Creek above Byberry Creek, Philadelphia	01465780	13.2	Sed	1965-70
Walton Run at Philadelphia	01465785	2.17	Sed	1965-68
Byberry Creek at Chalfont Road, Philadelphia	01465790	5.34	Sed	1966-68, 1970
Byberry Creek at Grant Avenue, Philadelphia	01465795	7.13	Sed	1965-70
Poquessing Creek at Grant Avenue, Philadelphia	01465798	21.4	Sed	1965-70
Delaware River at Torresdale Intake, Philadelphia	01467030	7,781	Temp	1956-57, 1960-81
			DO	1961-81
			SC	1963-81
			pH	1968-81
Pennypack Creek at Pine Road, Philadelphia	01467042	37.9	Sed	1965-69
Pennypack Creek below Verree Road, Philadelphia	01467045	42.8	Sed	1965-69
Wooden Bridge Run at Philadelphia	01467049	3.35	Sed	1965-70
Delaware River at Palmyra, N.J.	01467060	7,850	Sed	1962-64
Tacony Creek at County Line, Philadelphia	01467084	16.2	Sed	1966-69
Frankford Creek at Torresdale Avenue, Philadelphia	01467088	33.8	Sed	1966-70
Delaware River at Lehigh Avenue, Philadelphia	01467100	7,935	SC, DO, Temp, pH	1949-68
Delaware River at Wharton Street, Philadelphia	01467300	7,998	Temp, SC, pH, DO	1949-68
Delaware River at League Island, Philadelphia	01467400	8,072	SC, DO, Temp, pH	1949-68
Schuylkill River at Port Carbon	01467470	27.1	SC, pH, Sed	1949-51, 1963
Schuylkill River at Pottsville	01467500	53.4	SC, pH	1948-51, 1963-66
			Sed	1963-66
West Branch Schuylkill River at Cressona	01467950	52.5	Sed	1963-66
Schuylkill River at Landingville	01468500	133	SC, pH, Temp	1947-53
			Sed	1947-53, 1963-65
Schuylkill River at Auburn	01469000	160	Sed, SC, pH	1947-51, 1963-65
Little Schuylkill River at South Tamaqua	01469700	65.7	SC, pH	1948-51, 1963
			Sed	1950-53, 1963
Little Schuylkill River at Drehersville	01470000	122	SC, pH, Temp, Sed	1947-51, 1963-65

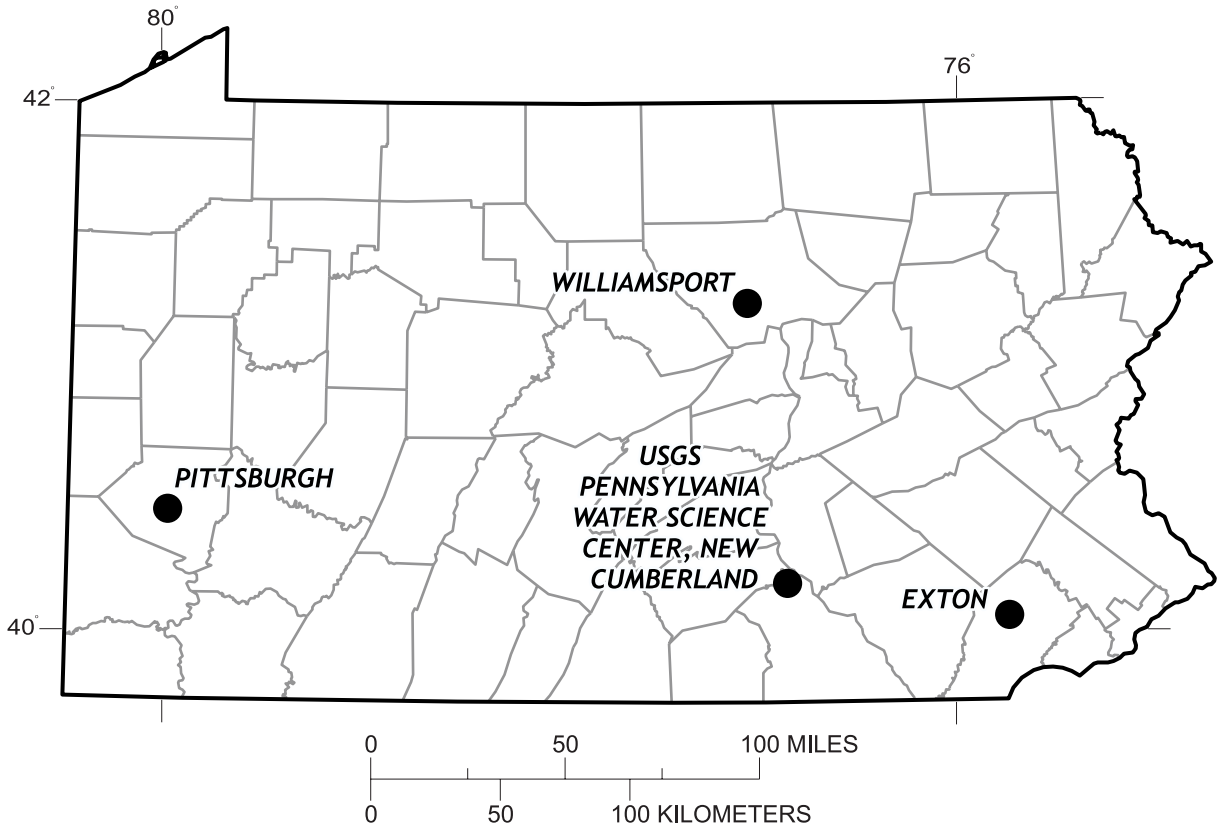
DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS —Continued

Station name	Station number	Drainage area (mi^2)	Type of Record	Period of record (water years)
Schuylkill River at Berne	01470500	355	Temp	1948-53, 1957-81
			SC, pH	1963-81
			Sed	1947-81
Maiden Creek tributary at Lenhartsville	01470720	7.46	Sed	1963-65
Maiden Creek near East Berkley	01470760	192	Sed	1963-65
Tulpehocken Creek near Reading	01471000	211	Sed	1963-65
Schuylkill River at Pottstown	01472000	1,147	Temp	1944-51, 1956, 1963-66
			Sed, pH	1948-51, 1963-66
			SC	1948-51, 1963-66, 1985-89
Pigeon Creek near Bucktown	01472054	4.20	Biol	1970-83
Pigeon Creek at Porters Mill	01472065	6.97	Biol	1970-83
Stony Run at Spring City	01472110	4.07	Biol	1970-83
Schuylkill River at Black Rock Dam at Mont Clare	01472119	---	SC, DO	1986-90
French Creek at Trythall	01472126	5.06	Biol	1971-83
French Creek near Knauertown	01472129	11.7	Biol	1970-83
Pickering Creek near Chester Springs	01472174	5.98	Sed	1967-69
Perkiomen Creek at Graterford	01473000	279	SC, pH, Temp	1946-51, 1948-53
			Sed	1963-66
Schuylkill River at Norristown Dam at Bridgeport	01473499	---	SC, DO	1985-90
Schuylkill River at Plymouth Dam	01473675	---	SC, DO	1985-90
Schuylkill River at Flat Rock Dam at West Manayunk	01473780	---	SC, DO	1985-90
Schuylkill River at Manayunk	01473800	893	SC, pH	1947-70
			Sed	1947-86
			Temp	1956-70
Wissahickon Creek at Fort Washington	01473900	40.8	Sed	1963-69
Wissahickon Creek at Bells Mill Road, Philadelphia	01473950	53.6	Sed	1966-69
Wissahickon Creek at Livezey Lane, Philadelphia	01473980	59.2	Sed	1966-69
Wissahickon Creek at mouth, Philadelphia	01474000	64.0	Sed	1966-69
Darby Creek near Darby	01475510	37.4	Sed	1965-69

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS —Continued

Station name	Station number	Drainage area (mi^2)	Type of Record	Period of record (water years)
Cobbs Creek at US Highway 1 near Philadelphia	01475530	4.78	Sed	1965-70
Cobbs Creek below Indian Creek near Upper Darby	01475540	9.65	Sed	1965-69
Cobbs Creek at Darby	01475550	22.0	Sed	1965-69
Crum Creek near Paoli	01475830	6.16	Biol	1970-83
Delaware River at Eddystone	01476200	10,190	SC, DO, Temp, pH	1949-68
Delaware River at Marcus Hook	01477200	10,370	SC, DO, Temp, pH	1949-77
West Branch Brandywine Creek near Honey Brook	01480300	18.7	Sed	1965-66, 1968
East Branch Brandywine Creek near Struble Dam	01480647	4.36	Biol	1972-82
Marsh Creek near Lyndell	01480680	17.8	Temp Sed	1965-66 1965-66, 1968
Marsh Creek near Downingtown	01480695	20.3	Temp	1973-87
Brandywine Creek at Chadds Ford	01481000	287	Sed	1963-70
Delaware River at Delaware Memorial Bridge, Del.	01482100	11,030	Temp DO SC pH	1956-81 1962-81 1963-81 1968-81

USGS PENNSYLVANIA WATER SCIENCE CENTER LOCATIONS AND ADDRESSES



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INTRODUCTION

The USGS Pennsylvania Water Science Center, in cooperation with State, municipal, and Federal agencies, collects a large amount of data pertaining to the water resources of Pennsylvania each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, these 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, contains: (1) discharge records for 79 continuous-record streamflow-gaging stations, 8 partial-record stations, 19 special study and miscellaneous streamflow sites; (2) elevation and contents records for 13 lakes and reservoirs, and water quality records for 6 lakes and reservoirs; (3) water-quality records for 38 gaging stations and 12 ungaged streamsites; (4) water-quality records for 82 special-study stations; (5) water-level records for 52 network observation wells; and (6) water-quality analyses of ground water from 16 ground-water wells. Additional water data collected at various sites not involved in the systematic data-collection program may also be presented.

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-04-1." 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. 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 (by river basin), 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, these data were published in two 5-year reports. Data prior to 1961 are included in two reports: "Compilation of Records of Surface Waters of the United States through 1950," and "Compilation of Records of Surface Waters of the United States, October 1950 to September 1960." Data for Pennsylvania are published in Parts 1, 3, and 4. Data on chemical quality, temperature, and suspended sediment for the 1941-70 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935-74 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from the U.S. Geological Survey, Information Services, Box 25286, Denver, CO 80225.

Information for ordering specific reports may be obtained from the USGS Pennsylvania Water Science Center at the address given on the back of the title page or by phoning the Scientific and Technical Products Section, at (717) 730-6940. Information on the availability of unpublished data or statistical analyses may be obtained from the USGS Pennsylvania Water Science Center Information Specialist by telephone at (717) 730-6916 or by FAX at (717) 730-6997.

COOPERATION

The U.S. Geological Survey (USGS) 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 acknowledged in station manuscripts. Organizations that assisted in collecting data for this report through cooperative agreements with the USGS are listed below.

The Commonwealth of Pennsylvania, Department of Environmental Protection, Kathleen A. McGinty, Secretary through the following:

Office of Water Management, Cathleen C. Myers, Deputy Secretary;
- Bureau of Water Supply and Wastewater Management, Frederick A. Marrocco, Director;
- Bureau of Watershed Management, Stuart I. Gansell, Director;
- Bureau of Waterways Engineering, Michael D. Conway, Director

Bucks County Commissioners, Michael Fitzpatrick, Chairman;
Chester County Health Department, David Jackson, Executive Director;
Chester County Water Resources Authority, Janet L. Bowers, Executive Director;
City of Allentown, Roy Afflerbach, Mayor;
City of Bethlehem, John B. Callahan, Mayor;
City of Philadelphia, Water Department, Kumar Kishinchand, Water Commissioner;

COOPERATION--Continued

Delaware County Solid Waste Authority, Joseph W. Vasturia, Chief Executive Officer;
Delaware Geological Survey, John Talley, Director;
Delaware River Basin Commission, Carol R. Collier, Executive Director;
Hazelton City Authority, Water Department, Randy J. Cahalan, Operation Manager;
Monroe County Conservation District, Craig Todd, District Manager;
North Penn Water Authority, Anthony J. Bellitto, Jr., Executive Director;
North Wales Water Authority, Peter. S. Lukens, Executive Director.

Federal Energy Regulatory Commission Licensee:
PPL Electric Utilities Corporation.

The following Federal agency assisted in the data-collection program by providing funds or services: Corps of Engineers, U.S. Army, Philadelphia District, and the U.S. Environmental Protection Agency, Region III.

The following organizations aided in collecting records: Palmer Water Company, Aqua Pennsylvania Water Company, Borough of Tamaqua, Womelsdorf-Robesonia Joint Water Authority, Forest Park Water Company, and the City of Coatesville.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

The Delaware River Basin extends from the confluence of the river's East and West branch headwaters at Hancock, N.Y., in the Catskill Mountains, southward 330 miles to the mouth of the Delaware Bay. In addition to Pennsylvania, the Delaware River drains parts of the states of New York, New Jersey, Delaware, and Maryland. The river is fed by 216 tributaries, the largest being the Schuylkill and Lehigh Rivers in Pennsylvania. Of the 13,539-mi^2 (square mile) drainage basin, 6,422 mi^2 (50.3 percent of the basin's total area) are within the Commonwealth of Pennsylvania (Delaware River Basin Commission, 2005).

Precipitation and Streamflow

Precipitation and streamflow for the 2004 water year were above average for the year. Data from 28 selected National Oceanic and Atmospheric Administration climatological sites, within 3 climatological regions in the Delaware River Basin in Pennsylvania, indicate the annual total precipitation for the Delaware River Basin in Pennsylvania averaged 59.5 inches. This average is 127 percent of the 1971-2000 basinwide average of 47.0 inches.

During the period from October to December, average basinwide precipitation was about 4.4 inches above normal. Precipitation totals averaged about 3.3 inches below normal from January to March. During April, May, and June, precipitation averaged about 0.4 inch above normal throughout the basin. Basinwide precipitation during July, August, and September averaged about 10.9 inches above normal. The greatest surplus basinwide, with an average of 4.7 inches above normal, occurred in September. The greatest deficit basinwide, with an average of 1.6 inches below normal, occurred in January. Precipitation for the water year was about 12.5 inches above the 1971-2000 basinwide average. This is the second consecutive water year precipitation totals were above average. The precipitation data are from the National Oceanic and Atmospheric Administration (Northeast Region Climate Center) and National Weather Service records.

Monthly precipitation at two index stations in the Delaware River Basin were used as indicator sites within the basin. The 2004 water year monthly precipitation was compared with the 1971-2000 mean monthly precipitation recorded at Pleasant Mount and Allentown, Pa. (fig. 1). The indicator sites show above-normal precipitation at both sites for all months except January, February, March, and June. The greatest surplus at the indicator sites, with an average of 6.1 inches above normal, occurred in September. The greatest deficit at the indicator sites, with an average of 1.5 inches below normal, occurred in March.

Streamflow varied seasonably throughout the basin and generally reflected the precipitation patterns within the basin unless the stream was regulated. Following a pattern defined by the above-normal precipitation that fell in the basin during the 2003 water year, the mean annual streamflow for unregulated Delaware River Basin streams during the 2004 water year was above normal. (Normal streamflows are defined as streamflows between the 25th and 75th percentiles of the streamflows measured during the period 1971-2000.) Using 39 unregulated sites with greater than 15 years of record, new record high annual mean streamflows were recorded at 7 of these sites during the water year.

Two U.S. Geological Survey streamflow-gaging stations within the basin were selected as indicators of basinwide streamflow conditions. Figure 2 compares the 2004 water year monthly and annual mean streamflows with the median of the monthly and annual mean streamflows for 1971 through 2000 at the indicator sites. The 2004 water year annual mean streamflow of the Bush Kill at Shoemakers in the upper Delaware River Basin was 147 percent of the 1971-2000 median of the mean annual streamflows. The mean annual streamflow of the Schuylkill River at Pottstown in the lower Delaware River Basin was 139 percent of the 1971-2000 median of the mean annual streamflows.

Monthly streamflows were above normal in the Bush Kill for October, November, December, August, and September. Monthly streamflows were above normal in the Schuylkill River at Pottstown during October through December and July through September. The remaining months had normal streamflows, except for March, when streamflows were below normal. Basinwide, using the non-regulated streamflow stations with at least 50 years of record, a new annual mean streamflow was recorded at one location. A new record high annual mean streamflow was recorded at Monocacy Creek at Bethlehem (01452500). This station also recorded a new instantaneous maximum discharge on September 18, 2004. Of the remaining 15 streamflow stations within the basin with at least 50 years of continuous record, no additional new instantaneous extremes were recorded.

The Delaware River Basin and its tributaries experienced flooding as a result of an active hurricane season. The remnants of Tropical Storm Ivan, interacting with a cold front on September 17, produced tremendous rainfall amounts across eastern Pennsylvania from late September 17 continuing into the 18th. This rainfall fell on soils already saturated by above-normal precipitation through the summer months, including precipitation from Tropical Storm Frances the week before. Then on September 28, the remnants of Tropical Storm Jeanne brought 4 to 8 inches of rain to the Philadelphia metropolitan area. This heavy precipitation caused widespread urban and small stream flooding (Delaware River Basin Commission, 2004). Within the Philadelphia area, record high streamflows were recorded on September 28 at Frankford Creek at Castor Avenue (01467087). At other locations within the metropolitan area, the peak streamflows recorded on September 28 and 29 were exceeded only by peaks as a result of Hurricane Floyd in 1999.

There were no drought declarations affecting the Delaware River Basin during the 2004 water year. All 67 Pennsylvania counties remained in a normal status for the entire water year.

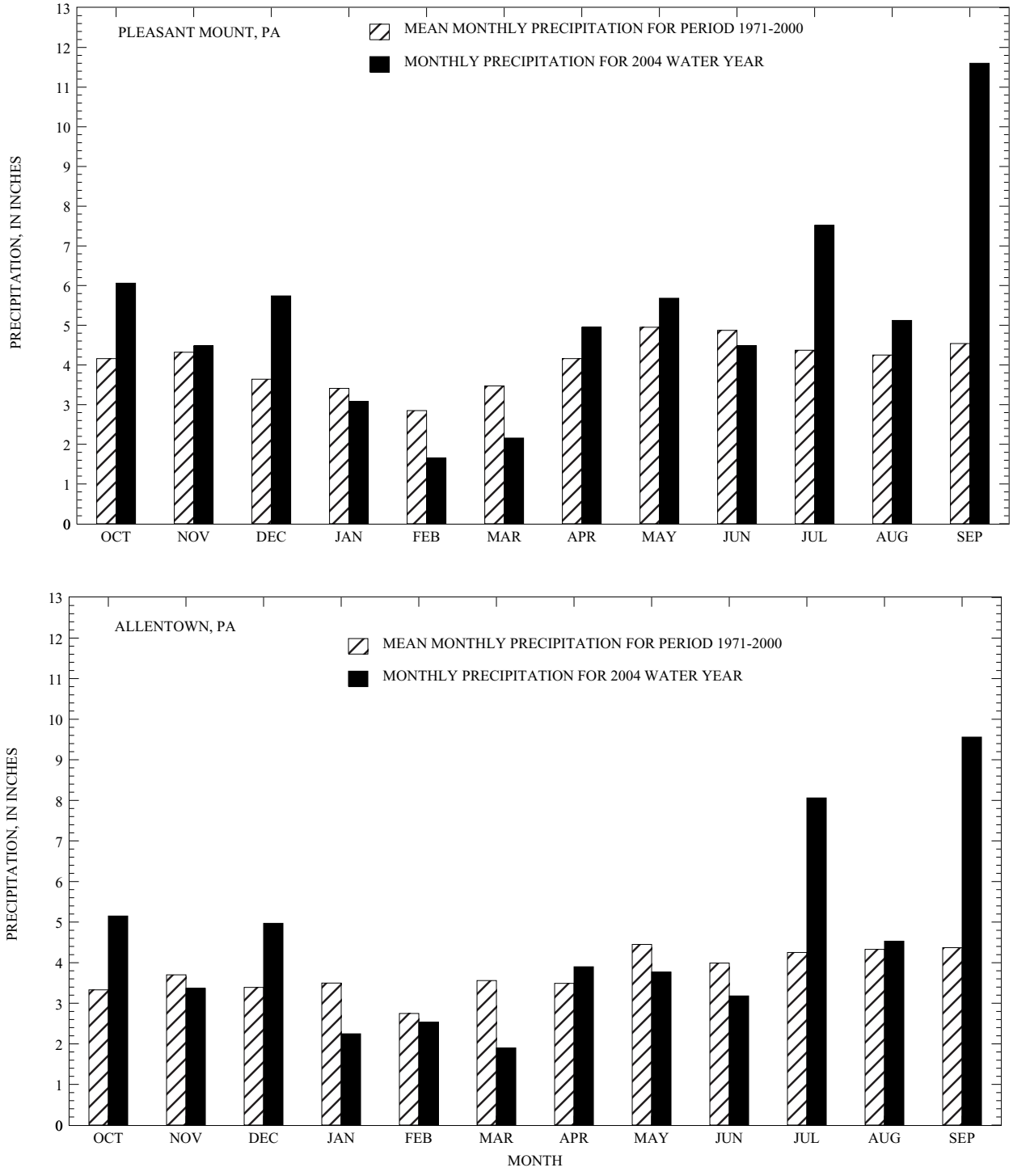

Figure 1.--Comparison of monthly precipitation in the Delaware River Basin at Pleasant Mount and Allentown, Pa. during the 2004 water year with mean monthly precipitation for the period 1971 through 2000.

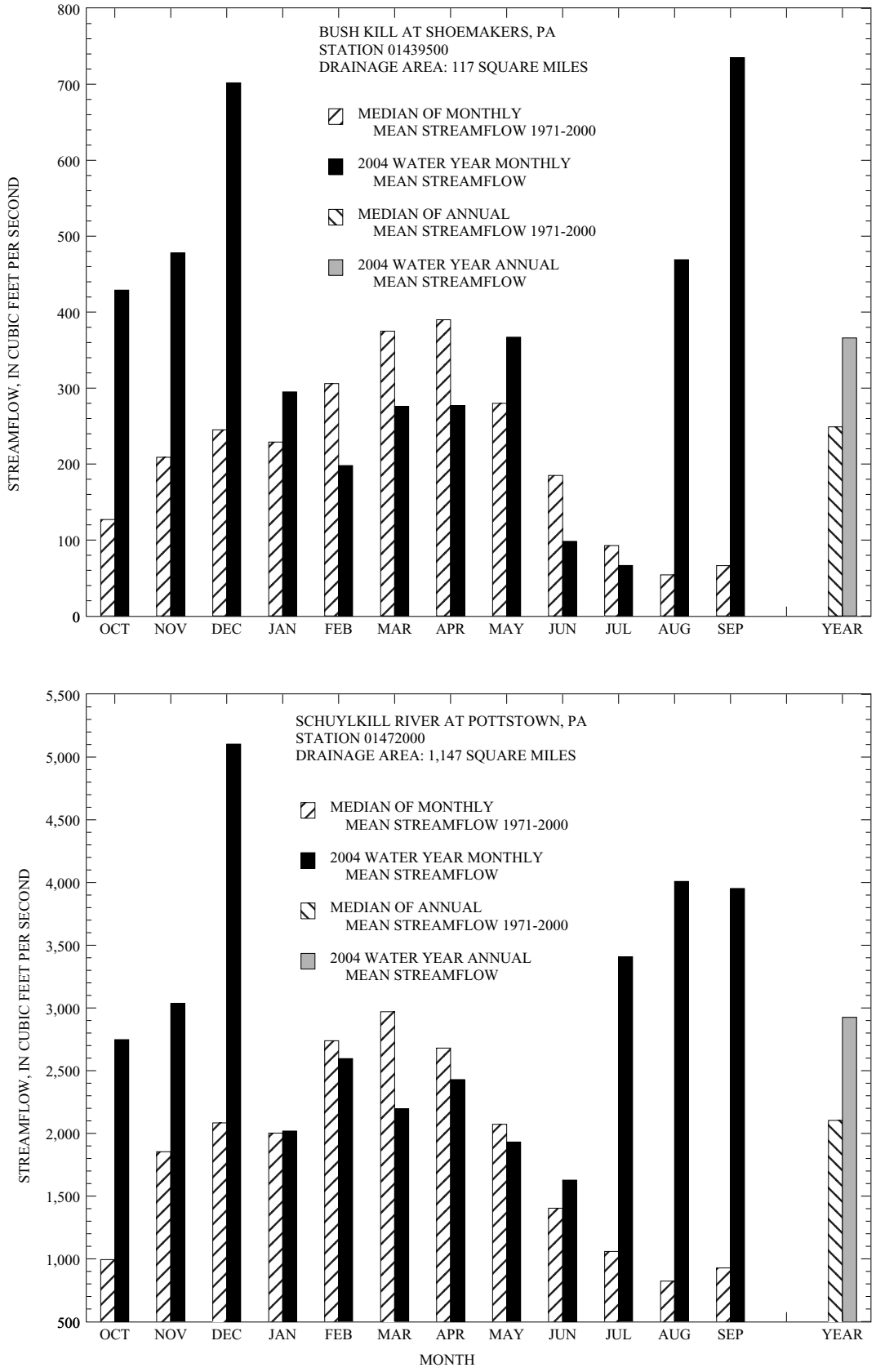

Figure 2.--Comparison of streamflow at two long-term streamflow-gaging stations during the 2004 water year with the median monthly and annual mean streamflow for the period 1971 through 2000.

Reservoirs

Total combined capacity of the major reservoirs in the Delaware River Basin within Pennsylvania is 659,390 acre-feet. Total combined drainage areas into these reservoirs is about 1,130 mi^2 or 18 percent of the total Delaware River Basin drainage area within the Commonwealth of Pennsylvania. Combined storage in 13 major reservoirs in the Delaware River Basin within Pennsylvania increased slightly from 238,130 acre-feet (36.1 percent of total combined capacity) on September 30, 2003, to 272,300 acre-feet (41.3 percent of total combined capacity) on September 30, 2004. This increase in water storage in the basin for the year is a reflection of the above-normal precipitation and streamflow conditions. Slightly more than 70 percent of the combined reservoir storage increase was the result of the change in storage measured at Lake Wallenpaupack.

Water Quality

As part of an ongoing program, the USGS maintains a network of continuous-record water-quality monitoring sites along the Delaware River and its tributaries. Water temperature, dissolved oxygen, pH, and specific conductance are monitored at most sites from April through November. A primary concern to water-resource managers of the Lower Delaware River Basin is the upstream migration of saline water from the Delaware Bay. The salinity and dissolved-solid content in the water are indirectly measured by specific conductance.

Water quality of the Delaware Estuary was monitored between Trenton, N.J., and Reedy Island Jetty, Del. Streamflow is a vital factor that influences the water quality of the estuary. Increased streamflow usually results in better water quality by limiting salt-water intrusion and diluting the concentration of dissolved minerals, bothcd

of which contribute to a lower specific conductance and chloride level. Increased freshwater streamflow also aids in maintaining lower water temperature during warm weather and in supporting higher dissolved-oxygen levels.

In general, streamflow for the Delaware River continued the trend begun in 2003 and was above normal for the 2004 water year. The annual mean streamflow as recorded at Delaware River at Trenton, N.J., was 155 percent of the period of record mean annual streamflow. The highest sustained streamflows occurred in September. The highest momentary streamflows (peaks) occurred on September 19. (For additional streamflow information refer to Delaware River at Trenton, N.J., station 01463500, pages 206-234). Higher than normal sustained streamflows in the Delaware River occurred in October, November, and December. February 2004 had a monthly mean flow recorded at 68 percent of period of record February mean monthly flows. This lower than normal flow continued into early March. As a reflection of these streamflows, the monthly mean specific conductance at the U.S. Geological Survey water-quality monitoring station on the Delaware River at Reedy Island Jetty, Del., was lowest in December and highest in February. High flows during the summer months, specifically during August and September, resulted in the monthly mean conductance at Reedy Island for those months to be 71 percent and 77 percent lower than the normal mean monthly conductance for those 2 months for period of record.

Figure 3 compares the 2004 water year monthly mean specific conductance with the mean monthly values for the period 1965 through 2003. The mean monthly values of specific conductance were lower than the mean for the period of record for all months except February, March, April, and June. Higher streamflows early in the water year kept the migration of saline water (commonly known as "The Salt Line"), at or below River Mile 70, a location about 2 miles upstream of the Delaware Memorial Bridge, into late January. The furthermost upstream location for the 2004 water year was River Mile 73, which occurred from February 4 to 9, during a low flow and ice-affected period. The instantaneous maximum conductance was recorded at Reedy Island on February 3. For perspective, the most upstream point of the Salt Line ever recorded (River Mile 102) occurred during the drought of the mid 1960s (Delaware River Basin Commission, 2004). Specific conductance data, along with other water-quality data from the Delaware River at Reedy Island Jetty, Del., can be found on pages 434-440.

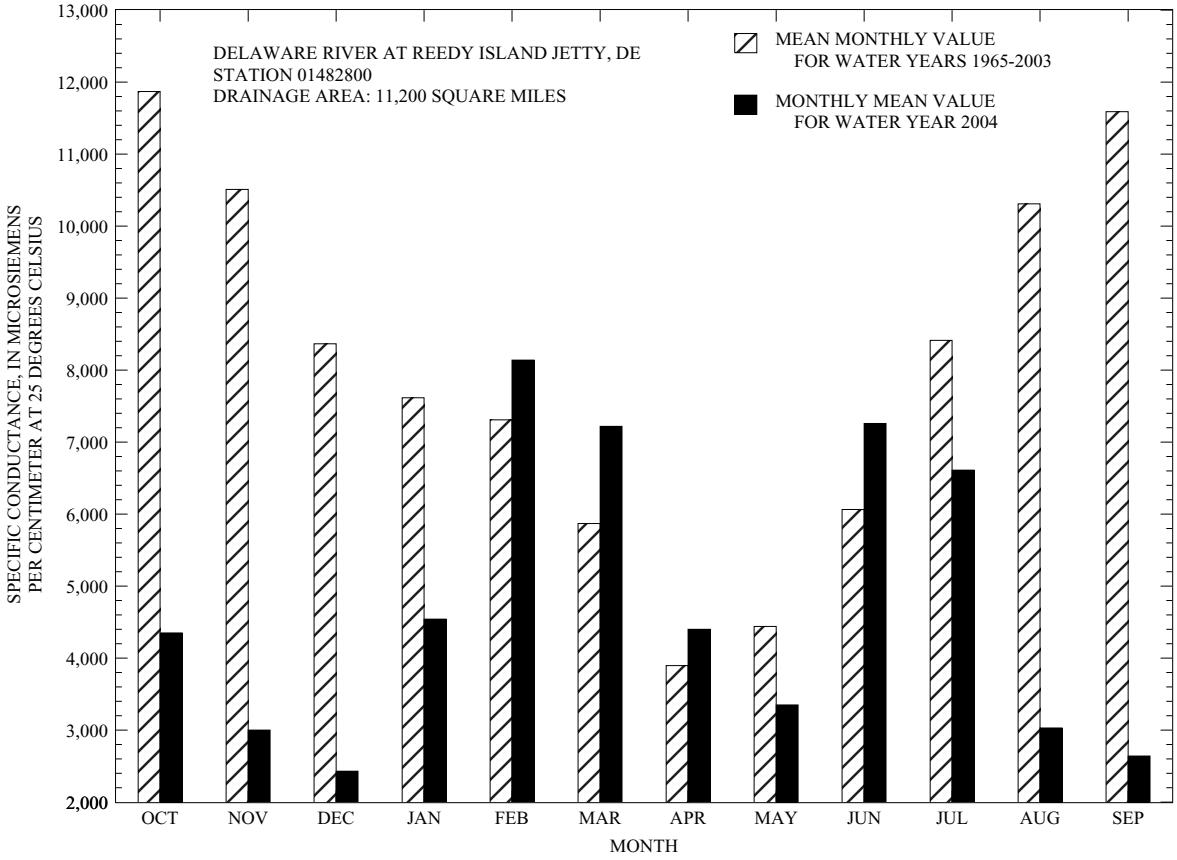

Figure 3.--Monthly mean specific conductance measured in the Delaware River at Reedy Island Jetty, Delaware for the 2004 water year and the mean monthly specific conductance for the period 1965 through 2003.

Ground Water

With some lag time, seasonal ground-water levels during the year generally reflect seasonal precipitation variations. A comparison of the monthly precipitation variation in the Delaware River Basin in the 2004 water year (fig. 1) and recorded ground-water levels shows that this scenario was the case for this year. Ground-water levels by the end of September 2003 were generally normal to much-above normal within the basin (Durlin and Schaffstall, 2004). Due to above-normal precipitation in October, combined with the end of the growing season, water levels in all but one observation well in the basin began the water year at normal to much-above-normal conditions. A comparison between seasonal ground-water levels for the 2004 water year and long-term seasonal ground-water levels is shown in figure 4.

During the winter season, in spite of below-normal precipitation in January, February, and March, ground-water levels continued to remain normal to much-above normal within the basin. By the end of the winter season, 13 of 15 indicator wells were at normal to much-above-normal levels. The wells began to show the effects of below-normal precipitation during the winter months in the spring season. By the end of the spring season, only 3 of 15 wells remained above to much-above normal, with 11 of 15 wells returning to normal levels. As a result of the precipitation surplus in the summer months, the ground-water levels showed a response. By the end of the summer season, ground-water levels, in general, gradually increased to above or much-above normal. By the end of the water year, ground-water levels in all of the 15 wells were normal to much-above normal, with 12 of 15 wells being measured at above to much-above levels. At six of the observation wells, those in Montgomery County (MG225), Montgomery County (MG917), Lebanon County (LB372), Bucks County (BK929), Chester County (CH10), and Northampton County (NP820), new high water levels were recorded. In contrast, one of these wells, in Chester County (CH10), had a new record low during the 2004 water year. No new record lows were recorded at any of the 15 observation wells this water year.

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Pennsylvania Department of Environmental Protection, 2005, Drought News Room, accessed January 26, 2005, at URL *[http://www.dep.state.pa.us/dep/subject/hotopics/drought/drought.htm]*.

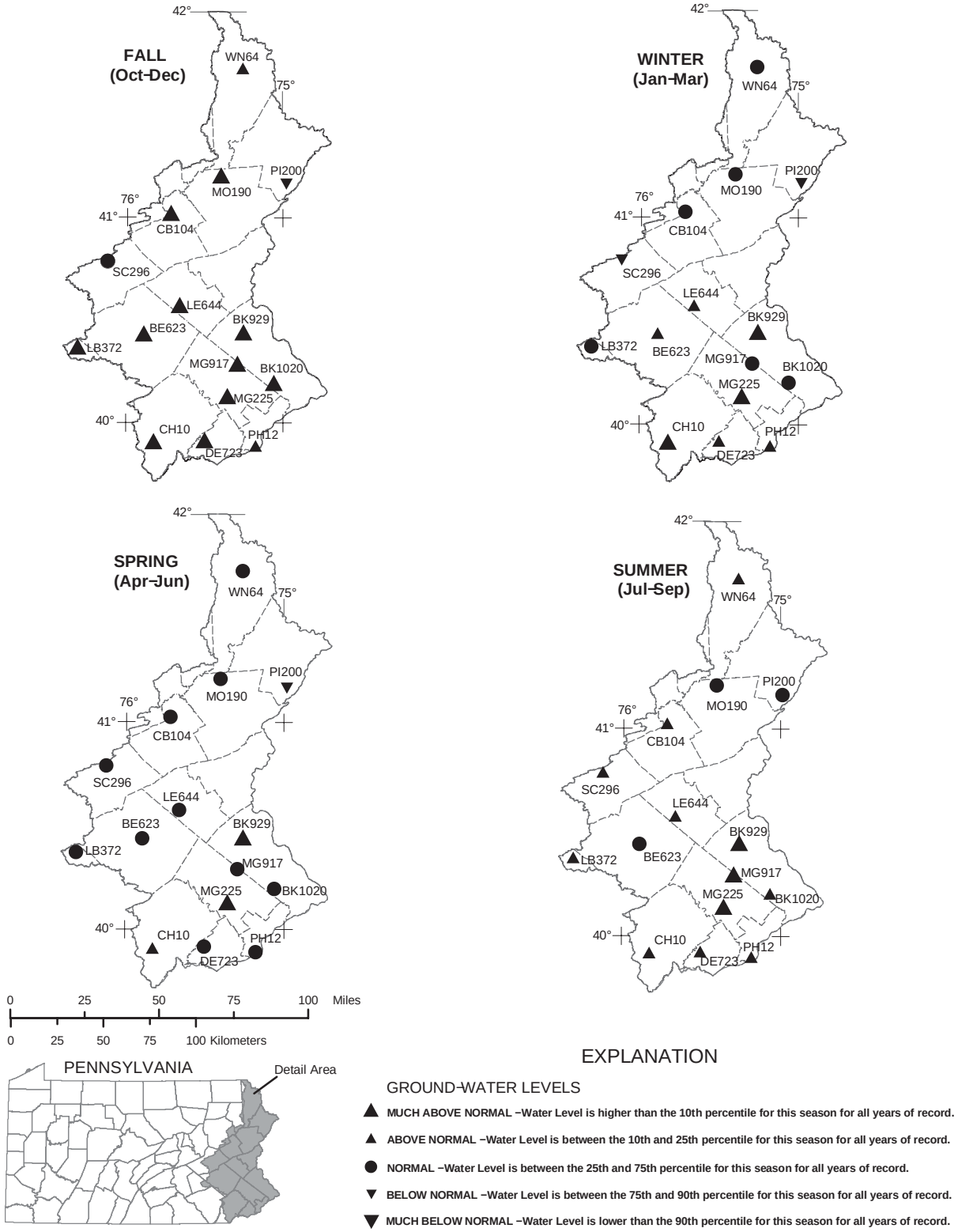

Figure 4.--Relation between 2004 seasonal mean ground-water levels and long-term mean ground-water levels *[Seasonal percentile values were determined by ranking the average monthly water levels for each month in the season from highest to lowest for all years of record and averaging the ranks for the three months. A water level that is higher than the seasonal 10th percentile value would be expected to occur only once in a ten-year period. Conversely, a water level that is lower than the seasonal 90th percentile value also would be expected to occur only once during a ten-year period.]*

SPECIAL NETWORKS AND PROGRAMS

The **Hydrologic Bench-Mark Network** is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from *http://water.usgs.gov/hbn/*.

The **National Stream-Quality Accounting Network** (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nations's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling on the Colorado and Columbia Rivers was reduced to a few index stations so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determing global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at *[http://water.usgs.gov/nasqan/]*.

The **National Atmospheric Deposition Program/National Trends Network** (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from *http://bqs.usgs.gov/acidrain/*.

The **USGS National Water-Quality Assessment Program** (NAWQA) is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from *http://water.usgs.gov/nawqa/*.

The **USGS National Streamflow Information Program** (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from *http://water.usgs.gov/nsip/*.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records in this report are for the 2004 water year that began October 1, 2003, and ended September 30, 2004. 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 and ecological data for streamflow stations, ground-water-level data, and water-quality data for ground-water wells. The location of these stations and wells are shown in figures 6-10 and 14-18. The following sections of the introductory text are presented to provide users with a more detailed explanation of how these hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report, whether a streamsite or a 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 indention in a list of stations in the front of the report. Each indention represents one rank. This downstream-order system of indention 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 and continuous-record stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. A station number can be from 8 to 15 digits in length and normally appears to the left of the station name. For example, an 8-digit number for a station such as 01470500, includes a 2-digit part number "*01*" plus a 6-digit downstream-order number "*470500*." 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 (fig. 5).

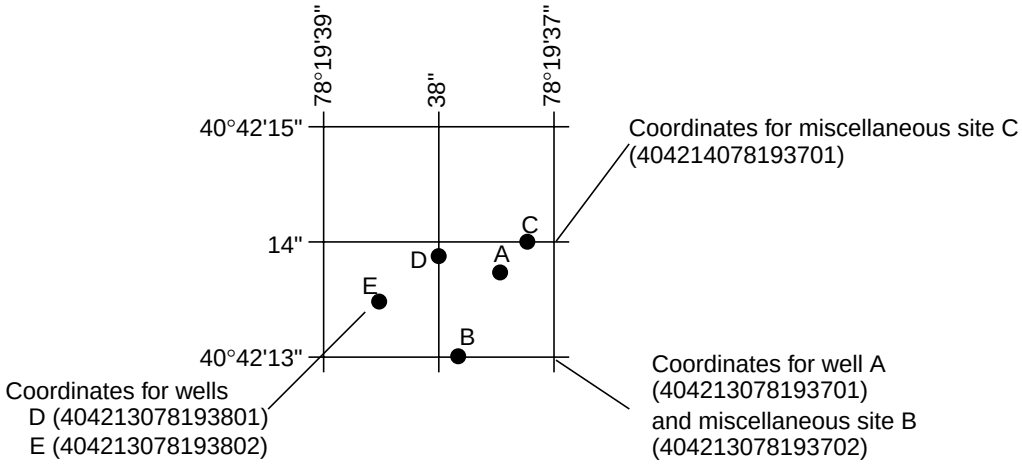

Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude).

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.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 6-13) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from *http://water.usgs.gov/pubs/twri/*. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, stage-discharge relation is affected by changing stage. At these stations, the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator’s log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts; (1) the station manuscript or description; (2) the data table of daily mean values for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and (5) a hydrograph of discharge.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments follow that clarify information presented under the various headings of the station description.

LOCATION.--Location information is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, 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 term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its streamflow reasonably can be considered equivalent to the streamflow at the present station.

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

GAGE.--The type of gage in current use, the datum of the current gage referred to referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, the outlet works and spillway, and the purpose and use of the reservoir.

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

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

PEAK DISCHARGES FOR CURRENT YEAR.--Peaks given here are similar to those found in the summary statistics table, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge (see Definition of Terms) are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb *(http://water.usgs.gov/nwis/nwis)*. Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 USGS Pennsylvania Water Science Center (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. Any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the REMARKS and in the inclusion of a stage-capacity table when daily volumes are given.

Peak discharge greater than base discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

The following summary statistics data are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the SUMMARY STATISTICS table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year.

ANNUAL MEAN.--The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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

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

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

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

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

MAXIMUM PEAK FLOW.--The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.--The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

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

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

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

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

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

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first table lists annual maximum stage and discharge at crest-stage stations, and the second table lists 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 often 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. This identification is shown either by flagging individual daily values with the letter "*e*" and noting in a table footnote, "*e–Estimated*," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. "*Excellent*" indicates that about 95 percent of the daily discharges are within 5 percent of the true value; "*good*," within 10 percent; and "*fair*," within 15 percent. "*Poor*" indicates that daily discharges have less than "*fair*" accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values listed for partial-record stations.

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 Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as observations of water temperature, discharge measurements, gage-height records, and rating tables is available from the USGS Pennsylvania Water Science Center. Also, most stream-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 USGS Pennsylvania Water Science Center (see address that is shown on the back of the title page of this report).

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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 and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of records

Water-quality data for surface-water sites are grouped into one of three classifications. A *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one 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 continuous- or partial-record station, where 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 *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. 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 6-10 and 14-18.

Accuracy of the records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating classifications for continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	≤ ±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C
Specific conductance	≤ ±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤ ±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤ ±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤ ±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

Arrangement of records

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

On-site measurements and sample collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS Pennsylvania Water Science Center (see address that is shown on the back of title page in this report).

Water temperature

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

At stations where recording instruments are used, maximum, minimum, and mean temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the USGS Pennsylvania Water Science Center.

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may be collected more frequently (twice daily or, in some instances, hourly). 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 are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of 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

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. The TWRI publications may be accessed from *http://water.usgs.gov/pubs/twri/*. These methods are consistent with ASTM standards and generally follow ISO standards.

Data presentation

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

In the descriptive headings, if the location is identical to that of the streamflow-gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information 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 information in the "Records of Stage and Water Discharge" section of this report (same comments apply).

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge" section of this report (same comments apply).

PERIOD OF RECORD.--This indicates the time periods for which published water-quality records for the station are available. 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 parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://waterdata.usgs.gov/nwis)*. Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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.

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,e	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality-Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of “E.” These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this USGS Water Science Center are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the USGS Pennsylvania Water Science Center.

Blank samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this USGS Water Science Center are:

Field blank--A blank solution that is subjected to all aspects of sample collection, field processing, preservation, transportation, and laboratory handling as an environmental sample.

Trip blank--A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank--A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank--A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank--A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank--A blank solution that is mixed and separated using a field sample splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank--A blank solution that is treated with the same preservatives used for an environmental sample.

Reference samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this USGS Water Science Center are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

Site Identification Numbers

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is produced for local needs. (See "Numbering System for Wells and Miscellaneous Sites" in this report for a detailed explanation)

Data Collection and Computation

Measurements are made in many types of wells, under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Most methods for collecting and analyzing water samples are described in the TWRIs referred to in the On-site Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The TWRI publications may be accessed from *http://water.usgs.gov/pubs/twri/*. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

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 above sea level 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 daily.

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

Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local or county well number. Well locations are shown in figures 7 and 9; each well is identified on the map by its local well or county well number.

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

LOCATION.—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are reported as North American Datum of 1927 unless otherwise specified.

AQUIFER.--This entry designates by name and geologic age of the aquifer that the well taps.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and 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 continuous, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, and so forth), 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 National Geodetic Vertical Datum of 1929 (NGVD 29); 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, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

PERIOD OF RECORD.—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

EXTREMES FOR PERIOD OF RECORD.—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

Water-level tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display recorder data show a solid line representing the maximum or mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder’s float mechanism to water-level fluctuations in a well.

GROUND-WATER-QUALITY DATA

Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide.

Most methods for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS Pennsylvania Water Science Center (see address shown on back of title page in this report).

Laboratory Measurements

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed on site. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from *http://water.usgs.gov*.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each USGS Water Science Center (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries. html*.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

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

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

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. (See also "Biomass" and "Dry weight")

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

Annual runoff is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that 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 collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

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

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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 mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) 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. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved solids content of the pore water and lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cells/volume refers to the number of cells of any organism that 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 volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3\ \pi r^3 \quad \text{cone } 1/3\ \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume ($\mu m^3/mL$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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 BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

Clostridium perfringens *(C. perfringens)* is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable bound-aries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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 site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, 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 saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(ft3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

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

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

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. (See also "Phytoplankton")

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

Diversity index (H) (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\overline{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n} ,$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

Dry mass refers to the mass of residue present after drying in an oven at 105 ˚C, 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. (See also "Ash mass," "Biomass," and "Wet mass")

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 ˚C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 ˚C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis*, *Streptococcus feacium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli *(E. coli)* are bacteria present in the intestine and feces of warmblooded animals. E. coli are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 ˚C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) concentration value is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

Euglenoids (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

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

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat are typically made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site: *http://www.co-ops.nos.noaa.gov/tideglos.html*

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = sum\frac{(n)(a)}{N} ,$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

Inch (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

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

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L} ,$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o} .$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

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

Mean high or low tide is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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

Method code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, µg/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 kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms)

of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations**,** it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Nonfilterable refers to the portion of the total residue retained by a filter.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or volatile mass of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

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

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

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) 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, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or percent of total 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, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

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

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

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 commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 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. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photo-synthetic 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 (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines 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 with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. The oxygen method defines 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. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a

specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of pre-cipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 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.

Stable isotope ratio (per MIL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See "Gage height")

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

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.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are 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 directly analyzing the suspended mate-rial collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

Suspended solids, total residue at 105 ˚C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydro-logic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

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

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) 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 determined at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided

organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30 ± 15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Vertical datum (See "Datum")

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens.

Watershed (See "Drainage basin")

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS 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, 2002, is called the "2002 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

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.

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are 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. (See also “Plankton”)

Techniques of Water-Resources Investigations of the U.S. Geological Survey

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, 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.

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at *http://water.usgs.gov/pubs/twri/*. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at http://www.usgs.gov/sales.html, or by FAX to (303)236-469 of an order form available online at *http://mac.usgs.gov/isb/pubs/forms/*. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

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, chap. D1. 1975. 65 p.
1–D2.*Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

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, chap. D1. 1974. 116 p.
2–D2.*Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

2–E1.*Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.
2–E2.*Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

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2–F1.*Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3–A1.*General field and office procedures for indirect discharge measurements,* by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.
3–A2.*Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
3–A3.*Measurement of peak discharge at culverts by indirect methods,* by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
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3–A6.*General procedure for gaging streams,* by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.
3–A7.*Stage measurement at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.
3–A8.*Discharge measurements at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
3–A9.*Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.
3–Al0.*Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
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3–A12.*Fluorometric procedures for dye tracing,* Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.
3–A13.*Computation of continuous records of streamflow,* by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.
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3–A17.*Acoustic velocity meter systems,* by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.
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3–A19.*Levels at streamflow gaging stations,* by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.
3–A20.*Simulation of soluble waste transport and buildup in surface waters using tracers,* by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.
3–A21*Stream-gaging cableways,* by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

3–B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.
3–B2.*Introduction to ground-water hydraulics, a programed text for self-instruction,* by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.
3–B3.*Type curves for selected problems of flow to wells in confined aquifers,* by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.
3–B4.*Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.

3–B4.*Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.
3–B5.*Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction,* by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.
3–B6.*The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.
3–B7.*Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
3–B8.*System and boundary conceptualization in ground-water flow simulation,* by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

3–C1.*Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
3–C2.*Field methods for measurement of fluvial sediment,* by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
3–C3.*Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4–A1.*Some statistical tools in hydrology,* by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
4–A2.*Frequency curves,* by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.
4–A3.*Statistical methods in water resources,* by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at http://water.usgs.gov/pubs/twri/twri4a3/. (Accessed August 30, 2002.)

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4–B1.*Low-flow investigations,* by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.
4–B2.*Storage analyses for water supply,* by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.
4–B3.*Regional analyses of streamflow characteristics,* by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

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4–D1.*Computation of rate and volume of stream depletion by wells,* by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

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5–A1.*Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.
5–A2.*Determination of minor elements in water by emission spectroscopy,* by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
5–A3.*Methods for the determination of organic substances in water and fluvial sediments,* edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5–A4.*Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
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5–A6.*Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

5–C1.*Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

6–A1.*A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.
6–A2.*Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.
6–A3.*A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.
6–A4.*A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.
6–A5.*A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI book 6, chap. A5. 1993. 243 p.
6–A6.*A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.
6–A7.*User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002.
77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7–C1.*Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.
7–C2.*Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.
7–C3.*A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8–A1.*Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.

8–A2.*Installation and service manual for U.S. Geological Survey manometers,* by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

8–B2.*Calibration and maintenance of vertical-axis type current meters,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9–A1.*National field manual for the collection of water-quality data: Preparations for water sampling,* by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
9–A2.*National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
9–A3.*National field manual for the collection of water-quality data: Cleaning of equipment for water sampling,* edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
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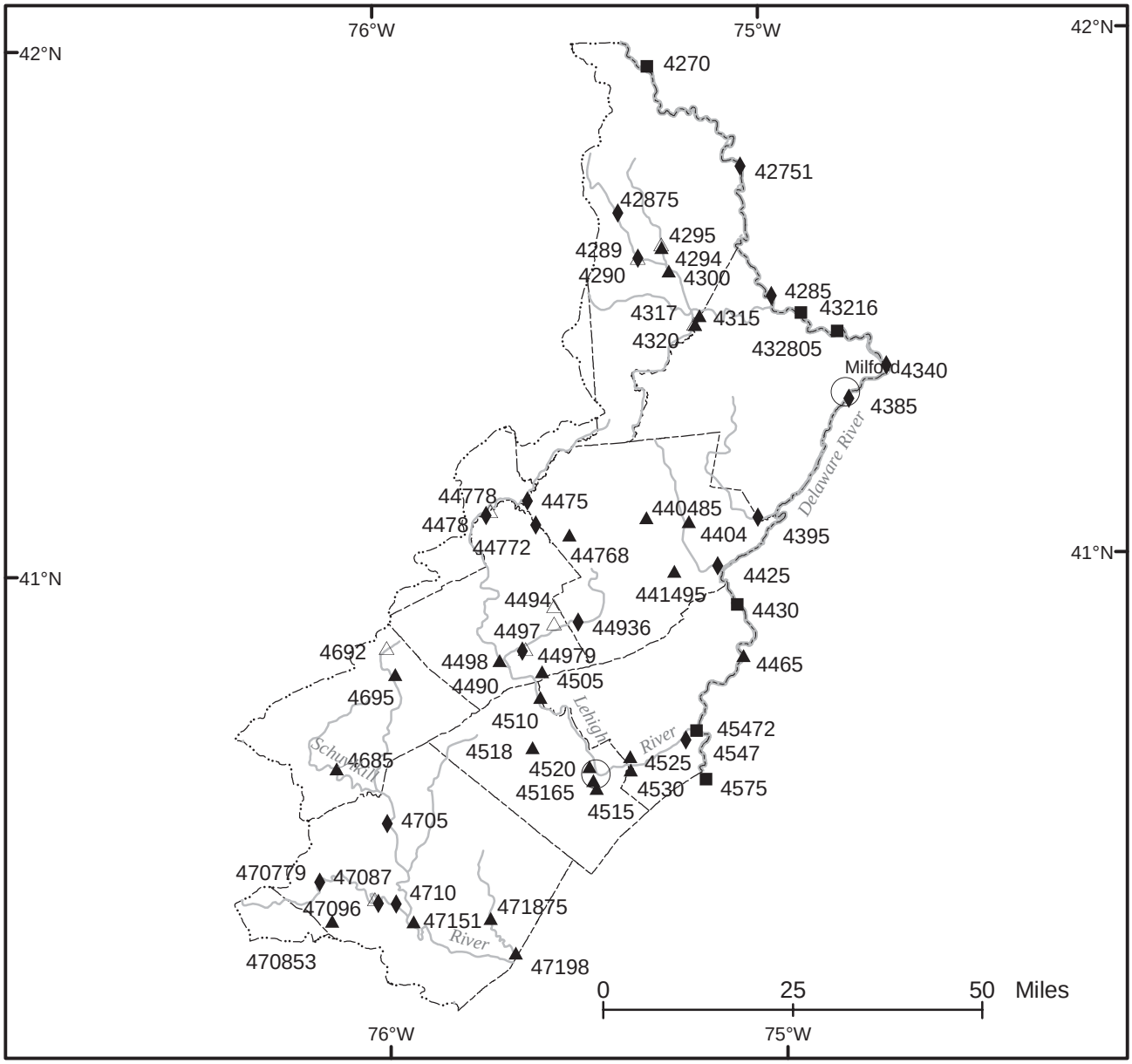
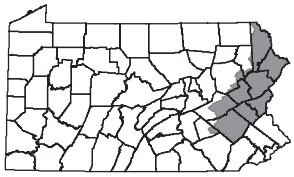
9–A5.*National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
9–A6.*National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
9–A7.*National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
9–A8.*National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
9–A9.*National field manual for the collection of water-quality data: Safety in field activities,* by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.





EXPLANATION

- ▲ Streamflow station
- △ Lake
- ♦ Streamflow and water-quality station
- ■ Water-quality station

NOTE: Downstream station numbers are abbreviated; the first two digits (part number) and the last two digits (if zeros) are omitted (for example, station number 01470500 is shown as 4705, and station number 01471875 is shown as 471875).

Figure 6.--Location of continuous-record data-collection stations in the upper Delaware River Basin.

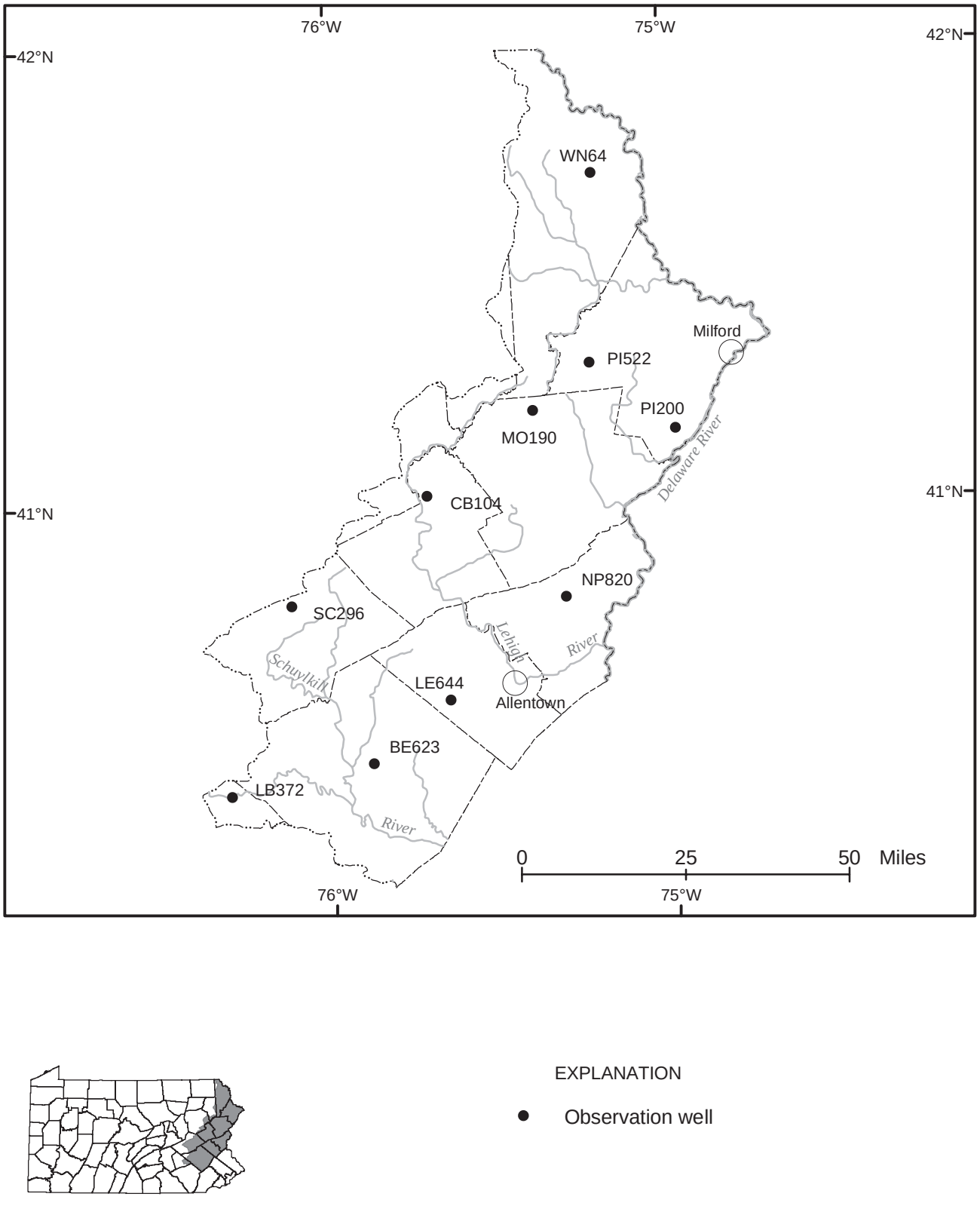
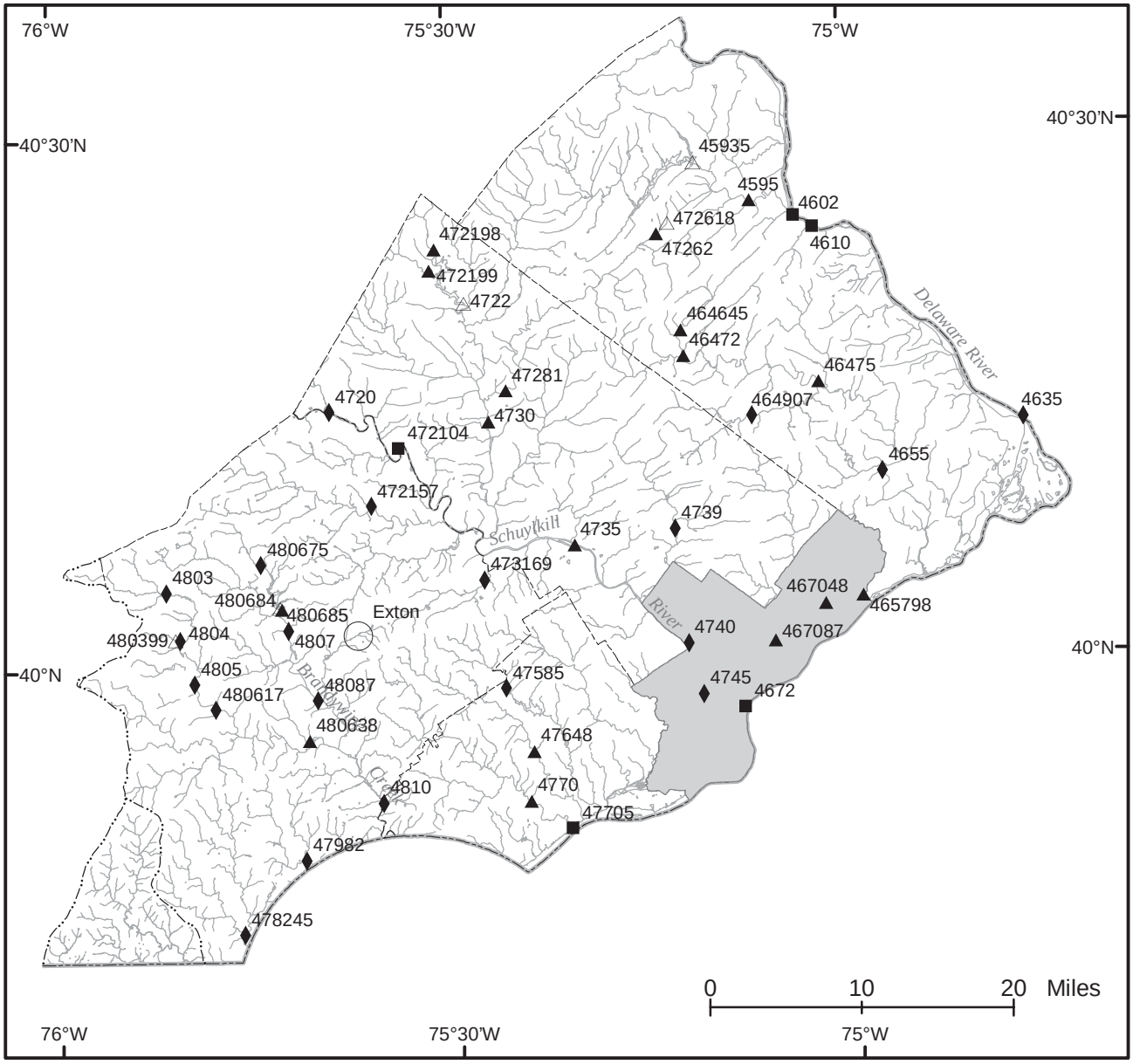
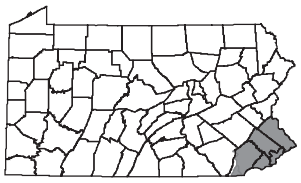


Figure 7.--Location of continuous-record observation wells in the upper Delaware River Basin.



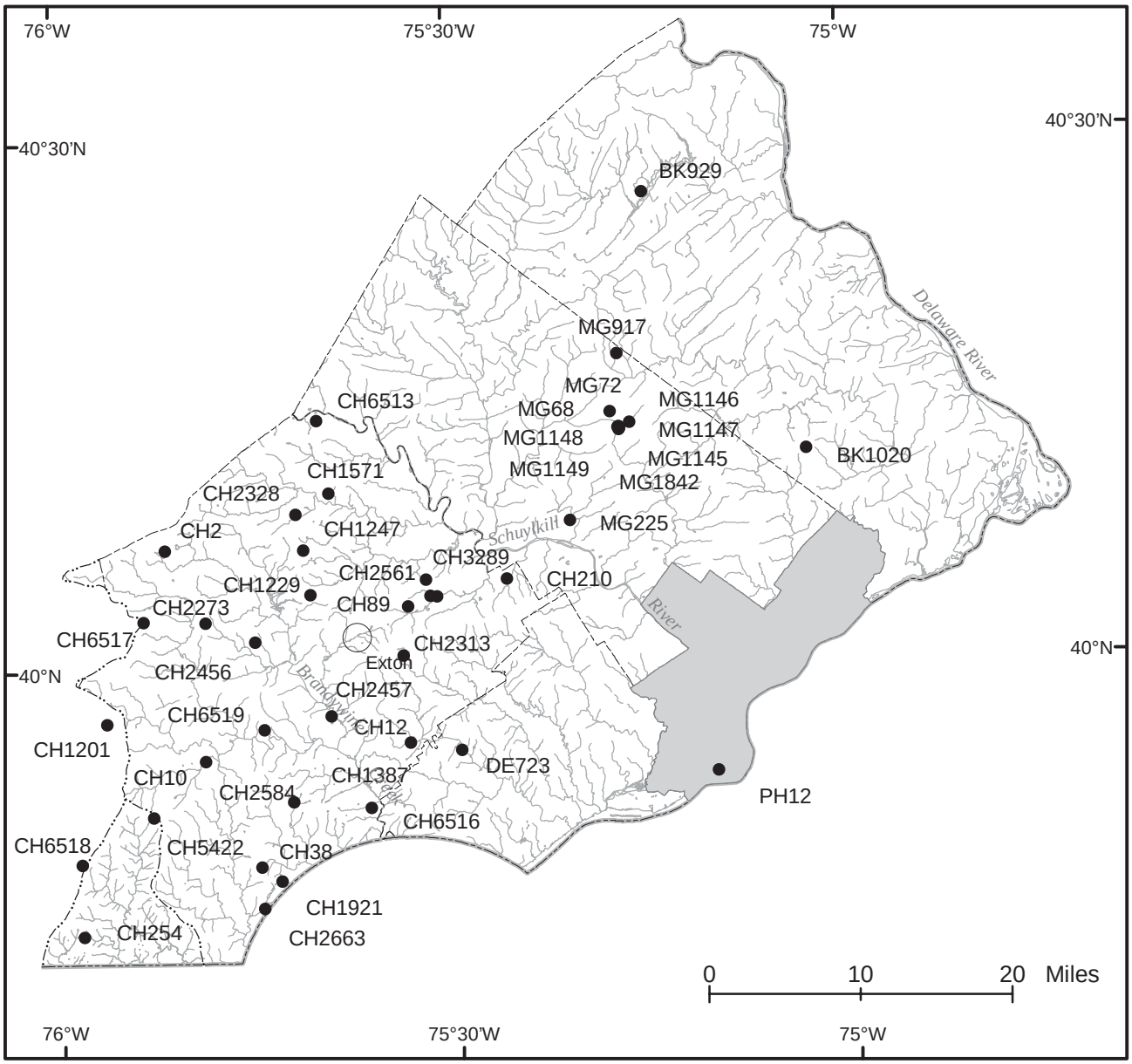


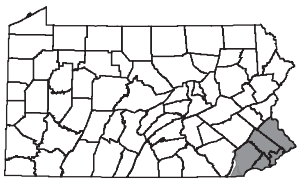
EXPLANATION

- ▲ Streamflow station
- △ Lake
- ■ Water-quality station
- ♦ Streamflow and water-quality station

NOTE: Downstream station numbers are abbreviated; the first two digits (part number) and the last two digits (if zeros) are omitted (for example, station number 01465460 is shown as 46546.

Figure 8.--Location of continuous-record data-collection stations in the lower Delaware River Basin.



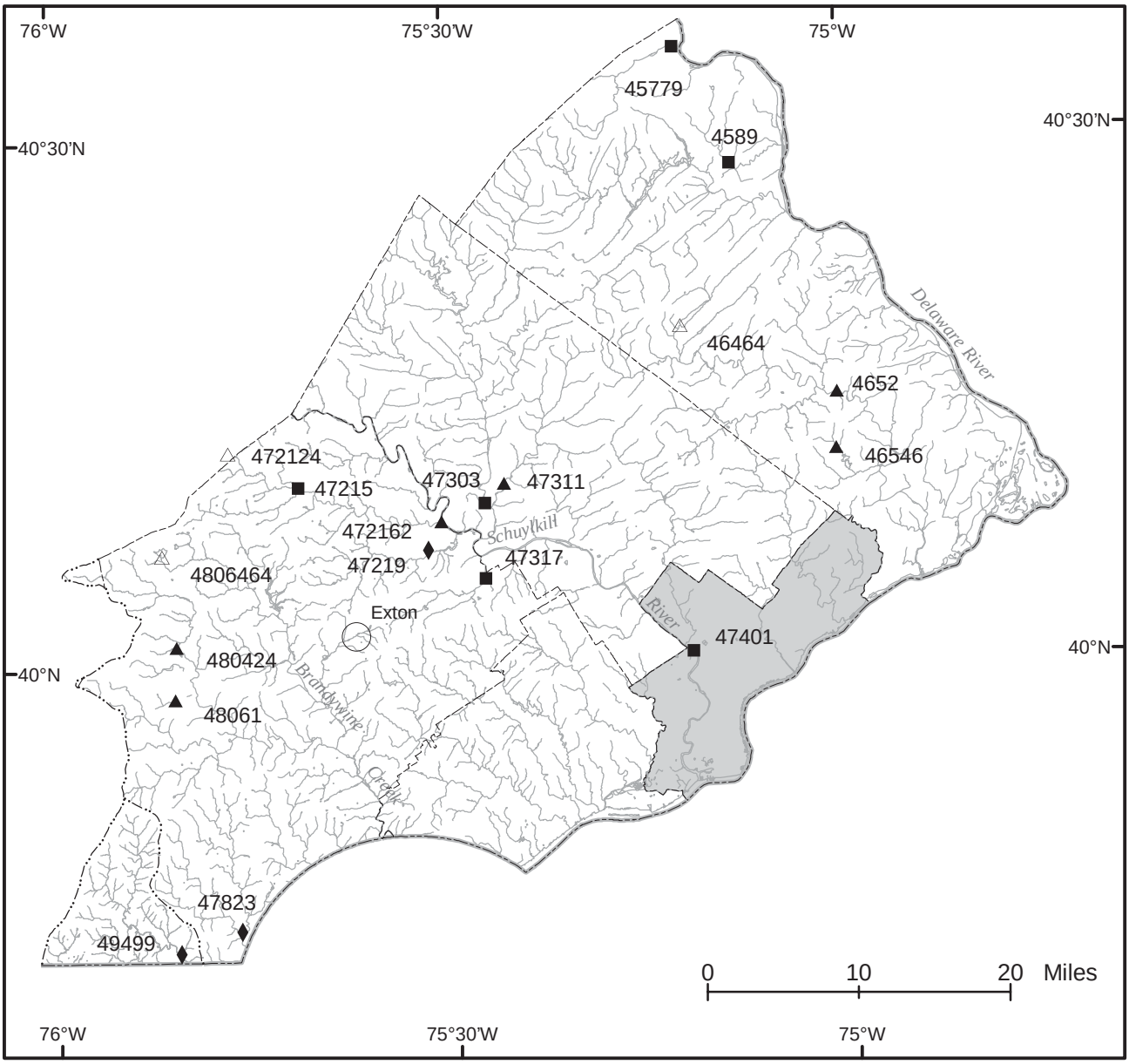


EXPLANATION

● Observation well

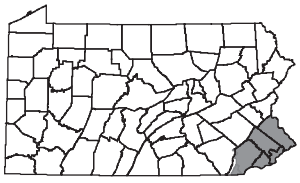
Figure 9.--Location of continuous-record observation wells in the lower Delaware River Basin.

Figure 10.--Location of partial-record data-collection stations in the upper Delaware River Basin.



EXPLANATION

- ▲ Streamflow station
- △ Lake
- ■ Water-quality station
- ♦ Streamflow and water-quality station



NOTE: Downstream station numbers are abbreviated; the first two digits (part number) and the last two digits (if zeros) are omitted (for example, station number 01465460 is shown as 46546.

Figure 11.--Location of partial-record data-collection stations in the lower Delaware River Basin.

SPECIAL NOTES, REMARK CODES, AND SELECTED CONSTITUENT DEFINITIONS

****

NOTES--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter(µG/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the µG/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols took place during the 1995 water year.

--Sample handling procedures at all **National Trends Network** stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

--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.

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

MBASCOR = M - 0.0088N - 0.00019C

where:

MBASCOR = corrected MBAS concentration, in mg/L;
M = reported MBAS concentration, in mg/L;
N = dissolved nitrate plus nitrite, as nitrogen, in mg/L; and
C = dissolved chloride concentration, in mg/L.

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

****

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

PRINTED OUTPUT	REMARK
E,e	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified but not quantified.
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).
ND	Material specifically analyzed for but not detected.
V	Analyte was detected in both the environmental sample and the associated blanks.

****

EXPLANATION OF CODES USED TO DEFINE SAMPLE COLLECTION PROCEDURES (partial listing)

(71999) SAMPLE PURPOSE CODES:

10--Routine
15--NAWQA
20--NASQAN
30--Benchmark
50--GW Network

(82398) SAMPLE METHOD CODES:

10--Equal width increment
20--Equal discharge increment
30--Single vertical
40--Multiple verticals
50--Point sample
70--Grab sample
120--Velocity integrated
4040--Submersible pump
8010--Other

(84164) SAMPLER TYPE: (partial list)

110--Sewage sampler
3011--US D-77
3035--DH-76 Trace metal sampler with teflon gasket and nozzle
3039--D-77 Trace metal
3040--D-77 Trace metal modified teflon bag sampler
3045--DH-81 with Teflon cap and nozzle
8010--Other (other than a defined sampler type)

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

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

AC-FT	acre-feet
BOT MAT	bottom material (Unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.)
COLS/100 ML	colonies per 100 milliliters
DIS	dissolved
FET	fixed end-point titration
FLD	field (Measurement determined at field site.)
F/S	feet per second
G/M	gallons per minute
G/SQM; MG/M2	grams or milligrams per square meter
IT	incremental titration
KF AGAR	nutrient medium for growth of fecal streptococcal bacteria
µG/L	micrograms per liter
µS/CM	microsiemens per centimeter
MG/L	milligrams per liter
MG/M2	milligrams per square meter
MM OF HG	millimeters of mercury
NONCARB	noncarbonate
NTU	nephelometric turbidity unit
PCI/L	picocuries per liter
REC	recoverable
TOT	total
T/DAY	tons per day
WH IT	whole water, incremental titration (Alkalinity, bicarbonate, and carbonate as determined by incremental titration of unfiltered water at the field site.)
2 SIGMA	Counting statistic that represents error in the reported radon, uranium, or tritium value caused by variations in sample counting, background radiation, volume of sample, and decay since sample was collected.
0.7µ GF	0.7 micron glass-fiber filter (Water filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size.)

****

(00027) AGENCY COLLECTING SAMPLE CODES: (partial listing)

1028 --U.S. Geological Survey

(00028) AGENCY ANALYZING SAMPLE CODES: (partial listing)

1028 --U.S. Geological Survey
80020 --U.S. Geological Survey, National Water-Quality Laboratory, Denver, Colorado
9813 --Pennsylvania Department of Environmental Protection
83613 --USGS Water Science Center, Water-Quality Laboratory, Troy, New York

MEDIUM CODES: (partial listing)

9-- Surface water.
6-- Ground water.
R-- Quality-control sample. Surface water.
S-- Quality-control sample. Ground water.
Q-- Quality-control sample. Artificial.

SURFACE-WATER RECORDS
NORTH ATLANTIC SLOPE BASINS
DELAWARE RIVER BASIN

01427000 WEST BRANCH DELAWARE RIVER AT HANCOCK, NY

LOCATION.--Lat 41°57'08", long 75°17'31", Delaware County, Hydrologic Unit 02040101, at bridge at end of Pennsylvania State Highway 191 in Hancock, and 1.3 mi upstream from confluence with East Branch Delaware Riverr.

DRAINAGE AREA.--650 mi^2.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1996 to current year.

INSTRUMENTATION.--Water-temperature satellite telemeter provides 15-minute-interval readings.

REMARKS.--Water temperature is affected by release of water from upstream reservoir.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURES: Maximum, 24.5°C, Sept. 18, 1997, June 13, 2001; minimum, 0.0°C on many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.5°C, June 16; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.0	14.5	15.0	11.5	10.5	11.0	6.0	5.0	5.5	3.5	2.5	3.0
2	15.0	13.5	14.0	11.0	11.0	11.0	5.0	3.5	4.5	3.5	2.5	3.0
3	14.5	12.0	13.5	12.5	11.0	11.5	4.0	3.0	3.5	4.0	3.0	3.5
4	13.0	11.5	12.0	12.0	11.0	11.5	4.0	2.5	3.5	4.0	3.0	4.0
5	13.0	10.5	12.0	11.0	10.5	11.0	4.5	3.0	4.0	3.0	2.5	3.0
6	12.5	10.5	11.5	11.0	10.5	11.0	4.0	2.0	3.0	2.5	1.5	2.5
7	14.0	10.5	12.5	11.0	9.5	10.0	2.5	2.0	2.5	1.5	1.0	1.0
8	15.0	11.5	13.5	9.5	7.0	8.0	3.0	1.5	2.5	1.5	0.5	1.0
9	15.5	13.0	14.5	7.5	6.0	7.0	3.5	2.5	3.0	1.0	0.0	0.0
10	16.5	14.0	15.5	7.5	5.0	6.5	5.0	3.5	4.0	0.0	0.0	0.0
11	16.5	14.0	15.0	6.5	5.5	6.0	5.5	4.0	4.5	0.0	0.0	0.0
12	16.0	13.5	14.5	9.0	6.5	8.0	4.5	3.5	4.0	0.5	0.0	0.0
13	15.5	13.0	14.5	9.0	5.5	8.0	4.0	3.0	4.0	1.0	0.0	0.5
14	14.0	12.0	13.0	5.5	3.5	4.5	3.5	2.5	3.0	0.0	0.0	0.0
15	13.0	10.5	12.0	6.0	4.5	5.5	3.5	2.5	3.0	0.0	0.0	0.0
16	11.5	9.0	10.5	6.5	5.0	5.5	4.0	3.0	3.5	0.0	0.0	0.0
17	11.0	9.5	10.5	7.0	6.5	6.5	4.0	3.5	4.0	0.0	0.0	0.0
18	11.5	10.0	11.0	8.0	7.0	7.5	3.5	3.0	3.0	0.0	0.0	0.0
19	10.5	9.5	10.0	10.5	8.0	9.0	3.5	2.5	3.0	0.0	0.0	0.0
20	11.5	9.0	10.0	9.0	7.5	8.0	3.5	2.5	3.0	0.0	0.0	0.0
21	12.5	10.0	11.5	8.0	7.0	7.5	2.5	1.5	2.0	0.0	0.0	0.0
22	11.5	9.0	10.5	8.5	7.5	8.0	3.5	1.5	2.5	0.0	0.0	0.0
23	9.0	8.0	8.5	8.0	7.0	7.5	4.5	3.0	3.5	0.0	0.0	0.0
24	9.0	8.0	8.5	8.5	7.5	8.0	4.0	3.5	3.5	0.0	0.0	0.0
25	10.0	7.0	8.5	7.5	6.5	7.0	4.0	3.5	3.5	0.0	0.0	0.0
26	12.0	10.0	11.0	6.5	6.0	6.5	4.0	3.5	3.5	0.0	0.0	0.0
27	12.0	9.5	11.0	7.0	6.0	6.5	4.0	3.5	4.0	0.0	0.0	0.0
28	10.5	9.0	9.5	8.0	6.5	7.0	4.0	3.0	3.5	0.0	0.0	0.0
29	10.0	9.5	10.0	7.5	5.0	6.5	4.0	2.5	3.0	0.0	0.0	0.0
30	11.0	10.0	10.5	6.5	5.0	5.5	4.0	3.0	3.5	0.0	0.0	0.0
31	11.5	10.0	10.5	---	---	---	3.5	2.5	3.0	0.0	0.0	0.0
MONTH	16.5	7.0	11.8	12.5	3.5	7.9	6.0	1.5	3.4	4.0	0.0	0.7

DELAWARE RIVER BASIN

01427000 WEST BRANCH DELAWARE RIVER AT HANCOCK, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	3.0	0.0	1.5	5.0	4.0	4.5	14.5	8.5	11.5
2	0.0	0.0	0.0	4.0	1.5	2.5	4.5	4.0	4.5	13.5	10.5	12.0
3	0.0	0.0	0.0	2.5	1.5	1.5	5.5	4.0	4.5	13.0	9.5	10.5
4	0.0	0.0	0.0	2.0	1.0	1.5	4.5	3.0	4.0	11.5	8.5	10.0
5	0.0	0.0	0.0	2.0	1.5	1.5	4.5	2.0	3.0	10.0	7.5	8.5
6	0.0	0.0	0.0	2.5	2.0	2.0	6.0	1.0	3.5	13.0	8.0	10.5
7	0.0	0.0	0.0	3.0	1.5	2.0	5.5	3.5	4.5	14.0	10.0	12.0
8	0.0	0.0	0.0	3.0	2.0	2.5	5.0	3.5	4.5	12.0	9.0	11.0
9	0.0	0.0	0.0	3.0	2.0	2.5	7.0	3.5	5.0	12.5	9.5	11.0
10	0.0	0.0	0.0	4.0	2.0	2.5	6.5	3.0	5.0	14.5	10.5	12.5
11	0.0	0.0	0.0	4.5	1.5	3.0	6.5	3.5	5.0	16.0	12.0	14.0
12	0.0	0.0	0.0	3.0	2.0	2.5	6.5	4.0	5.5	16.5	12.5	14.5
13	0.0	0.0	0.0	3.0	1.0	2.0	6.0	4.5	5.5	16.5	13.5	15.0
14	0.0	0.0	0.0	2.5	0.5	1.5	6.0	5.0	5.5	18.0	14.5	16.0
15	0.0	0.0	0.0	4.5	2.0	3.0	8.0	4.0	6.0	18.5	15.0	16.5
16	0.0	0.0	0.0	3.0	0.5	1.5	8.5	4.0	6.0	16.0	13.5	14.5
17	0.0	0.0	0.0	3.0	0.5	2.0	9.5	5.0	7.5	17.5	13.0	15.5
18	0.0	0.0	0.0	3.0	1.0	2.0	9.5	6.0	8.0	17.0	13.5	15.5
19	0.0	0.0	0.0	3.5	1.0	2.5	11.5	7.0	9.5	16.5	12.0	14.5
20	0.0	0.0	0.0	3.5	0.5	2.5	10.0	7.0	8.5	16.5	13.0	15.0
21	0.0	0.0	0.0	3.0	1.5	2.5	11.5	6.5	9.0	17.5	15.0	16.0
22	0.0	0.0	0.0	3.0	0.0	1.5	11.0	8.0	10.0	19.5	15.5	17.5
23	0.0	0.0	0.0	3.5	0.0	1.5	10.5	8.0	8.5	20.0	16.5	18.5
24	0.0	0.0	0.0	5.5	1.0	3.5	12.0	7.5	9.5	20.5	17.5	19.0
25	0.0	0.0	0.0	5.0	3.5	4.0	9.5	6.5	7.5	18.5	15.5	17.0
26	0.0	0.0	0.0	6.5	3.0	5.0	8.0	6.5	7.0	17.5	15.0	16.0
27	0.0	0.0	0.0	5.5	4.5	5.0	10.5	7.5	9.0	19.0	14.5	17.0
28	0.0	0.0	0.0	7.5	4.0	5.5	10.5	6.0	8.0	18.5	15.5	17.0
29	0.0	0.0	0.0	7.0	3.5	5.0	12.0	6.5	9.5	16.5	13.5	15.0
30	---	---	---	6.5	3.0	5.0	13.0	8.0	10.5	17.5	12.5	15.0
31	---	---	---	5.0	4.0	4.5	---	---	---	15.5	12.5	13.5
MONTH	0.0	0.0	0.0	7.5	0.0	2.8	13.0	1.0	6.6	20.5	7.5	14.3
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.5	13.0	14.5	18.0	14.0	16.0	20.5	17.5	19.0	17.5	15.0	16.5
2	16.0	13.5	15.0	16.5	14.5	15.5	22.5	18.0	20.0	16.5	13.0	14.5
3	17.5	13.5	15.5	15.0	10.0	13.0	23.0	18.0	20.5	16.0	12.5	14.5
4	18.0	13.0	15.5	14.0	9.5	12.0	21.5	18.5	20.0	16.0	13.0	14.5
5	16.0	13.5	14.0	15.5	10.5	13.0	18.5	15.5	17.0	14.5	13.5	14.0
6	14.0	13.0	13.5	14.5	12.0	13.5	16.5	14.0	15.5	17.5	13.0	15.0
7	19.0	13.5	16.0	14.5	10.5	13.0	17.0	14.0	15.0	17.0	15.0	16.0
8	21.0	15.5	18.5	18.0	13.0	15.5	18.5	13.5	16.0	17.0	15.5	16.0
9	19.5	14.0	17.0	16.5	10.5	13.5	20.5	15.0	18.0	18.0	14.5	16.5
10	18.0	14.0	15.5	14.0	8.5	11.5	20.5	16.0	18.5	15.5	11.5	13.5
11	17.0	12.5	14.5	16.5	10.0	13.5	21.0	17.5	19.5	13.5	10.5	12.0
12	18.0	12.5	15.0	15.5	12.5	13.5	20.0	17.5	18.5	13.0	10.0	11.5
13	16.0	13.5	15.0	15.0	12.0	13.5	17.5	16.5	17.0	14.5	11.0	13.0
14	17.0	14.0	15.0	16.0	13.5	14.5	18.5	16.0	17.0	13.5	11.0	12.5
15	21.5	15.5	18.5	17.0	13.0	15.0	18.0	16.0	17.0	14.5	12.0	13.5
16	23.5	17.5	20.5	17.0	14.0	15.5	16.5	15.0	15.5	15.0	12.5	13.5
17	21.0	18.5	20.0	18.5	15.0	16.5	18.0	14.5	16.0	15.0	12.5	13.5
18	19.0	15.0	17.5	17.0	13.0	14.5	18.5	15.0	16.5	16.5	14.5	15.0
19	18.0	12.5	15.0	16.5	12.5	14.0	18.0	15.5	16.5	18.0	16.5	17.5
20	18.0	13.0	15.5	18.0	14.0	16.0	19.0	16.0	17.5	18.5	17.0	17.5
21	20.5	13.0	17.0	17.0	12.5	14.5	18.5	12.5	15.0	18.5	17.0	17.5
22	17.5	15.5	16.5	15.5	12.0	14.0	15.5	11.5	13.0	19.0	17.0	18.0
23	21.0	14.0	17.5	14.0	12.5	13.5	13.5	9.0	11.5	19.5	17.0	18.0
24	22.0	16.0	19.0	18.0	13.0	15.5	15.0	10.5	13.0	18.0	13.5	15.0
25	19.5	16.5	18.0	18.5	14.5	16.5	13.0	9.5	11.0	13.5	12.0	13.0
26	16.5	14.0	15.5	16.5	13.5	15.0	13.0	9.5	11.5	12.5	10.5	11.5
27	18.5	13.0	15.5	15.5	13.5	14.5	13.5	10.5	12.0	12.0	9.5	11.0
28	17.0	14.0	15.5	17.0	15.0	16.0	14.5	11.0	13.0	12.5	11.0	12.0
29	18.5	14.5	16.5	18.5	15.5	17.0	16.5	12.5	14.5	14.5	11.0	13.0
30	16.0	11.5	14.0	19.5	16.0	18.0	18.5	12.5	14.5	11.5	10.0	11.0
31	---	---	---	19.5	17.5	18.5	20.0	15.0	18.5	---	---	---
MONTH	23.5	11.5	16.2	19.5	8.5	14.7	23.0	9.0	16.1	19.5	9.5	14.3
YEAR	23.5	0.0	9.1									

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°45'24", long 75°03'28", 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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 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 good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir. 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. Satellite and telephone gage-height and temperature telemeter at station. Information on the above reservoirs can be found in the annual Water-Data Report NY-04-1.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft^3/s, Jan. 19, 1996, gage-height, 16.31 ft; minimum discharge, 306 ft^3/s, Sept. 24, 25, 1997; minimum gage height, 2.20 ft, Sept. 13, 1977, Aug. 23, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,900 ft^3/s, Sept. 4, gage height, 9.38 ft; minimum recorded discharge, 634 ft^3/s, Oct. 2, but may have been less during period of estimated record, gage height, 2.73 ft.

REVISIONS.--Revised daily (in **Bold**), monthly and yearly discharges for 2003 water year and statistical summaries for period of record through 2003 water year are given below. These figures supersede those published in the report for 2003.

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	756	**e1,200**	**e1,700**	**2,450**	**e1,400**	**e2,100**	10,200	3,450	6,450	1,670	1,260	1,060
2	673	**e1,200**	**e1,500**	**e7,000**	**e1,300**	**e2,100**	8,930	5,290	7,730	1,400	2,440	11,700
3	**e1,200**	**e1,100**	**e1,400**	**e5,000**	**e1,300**	**e2,000**	8,680	8,160	6,330	1,240	2,200	11,500
4	**e1,100**	**e1,000**	**e1,300**	**e4,000**	**e1,400**	**e1,900**	8,050	7,450	6,000	1,170	2,770	26,300
5	**e1,000**	**e960**	**e1,200**	**e3,200**	**e1,600**	**e1,800**	8,120	6,260	5,590	1,190	3,680	18,200
6	**e1,200**	**e1,300**	**e1,300**	**e2,600**	**e1,900**	**e1,800**	7,950	5,440	5,040	1,130	4,270	12,200
7	**e1,100**	**e1,600**	**e1,200**	**e2,300**	**e1,800**	**e1,700**	7,570	4,550	4,660	1,040	3,580	8,990
8	**e1,200**	**e1,500**	**e1,100**	**e2,200**	**e1,700**	**e1,700**	6,890	3,900	e4,900	1,270	2,780	6,890
9	**e1,300**	**1,360**	**e1,100**	**e2,000**	**e1,600**	**e1,600**	6,110	3,340	e4,200	1,440	e2,650	5,220
10	**e1,200**	**1,120**	**e1,000**	**e1,800**	**e1,600**	**e1,600**	5,480	2,850	e3,400	1,270	2,870	4,450
11	**e1,200**	**1,060**	**e1,200**	**e1,700**	**e1,700**	**e1,500**	5,640	e2,550	e3,100	2,170	4,590	e3,800
12	**e5,000**	**1,520**	**e1,400**	**e1,600**	**e1,700**	**e1,500**	6,370	e3,300	e3,400	2,360	7,240	e2,600
13	**e4,000**	**e2,400**	**e1,500**	**e1,400**	**e1,600**	**e1,400**	5,820	e4,400	e4,000	1,430	6,030	1,960
14	**e3,300**	**e2,300**	**e1,800**	**e1,300**	**e1,400**	**e1,400**	5,070	e4,200	e9,800	1,120	5,550	1,750
15	**e3,000**	**e2,000**	**e2,200**	**e1,200**	**e1,200**	**e1,500**	4,560	e3,650	e10,200	1,080	e4,700	4,050
16	**e3,400**	**e1,900**	**e1,900**	**e1,200**	**e1,100**	**e1,900**	4,210	3,260	e7,400	1,120	e3,800	5,640
17	**e13,000**	**e4,300**	**e1,500**	**e1,200**	**e1,100**	**e3,900**	3,780	2,940	e5,800	1,330	e3,200	4,080
18	**e4,000**	**e5,200**	**e1,400**	**e1,300**	**e1,200**	**e8,000**	3,380	2,620	e5,200	1,170	e3,000	3,340
19	**e4,000**	**e4,200**	**e1,900**	**e1,400**	**e1,200**	**e12,000**	3,080	2,310	e4,600	1,270	e2,450	3,210
20	**e3,000**	**e3,400**	**e2,800**	**e1,500**	**e1,300**	12,400	2,770	2,040	e4,200	1,230	1,950	2,990
21	**e2,500**	**e3,900**	**e4,600**	**e1,700**	**e1,300**	25,700	2,480	1,930	e7,800	966	1,640	2,180
22	**e2,200**	**e4,900**	**e4,000**	**e1,700**	**e1,500**	30,200	2,450	1,880	e9,500	1,900	1,410	1,780
23	**e1,800**	**e5,300**	**e3,000**	**e1,600**	**e1,700**	26,100	2,450	1,640	e9,300	2,970	1,260	10,300
24	**e1,500**	**e4,000**	**e2,600**	**e1,600**	**e2,100**	18,100	2,290	1,540	e6,600	2,460	1,070	12,200
25	**e1,400**	**e3,500**	**e2,500**	**e1,500**	**e2,700**	14,400	2,110	1,740	e5,600	1,860	e1,030	8,060
26	**e1,900**	**e3,200**	**2,140**	**e1,500**	**e2,800**	13,800	2,470	2,040	e4,100	1,520	e1,000	6,160
27	**e2,100**	**e2,800**	**2,430**	**e1,500**	**e2,600**	12,200	5,280	2,450	e3,400	1,480	e970	5,190
28	**e1,900**	**e2,400**	**2,220**	**e1,600**	**e2,300**	9,880	4,870	2,260	e2,850	1,470	e1,070	9,090
29	**e1,700**	**e2,100**	**1,950**	**e1,600**	---	9,510	4,340	2,180	2,300	1,300	e1,090	11,200
30	**e1,500**	**e1,900**	**1,840**	**e1,600**	---	13,500	3,840	1,950	1,960	1,160	1,240	8,590
31	**e1,300**	---	**1,800**	**e1,500**	---	12,200	---	2,010	---	1,080	1,190	---
TOTAL	74,429	74,620	59,480	63,750	46,100	249,390	155,240	103,580	165,410	45,266	83,980	214,680
MEAN	2,401	2,487	1,919	2,056	1,646	8,045	5,175	3,341	5,514	1,460	2,709	7,156
MAX	13,000	5,300	4,600	7,000	2,800	30,200	10,200	8,160	10,200	2,970	7,240	26,300
MIN	673	960	1,000	1,200	1,100	1,400	2,110	1,540	1,960	966	970	1,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

MEAN	1,987	2,526	2,597	2,415	2,608	4,633	5,637	3,494	1,954	1,366	1,334	1,582
MAX	6,545	6,561	11,130	7,594	7,993	11,080	14,500	7,866	5,514	3,571	2,710	7,156
(WY)	(1978)	(1997)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(2003)	(1996)	(1994)	(2003)
MIN	701	1,130	1,035	587	611	1,177	1,496	935	734	777	560	839
(WY)	(1992)	(1979)	(1999)	(1977)	(1980)	(1981)	(1985)	(1985)	(1985)	(1981)	(1985)	(1994)

e Estimated.

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	760,051		1,335,925			
ANNUAL MEAN	2,082		3,660		2,672	
HIGHEST ANNUAL MEAN					3,972	1978
LOWEST ANNUAL MEAN					1,434	1985
HIGHEST DAILY MEAN	13,000	Oct 17	30,200	Mar 22	54,800	Mar 15, 1986
LOWEST DAILY MEAN	520	Jan 20	673	Oct 2	312	Aug 23, 1985
ANNUAL SEVEN-DAY MINIMUM	594	Jan 15	1,000	Oct 1	354	Aug 17, 1985
10 PERCENT EXCEEDS	4,240		8,020		6,020	
50 PERCENT EXCEEDS	1,500		2,200		1,400	
90 PERCENT EXCEEDS	760		1,200		800	

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004**
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,850	13,400	8,750	5,890	e840	e780	4,990	4,390	3,380	864	3,430	3,310
2	5,670	10,200	7,330	5,090	e840	e860	5,770	3,800	3,680	896	3,360	2,420
3	4,800	8,280	5,950	4,860	e840	e1,700	5,150	5,270	3,960	1,220	2,520	2,000
4	4,310	6,810	4,930	6,390	e840	e3,000	4,690	5,090	3,420	1,240	2,050	1,700
5	5,740	6,010	4,340	9,400	e840	e4,700	4,260	4,520	2,960	1,290	2,300	1,420
6	4,910	6,220	3,980	8,350	e760	e8,700	3,710	4,580	2,700	1,220	2,090	1,320
7	4,210	5,100	3,610	6,820	e760	14,100	3,430	4,330	2,510	1,380	1,600	1,230
8	3,610	4,220	3,130	5,940	e747	10,300	3,490	3,790	2,080	1,410	1,390	1,260
9	3,200	3,670	2,840	e4,500	e760	8,410	3,300	3,440	1,870	1,120	1,250	4,910
10	2,880	3,480	2,580	e3,600	e750	6,830	2,840	3,230	1,690	1,410	1,130	6,650
11	2,580	3,320	9,900	e3,200	e760	5,820	2,460	4,750	1,510	1,220	1,120	4,980
12	2,290	3,400	19,600	e2,800	e750	5,260	2,190	4,620	1,290	985	3,580	3,630
13	2,060	3,320	12,700	e2,400	e740	4,540	3,020	5,440	1,120	1,080	17,100	2,790
14	1,830	3,120	9,620	e2,300	e750	3,840	5,600	5,150	1,000	1,220	9,740	2,380
15	4,950	2,880	8,300	e2,000	e750	4,120	5,390	4,480	935	2,410	5,410	2,050
16	5,520	2,670	6,680	e1,600	e740	3,620	4,870	4,380	878	2,130	10,300	1,830
17	4,420	2,550	6,060	e1,400	e740	3,070	4,410	3,700	903	1,800	9,230	2,480
18	3,820	2,520	7,570	e1,300	e750	2,780	3,930	3,440	1,260	1,740	6,790	75,200
19	3,590	3,400	6,850	e1,200	e760	2,530	3,630	3,000	1,440	2,050	5,480	50,200
20	3,810	20,100	6,240	e1,200	e750	2,300	3,390	2,500	961	1,980	4,430	23,800
21	3,390	19,100	5,370	e1,100	e740	3,010	3,180	2,120	844	1,770	4,610	13,800
22	3,140	14,000	4,700	e1,100	e740	3,060	2,920	2,020	784	1,650	5,010	9,340
23	2,870	10,700	4,340	e1,100	e730	2,540	3,060	1,840	792	1,940	4,360	7,030
24	2,630	8,550	10,700	e1,000	e720	2,540	3,590	1,850	762	2,520	3,650	6,470
25	2,410	7,880	24,700	e1,000	e710	2,860	3,070	1,830	760	1,990	3,530	5,410
26	2,220	6,810	18,100	e940	e700	3,240	4,980	1,940	1,000	1,470	3,160	4,600
27	6,310	5,790	13,100	e920	e710	4,600	6,870	3,500	1,210	3,820	2,780	4,090
28	20,600	5,770	10,100	e920	e730	6,490	5,990	4,350	828	10,500	2,450	6,060
29	24,300	11,000	8,130	e920	e760	6,120	5,460	4,580	775	7,690	2,400	9,850
30	28,300	10,300	7,080	e900	---	5,420	5,000	3,900	1,040	4,780	2,300	8,850
31	18,900	---	6,730	e900	---	4,890	---	3,310	---	3,430	3,670	---
TOTAL	196,120	214,570	254,010	91,040	22,007	142,030	124,640	115,140	48,342	70,225	132,220	271,060
MEAN	6,326	7,152	8,194	2,937	759	4,582	4,155	3,714	1,611	2,265	4,265	9,035
MAX	28,300	20,100	24,700	9,400	840	14,100	6,870	5,440	3,960	10,500	17,100	75,200
MIN	1,830	2,520	2,580	900	700	780	2,190	1,830	760	864	1,120	1,230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

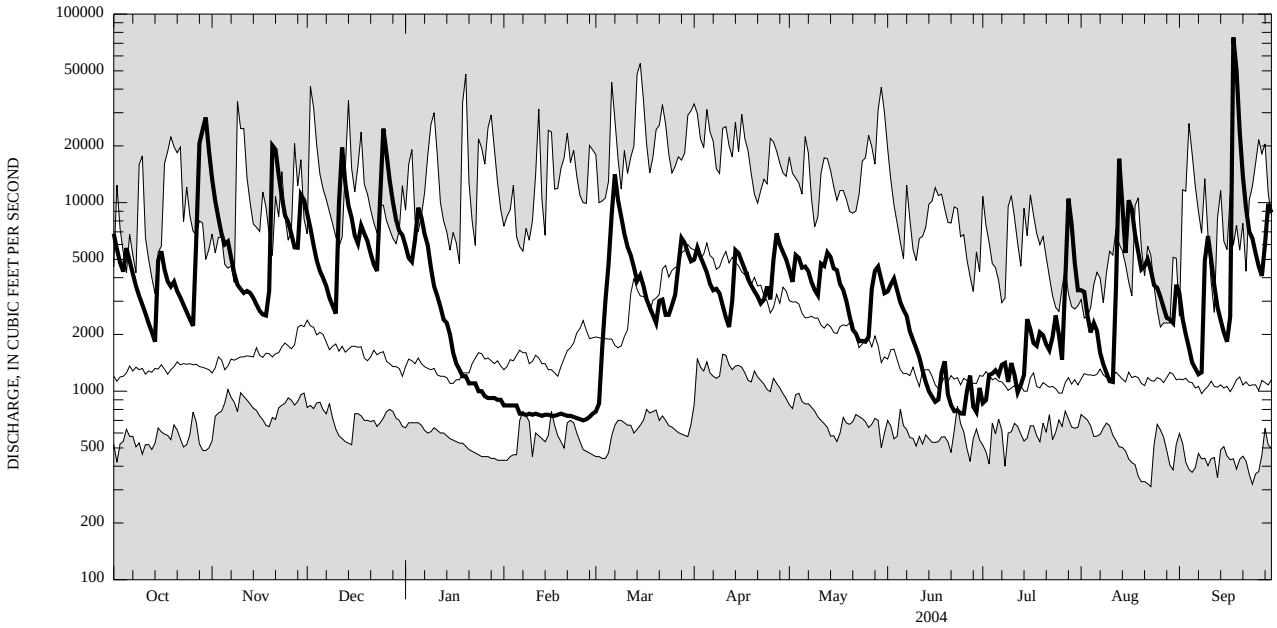
MEAN	2,137	2,686	2,790	2,433	2,543	4,631	5,586	3,502	1,942	1,396	1,431	1,830
MAX	6,545	7,152	11,130	7,594	7,993	11,080	14,500	7,866	5,514	3,571	4,265	9,035
(WY)	(1978)	(2004)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(2003)	(1996)	(2004)	(2004)
MIN	701	1,130	1,035	587	611	1,177	1,496	935	734	777	560	839
(WY)	(1992)	(1979)	(1999)	(1977)	(1980)	(1981)	(1985)	(1985)	(1985)	(1981)	(1985)	(1994)

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004**--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	1,792,096		1,681,404			
ANNUAL MEAN	4,910		4,594		2,739	
HIGHEST ANNUAL MEAN					4,594	2004
LOWEST ANNUAL MEAN					1,434	1985
HIGHEST DAILY MEAN	30,200	Mar 22	75,200	Sep 18	75,200	Sep 18, 2004
LOWEST DAILY MEAN	966	Jul 21	700	Feb 26	312	Aug 23, 1985
ANNUAL SEVEN-DAY MINIMUM	1,070	Aug 24	720	Feb 22	354	Aug 17, 1985
10 PERCENT EXCEEDS	10,200		8,780		6,110	
50 PERCENT EXCEEDS	3,300		3,340		1,430	
90 PERCENT EXCEEDS	1,300		843		800	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1975 to current year.

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

REMARKS.--Water temperature is affected by release of water from upstream reservoir. The daily water temperature records for this site were collected, stored, reported and were furnished by the USGS New York Water Science Center. Some values for "dissolved" parameters exceeded values for the corresponding "total" parameter. These results are within the limits of analytical precision and methods. Other data for the Water-Quality Network can be found on pages 446-484.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, (water years 1976-2004), 30.5°C, July 12, 1987; minimum, 0.0°C on many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 26.5°C, June 18, July 3; minimum, 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)
OCT 2003													
09...	1400	1028	9813	3200	11.0	7.7	7.2	67	66	13.7	19	5.4	5.7
DEC													
11...	1230	1028	9813	9900	12.1	7.2	7.1	68	71	4.3	19	5.2	5.2
APR 2004													
20...	0900	1028	9813	3390	10.6	7.1	6.6	72	72	11.9	20	6.0	5.9
JUN													
15...	0900	1028	9813	935	9.8	7.5	7.4	84	81	18.8	24	6.9	7.0
AUG													
24...	0930	1028	9813	3650	10.5	7.4	6.7	68	69	17.3	20	5.8	5.9

Date	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
OCT 2003													
09...	1.2	1.3	15	.00	5.6	62	2	<.020	.16	<.040	<.01	<.010	.18
DEC													
11...	1.1	1.4	12	.00	5.5	42	64	<.020	.31	<.040	.03	.089	.70
APR 2004													
20...	1.3	1.3	16	2.4	5.8	46	8	<.020	.34	<.040	<.01	.021	.65
JUN													
15...	1.5	1.5	18	11	6.0	54	<2	<.020	.21	<.040	<.01	.012	.46
AUG													
24...	1.2	1.2	18	--	5.5	46	6	<.020	.23	<.040	<.01	<.010	.42

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)
OCT 2003													
09...	.7	10	20	<4	<4	50	90	<1.0	<1.0	20	30	<4.0	<4.0
DEC													
11...	1.5	100	1500	<4	<4	180	1810	<1.0	2.0	20	150	<4.0	<4.0
APR 2004													
20...	1.1	<10	20	<4	<4	30	60	<1.0	<1.0	9	10	<4.0	<4.0
JUN													
15...	.9	<10	10	<4	<4	30	50	<1.0	<1.0	10	20	<4.0	<4.0
AUG													
24...	.4	<10	30	<4	<4	50	90	<1.0	<1.0	10	20	<4.0	<4.0

Date	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
OCT 2003		
09...	<5.0	<5.0
DEC		
11...	<5.0	20
APR 2004		
20...	<5.0	<5.0
JUN		
15...	<5.0	<5.0
AUG		
24...	<5.0	<5.0

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	11/03/03
Benthic macroinvertebrate	Count
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	2
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	3
Insecta	
Ephemeroptera (MAYFLIES)	
Ephemerellidae	
Ephemerella	19
Eurylophella	4
Serratella	3
Heptageniidae	
Epeorus	1
Stenonema	2
Isonychiidae	
Isonychia	6
Plecoptera (STONEFLIES)	
Perlidae	
Acroneuria	1
Perlodidae	
Isoperla	1
Trichoptera (CADDISFLIES)	
Apataniidae	
Apatania	1
Hydropsychidae	
Cheumatopsyche	13
Hydropsyche	13
Potamyia	5
Limnephilidae	
Hydatophylax	2
Rhyacophilidae	
Rhyacophila	1
Uenoidae	
Neophylax	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	24
Simuliidae (BLACK FLIES)	
Prosimulium	1
Total Organisms	107
Total Taxa	21

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.5	13.5	14.0	11.5	10.5	11.0	5.5	5.0	5.0	3.0	2.5	3.0
2	13.5	12.5	13.0	11.5	11.5	11.5	5.0	3.0	4.0	3.0	2.5	3.0
3	13.0	11.5	12.5	12.0	11.0	11.5	3.0	1.5	2.0	4.0	3.0	3.5
4	12.0	11.0	11.5	12.0	11.5	12.0	2.0	1.0	1.5	4.5	4.0	4.5
5	11.0	10.5	11.0	11.5	11.0	11.5	2.5	1.5	2.0	4.0	3.0	3.5
6	11.5	10.5	11.0	11.0	11.0	11.0	2.0	1.5	1.5	3.0	1.5	2.5
7	12.0	10.5	11.0	11.0	10.0	10.5	1.5	0.0	1.0	1.5	0.0	0.5
8	13.0	11.0	12.0	10.0	7.0	8.5	1.0	0.0	0.5	0.0	0.0	0.0
9	14.5	12.0	13.0	7.0	5.0	6.0	2.0	0.5	1.5	0.0	0.0	0.0
10	15.5	13.5	14.5	5.5	4.5	5.0	3.5	2.0	2.5	0.0	0.0	0.0
11	16.5	14.0	15.0	5.0	4.5	4.5	5.0	3.5	4.0	0.0	0.0	0.0
12	16.0	13.5	15.0	7.0	5.0	6.0	4.5	3.5	4.0	0.0	0.0	0.0
13	15.5	13.5	14.5	7.5	6.0	7.0	3.5	2.5	3.0	0.0	0.0	0.0
14	14.5	13.0	13.5	6.0	4.0	5.0	2.5	1.0	2.0	0.0	0.0	0.0
15	13.5	11.5	12.5	4.5	3.0	3.5	1.5	1.0	1.0	0.0	0.0	0.0
16	11.5	9.5	10.5	4.5	3.5	4.0	2.5	1.5	2.0	0.0	0.0	0.0
17	10.0	9.0	9.5	6.0	4.5	5.0	3.0	2.5	3.0	0.0	0.0	0.0
18	10.5	9.5	9.5	7.0	6.0	6.5	3.0	2.5	2.5	0.0	0.0	0.0
19	10.0	9.0	9.5	10.0	7.0	8.0	2.5	2.0	2.0	0.0	0.0	0.0
20	10.0	8.5	9.0	9.5	7.5	8.5	2.5	2.0	2.5	0.0	0.0	0.0
21	11.0	9.0	10.0	7.5	7.0	7.5	2.0	1.5	1.5	0.0	0.0	0.0
22	10.5	9.0	10.0	8.0	7.5	7.5	2.0	1.0	1.5	0.0	0.0	0.0
23	9.0	7.0	8.0	7.5	7.5	7.5	3.5	2.0	3.0	0.0	0.0	0.0
24	7.5	6.0	7.0	8.0	7.5	7.5	4.0	3.0	3.5	0.0	0.0	0.0
25	8.0	6.0	7.0	8.0	6.0	7.0	4.0	3.5	3.5	0.0	0.0	0.0
26	10.0	7.5	8.5	6.0	5.5	5.5	3.5	3.5	3.5	0.0	0.0	0.0
27	11.5	10.0	10.5	6.5	5.5	6.0	4.0	3.5	3.5	0.0	0.0	0.0
28	10.5	9.5	10.0	7.5	6.5	7.0	3.5	3.0	3.0	0.0	0.0	0.0
29	10.0	9.5	10.0	7.5	5.5	7.0	3.0	2.5	3.0	0.0	0.0	0.0
30	10.0	9.5	10.0	5.5	5.0	5.0	3.5	3.0	3.5	0.0	0.0	0.0
31	10.5	10.0	10.0	---	---	---	3.5	3.0	3.0	0.0	0.0	0.0
MONTH	16.5	6.0	11.1	12.0	3.0	7.5	5.5	0.0	2.6	4.5	0.0	0.7
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	6.0	15.0	12.0	13.5
2	0.0	0.0	0.0	0.0	0.0	0.0	6.0	5.5	5.5	15.0	13.5	14.5
3	0.0	0.0	0.0	0.0	0.0	0.0	6.0	5.5	5.5	14.0	11.0	13.0
4	0.0	0.0	0.0	0.0	0.0	0.0	6.5	4.5	5.5	12.0	10.0	11.0
5	0.0	0.0	0.0	0.5	0.0	0.0	5.0	3.0	4.0	10.5	9.5	10.0
6	0.0	0.0	0.0	0.5	0.0	0.0	5.0	2.0	3.5	13.0	9.0	11.0
7	0.0	0.0	0.0	2.5	0.0	1.0	7.0	4.0	5.5	15.5	11.5	13.5
8	0.0	0.0	0.0	2.5	2.5	2.5	6.5	5.0	5.5	14.5	12.0	13.0
9	0.0	0.0	0.0	3.0	2.0	2.5	7.5	5.0	6.0	13.5	11.5	12.5
10	0.0	0.0	0.0	3.5	2.5	3.0	8.0	5.0	6.5	15.0	12.0	13.5
11	0.0	0.0	0.0	4.0	2.5	3.5	8.0	6.0	7.0	17.5	14.0	16.0
12	0.0	0.0	0.0	4.0	2.5	3.5	8.5	6.0	7.5	18.0	16.0	17.0
13	0.0	0.0	0.0	3.0	1.5	2.0	7.0	6.5	6.5	18.5	16.5	17.5
14	0.0	0.0	0.0	2.0	1.0	1.5	7.0	6.5	6.5	18.0	16.5	17.0
15	0.0	0.0	0.0	3.5	1.5	2.5	8.0	6.0	7.0	20.0	17.0	18.5
16	0.0	0.0	0.0	3.0	1.0	2.5	9.5	6.5	8.0	18.5	16.0	17.5
17	0.0	0.0	0.0	2.0	0.5	1.5	10.5	7.5	9.0	19.0	15.5	17.0
18	0.0	0.0	0.0	3.0	1.0	2.0	12.0	9.0	10.5	20.0	17.5	18.5
19	0.0	0.0	0.0	3.5	1.5	2.0	13.5	10.5	12.0	20.0	17.5	18.5
20	0.0	0.0	0.0	4.0	1.0	2.5	14.5	11.5	12.5	20.0	16.0	18.0
21	0.0	0.0	0.0	4.0	2.0	3.0	13.0	11.0	11.5	20.0	17.5	18.5
22	0.0	0.0	0.0	3.0	0.5	1.5	15.0	11.5	13.0	21.5	18.0	19.5
23	0.0	0.0	0.0	3.5	0.0	1.5	13.0	11.0	12.0	24.0	19.0	21.5
24	0.0	0.0	0.0	5.5	1.0	3.5	13.0	10.0	11.5	24.5	20.5	22.5
25	0.0	0.0	0.0	5.0	4.0	4.5	11.0	9.0	10.5	22.5	20.5	21.5
26	0.0	0.0	0.0	7.5	4.5	5.5	9.0	8.0	8.0	21.0	18.5	20.0
27	0.0	0.0	0.0	7.5	6.5	7.0	10.0	8.0	9.0	21.0	18.0	19.5
28	0.0	0.0	0.0	8.0	6.0	7.0	10.5	8.5	9.5	20.5	18.0	19.5
29	0.0	0.0	0.0	8.0	6.5	7.0	11.5	9.0	10.0	18.0	15.5	17.0
30	---	---	---	7.5	6.0	6.5	13.5	10.5	12.0	18.0	15.0	16.5
31	---	---	---	7.0	6.0	6.5	---	---	---	16.0	14.0	15.5
MONTH	0.0	0.0	0.0	8.0	0.0	2.8	15.0	2.0	8.2	24.5	9.0	16.5

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15.5	13.5	14.5	24.5	20.5	23.0	22.5	20.5	21.0	21.0	18.5	19.5
2	17.0	14.5	16.0	26.0	21.5	24.0	24.5	20.5	22.5	21.0	18.0	19.5
3	18.5	15.5	17.0	26.5	21.0	24.0	26.0	22.0	23.5	21.0	17.5	19.5
4	19.5	15.5	17.5	24.5	20.5	22.5	26.0	22.5	24.0	22.0	18.5	20.0
5	17.0	15.5	16.5	24.0	20.5	22.5	23.5	20.5	22.5	20.0	18.5	19.0
6	15.5	14.5	15.0	23.5	20.0	22.0	20.5	18.5	19.5	21.0	17.5	19.0
7	19.0	14.0	16.5	23.5	20.0	22.0	20.0	17.5	18.5	22.0	18.0	20.0
8	23.0	17.0	20.0	24.0	20.0	22.0	21.0	16.5	19.0	20.5	19.0	20.0
9	25.0	19.5	22.0	23.0	20.5	21.5	23.5	17.5	20.5	19.5	19.0	19.0
10	23.0	20.0	21.5	24.0	19.5	22.0	24.5	19.5	22.0	19.0	17.0	18.5
11	22.0	18.5	20.0	24.5	18.5	21.5	25.0	21.0	23.0	17.5	16.0	17.0
12	22.5	16.5	20.0	22.5	20.0	21.0	23.0	19.0	21.5	17.5	15.5	16.5
13	20.5	18.0	19.5	21.5	19.0	20.5	19.5	17.5	18.5	19.0	16.0	17.5
14	21.0	18.0	19.0	20.5	18.5	19.5	18.5	17.0	17.5	18.0	17.0	17.5
15	24.5	18.5	21.5	20.5	18.0	19.0	19.5	18.0	18.5	19.0	16.5	17.5
16	26.0	21.0	23.5	21.5	18.0	19.5	18.5	16.5	17.5	20.0	17.0	18.5
17	25.5	23.0	24.0	23.5	19.5	21.0	18.5	16.0	17.0	18.5	17.5	18.0
18	26.5	22.5	24.5	21.0	20.0	20.5	19.5	17.5	18.5	17.5	15.0	16.0
19	25.0	21.0	23.5	21.5	19.0	20.0	20.0	18.5	19.0	17.0	15.5	16.5
20	22.5	18.5	21.0	23.0	18.5	20.5	20.0	18.0	19.0	17.5	16.5	17.0
21	23.5	17.5	21.0	24.5	19.5	22.0	19.0	17.0	18.5	17.5	16.5	17.0
22	22.0	19.5	20.5	25.0	21.5	23.0	17.5	15.0	16.5	18.0	16.5	17.5
23	25.0	19.5	22.5	24.0	21.0	22.5	19.0	16.5	17.5	18.5	17.5	18.0
24	25.5	20.5	23.0	23.0	20.0	21.5	20.0	17.0	18.5	19.0	17.5	18.5
25	24.5	21.5	23.0	24.0	20.0	22.0	19.0	17.0	18.0	17.5	16.0	16.5
26	24.0	21.0	22.5	23.5	20.5	22.0	18.0	16.0	17.0	16.0	14.5	15.5
27	23.0	19.5	21.5	21.5	16.5	19.5	18.5	16.0	17.0	15.5	14.0	14.5
28	20.5	18.5	20.0	17.5	16.0	16.5	20.5	17.0	18.5	15.0	14.0	14.5
29	23.5	18.5	21.0	19.0	17.5	18.0	21.5	18.0	19.5	15.0	14.0	14.5
30	24.0	19.5	22.0	21.0	18.5	19.5	22.0	19.0	20.5	15.0	13.5	14.0
31	---	---	---	22.0	19.5	20.5	21.0	19.0	20.0	---	---	---
MONTH	26.5	13.5	20.3	26.5	16.0	21.1	26.0	15.0	19.5	22.0	13.5	17.6
YEAR	26.5	0.0	10.7									

DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

LOCATION.--Lat 41°30'32", long 74°59'10", 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^2.

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^2 of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir. 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. Satellite and telephone gage-height and temperature telemeter at station. Information on the above reservoirs can be found in the annual Water-Data Report NY-04-1.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,300 ft^3/s, Mar. 22, Sept. 4, gage height, 12.26 ft; minimum, 642 ft^3/s, Oct. 3, gage height, 2.34 ft.

REVISIONS.--Revised daily (in **Bold**), monthly and yearly discharges for 2003 water year and statistical summaries for period of record through 2003 water year are given below. These figures supersede those published in the report for 2003.

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	884	1,770	**e2,300**	2,760	**e1,800**	**e2,500**	11,300	4,160	6,380	2,000	1,260	1,240
2	734	1,640	**e2,000**	8,870	**e1,700**	**e2,400**	9,820	4,970	8,620	1,670	2,140	10,900
3	662	1,540	**e1,800**	8,170	**e1,700**	**e2,400**	9,420	8,220	6,870	1,440	2,600	15,300
4	932	1,450	**1,560**	6,180	**e1,700**	**e2,400**	8,760	8,060	6,230	1,310	2,620	26,300
5	1,010	1,360	**1,420**	**5,020**	**e1,900**	**e2,300**	8,680	6,920	5,770	1,270	4,060	22,000
6	913	1,760	**e1,500**	**e4,000**	**e2,500**	**e2,300**	8,680	6,080	5,130	1,260	4,800	13,800
7	972	2,430	**e1,300**	**e3,500**	**e2,400**	**e2,200**	8,420	5,290	4,820	1,170	4,480	9,900
8	946	2,210	**e1,200**	**e3,100**	**e2,200**	**e2,200**	7,730	4,600	5,040	1,220	3,300	7,610
9	888	1,890	**e1,300**	**e2,800**	**e2,000**	**e2,100**	6,980	4,020	4,330	1,540	3,690	6,030
10	974	1,730	**1,150**	**e2,500**	**e1,900**	**e2,100**	6,350	3,520	3,700	1,410	3,290	5,080
11	1,170	1,670	**1,100**	**e2,100**	**e1,900**	**e2,000**	6,360	3,010	3,330	1,560	4,310	4,230
12	5,190	1,710	**e1,100**	**e1,900**	**e2,000**	**1,910**	7,420	3,910	3,750	2,940	8,400	3,270
13	7,030	3,020	**e2,000**	**e1,700**	**e2,000**	**1,910**	6,940	4,510	5,970	1,750	6,410	2,530
14	4,370	3,460	**e2,500**	**e1,600**	**e2,000**	**1,860**	6,110	4,300	9,810	1,280	5,830	2,240
15	3,120	2,920	4,130	**e1,500**	**e1,900**	**1,840**	5,490	4,100	10,600	1,130	4,980	3,340
16	3,680	2,670	3,940	**e1,500**	**e1,900**	**2,270**	5,090	3,800	8,170	1,080	3,970	7,090
17	14,600	5,650	3,120	**1,510**	**e1,800**	**4,090**	4,650	3,480	6,620	1,330	3,240	5,050
18	8,980	8,610	2,330	**e1,600**	**e1,700**	10,200	4,220	3,110	5,520	1,290	3,000	4,180
19	5,800	7,030	2,010	**e1,600**	**e1,700**	16,800	3,860	2,780	4,890	1,190	2,520	3,950
20	4,430	5,590	3,050	**e1,900**	**e1,800**	14,300	3,510	2,470	4,320	1,350	2,230	3,910
21	3,520	5,070	6,950	**e2,100**	**e1,800**	28,200	3,140	2,340	8,370	1,090	1,910	2,980
22	2,810	5,040	5,430	**e2,200**	**e1,900**	34,100	3,030	2,310	9,680	1,730	1,590	2,320
23	2,340	6,400	4,520	**e2,100**	**e2,100**	30,500	3,050	2,100	9,390	3,290	1,420	9,190
24	2,010	5,990	3,850	**e2,000**	**e2,600**	21,300	2,880	1,910	7,440	2,920	1,230	15,300
25	1,760	4,960	3,420	**e1,900**	**e3,400**	16,500	2,680	2,110	5,870	2,200	1,090	9,580
26	2,500	4,290	2,820	**e2,000**	**e3,400**	15,400	2,620	2,450	4,800	1,730	1,040	7,480
27	3,650	3,840	2,990	**e1,900**	**e3,200**	13,800	5,530	3,040	4,230	1,560	999	6,220
28	2,930	3,420	2,880	**e2,000**	**e2,800**	11,200	5,600	2,820	3,480	1,570	1,090	8,770
29	2,440	2,980	2,700	**e2,000**	---	10,200	5,100	2,650	2,680	1,450	1,110	13,200
30	2,160	2,710	2,470	**e2,100**	---	14,100	4,580	2,380	2,320	1,270	1,470	9,880
31	1,960	---	2,380	**e1,900**	---	13,500	---	2,290	---	1,150	1,310	---
TOTAL	95,365	104,810	81,220	86,010	59,700	288,880	178,000	117,710	178,130	49,150	91,389	242,870
MEAN	3,076	3,494	2,620	2,775	2,132	9,319	5,933	3,797	5,938	1,585	2,948	8,096
MAX	14,600	8,610	6,950	8,870	3,400	34,100	11,300	8,220	10,600	3,290	8,400	26,300
MIN	662	1,360	1,100	1,500	1,700	1,840	2,620	1,910	2,320	1,080	999	1,240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	2,018	2,708	3,052	2,725	2,935	5,195	6,448	4,066	2,436	1,616	1,426	1,640
MAX	7,404	7,448	11,940	8,335	9,389	12,050	16,500	8,615	6,701	4,087	3,033	8,096
(WY)	(1978)	(1997)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(1972)	(1996)	(1994)	(2003)
MIN	527	610	1,114	687	712	1,399	1,878	1,161	673	328	465	448
(WY)	(1964)	(1965)	(1999)	(1977)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

e Estimated.

DELAWARE RIVER BASIN

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

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	935,734		1,573,234			
ANNUAL MEAN	2,564		4,310		3,020	
HIGHEST ANNUAL MEAN					4,650	1973
LOWEST ANNUAL MEAN					1,297	1965
HIGHEST DAILY MEAN	14,600	Oct 17	34,100	Mar 22	63,000	Jan 20, 1996
LOWEST DAILY MEAN	606	Sep 20	662	Oct 3	250	Oct 27, 1963
ANNUAL SEVEN-DAY MINIMUM	690	Sep 17	872	Oct 1	264	Oct 23, 1963
10 PERCENT EXCEEDS	5,600		8,760		6,710	
50 PERCENT EXCEEDS	1,890		2,820		1,640	
90 PERCENT EXCEEDS	819		1,300		873	

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004**
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,010	15,400	10,000	7,050	e1,100	1,100	5,560	5,150	3,580	1,110	3,570	4,050
2	6,730	11,800	8,580	6,230	e1,100	1,280	6,620	4,480	3,930	964	3,810	2,790
3	5,790	9,630	7,150	5,870	e1,100	2,660	6,050	6,140	4,250	1,160	2,950	2,280
4	5,060	8,060	6,030	7,220	e1,100	5,070	5,430	6,160	3,850	1,320	2,340	1,970
5	6,290	7,080	5,340	11,200	e1,100	6,560	4,960	5,330	3,360	1,360	2,330	1,650
6	5,880	7,440	4,960	10,300	e1,000	10,400	4,340	5,330	3,060	1,300	2,510	1,490
7	5,050	6,370	4,560	8,280	e1,000	16,500	3,950	5,140	2,860	1,320	1,890	1,420
8	4,430	5,340	4,030	6,980	e1,000	12,600	3,980	4,600	2,480	1,570	1,590	1,370
9	3,970	4,620	3,690	e5,600	e1,000	9,730	3,870	4,260	2,100	1,300	1,430	4,390
10	3,600	4,350	3,360	e4,200	e1,000	7,970	3,420	3,990	1,980	1,380	1,290	7,410
11	3,230	4,170	10,600	e3,800	e1,000	6,810	2,960	5,060	1,790	1,340	1,250	5,740
12	2,890	4,180	24,300	e3,500	e1,000	6,150	2,640	5,340	1,550	1,160	2,730	4,240
13	2,600	4,150	15,300	e3,200	e1,000	5,390	3,410	6,100	1,350	1,170	26,500	3,300
14	2,330	3,920	11,400	e2,800	e1,000	4,570	6,130	5,860	1,220	1,140	13,900	2,710
15	5,040	3,650	9,770	e2,700	e1,000	4,530	6,440	5,180	1,110	2,260	7,000	2,350
16	6,900	3,400	8,140	e2,100	e1,000	4,400	5,670	4,950	1,070	2,300	9,750	2,100
17	5,460	3,210	7,160	e1,800	e1,000	3,720	5,160	4,340	1,050	2,040	9,880	2,030
18	4,740	3,160	8,740	e1,700	1,000	3,390	4,590	3,900	1,350	1,830	7,700	76,400
19	4,310	3,310	8,170	e1,600	1,060	3,090	4,200	3,650	1,660	2,130	6,040	60,600
20	4,580	19,500	7,350	e1,500	1,030	2,790	3,940	3,110	1,240	2,230	5,000	28,800
21	4,190	21,500	6,540	e1,400	980	3,310	3,700	2,580	1,060	1,900	5,020	16,900
22	3,900	15,900	5,780	e1,400	1,000	3,800	3,460	2,420	959	1,820	5,730	11,500
23	3,590	12,200	5,300	e1,400	1,180	3,120	3,560	2,170	954	1,930	4,860	8,560
24	3,300	9,790	9,650	e1,300	1,180	2,980	4,230	2,200	923	2,620	4,120	7,400
25	3,030	8,960	26,800	e1,300	1,220	3,300	3,780	2,060	893	2,550	3,760	6,470
26	2,800	8,020	20,700	e1,200	1,110	3,720	5,210	2,230	1,010	1,720	3,530	5,320
27	5,680	6,910	15,100	e1,200	1,010	4,600	8,160	3,370	1,370	1,810	3,090	4,680
28	22,000	6,460	11,600	e1,200	1,020	6,890	7,070	4,600	1,100	11,300	2,760	6,770
29	24,700	11,900	9,440	e1,200	1,050	6,800	6,270	4,980	931	8,760	2,610	12,200
30	32,400	11,800	8,240	e1,200	---	6,100	5,760	4,350	1,010	5,760	2,540	10,900
31	21,700	---	7,890	e1,200	---	5,550	---	3,740	---	3,980	3,130	---
TOTAL	224,180	246,180	295,670	111,630	30,340	168,880	144,520	132,770	55,050	74,534	154,610	307,790
MEAN	7,232	8,206	9,538	3,601	1,046	5,448	4,817	4,283	1,835	2,404	4,987	10,260
MAX	32,400	21,500	26,800	11,200	1,220	16,500	8,160	6,160	4,250	11,300	26,500	76,400
MIN	2,330	3,160	3,360	1,200	980	1,100	2,640	2,060	893	964	1,250	1,370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	2,145	2,843	3,210	2,746	2,888	5,201	6,408	4,072	2,421	1,635	1,512	1,850
MAX	7,404	8,206	11,940	8,335	9,389	12,050	16,500	8,615	6,701	4,087	4,987	10,260
(WY)	(1978)	(2004)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(1972)	(1996)	(2004)	(2004)
MIN	527	610	1,114	687	712	1,399	1,878	1,161	673	328	465	448
(WY)	(1964)	(1965)	(1999)	(1977)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

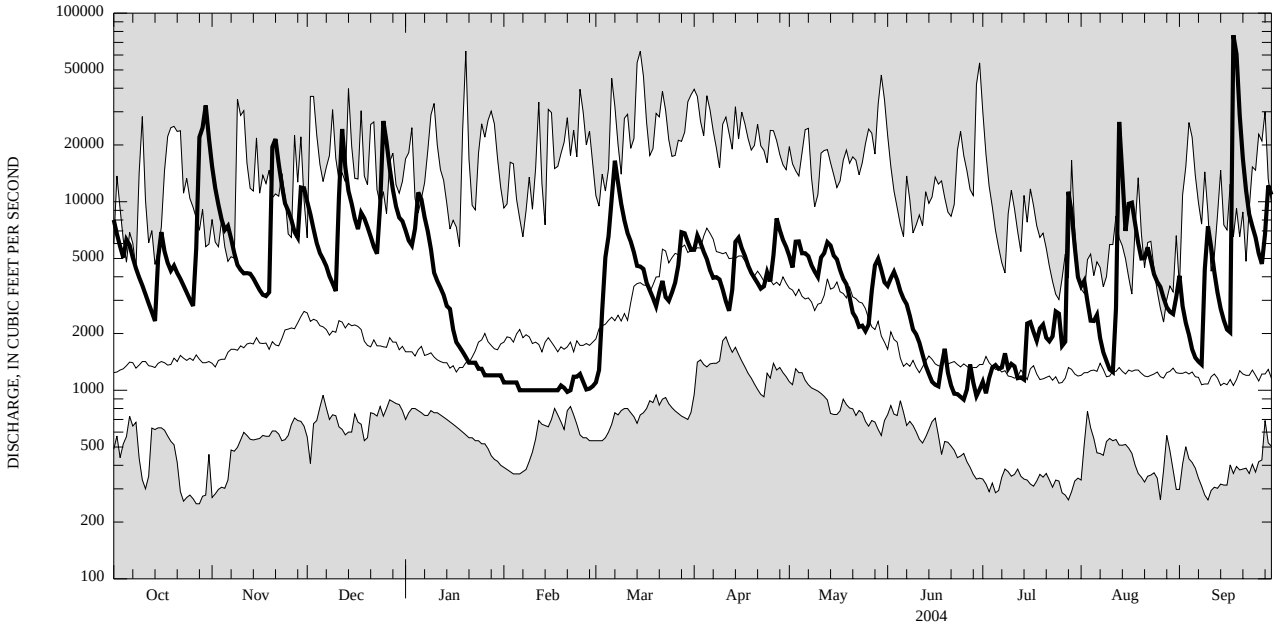
e Estimated.

DELAWARE RIVER BASIN

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

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004**--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	2,057,869		1,946,154			
ANNUAL MEAN	5,638		5,317		3,076	
HIGHEST ANNUAL MEAN					5,317	2004
LOWEST ANNUAL MEAN					1,297	1965
HIGHEST DAILY MEAN	34,100	Mar 22	76,400	Sep 18	76,400	Sep 18, 2004
LOWEST DAILY MEAN	999	Aug 27	893	Jun 25	250	Oct 27, 1963
ANNUAL SEVEN-DAY MINIMUM	1,140	Aug 23	1,000	Feb 6	264	Oct 23, 1963
10 PERCENT EXCEEDS	11,300		9,920		6,800	
50 PERCENT EXCEEDS	3,950		3,860		1,670	
90 PERCENT EXCEEDS	1,580		1,100		880	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

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 recorder provides 15-minute-interval readings. From October 1975 to September 1995, water-temperature recorder provided one-hour-interval readings. Prior to October 1975, water-temperature recorder provided continuous readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-75, 1980-81, 1983, 1985-96, 1999-2001, 2003-04), 32.5°C, July 9, 10, 1993; minimum (water years 1968, 1977-2004), 0.0°C, on many days during winters, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 28.0°C, July 2; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	14.0	14.0	11.0	10.0	10.5	5.5	5.0	5.0	3.0	2.5	3.0
2	14.0	13.0	13.5	11.5	11.0	11.5	5.0	3.5	4.0	3.0	2.5	3.0
3	13.0	12.0	12.5	12.0	11.0	11.5	3.5	1.5	2.5	4.0	3.0	3.5
4	12.5	11.5	11.5	12.0	12.0	12.0	1.5	1.0	1.5	4.5	4.0	4.0
5	11.5	10.5	11.0	12.0	11.5	11.5	1.5	1.0	1.0	4.5	3.5	4.0
6	11.5	10.5	11.0	11.5	11.0	11.0	1.5	1.0	1.0	3.5	2.0	3.0
7	12.0	10.5	11.0	11.0	10.5	11.0	1.0	0.5	1.0	2.0	0.0	1.0
8	12.5	11.0	12.0	10.5	8.0	9.0	1.0	0.0	0.5	0.0	0.0	0.0
9	14.0	12.5	13.0	8.0	6.0	6.5	1.0	0.5	0.5	0.0	0.0	0.0
10	15.5	13.5	14.5	6.0	5.0	5.0	3.0	1.0	2.0	0.0	0.0	0.0
11	16.5	14.5	15.5	5.0	4.5	4.5	4.5	3.0	4.0	0.0	0.0	0.0
12	16.5	14.5	15.5	6.5	4.5	5.5	4.5	3.5	4.0	0.0	0.0	0.0
13	16.5	14.0	15.0	7.5	6.0	7.0	3.5	2.5	3.0	0.5	0.0	0.0
14	15.0	13.5	14.5	6.0	5.0	5.5	3.0	1.0	2.0	0.0	0.0	0.0
15	14.0	12.0	13.0	5.0	3.5	4.5	1.0	0.5	1.0	0.0	0.0	0.0
16	12.0	10.5	11.0	4.0	3.5	4.0	2.5	1.0	1.5	0.0	0.0	0.0
17	10.5	9.5	10.0	5.0	4.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0
18	10.0	9.5	9.5	6.5	5.0	6.0	3.0	2.0	2.5	0.0	0.0	0.0
19	10.0	9.0	9.5	8.5	6.5	7.5	2.5	2.0	2.0	0.0	0.0	0.0
20	10.0	9.0	9.5	9.5	8.0	9.0	2.5	2.0	2.0	0.0	0.0	0.0
21	10.5	9.5	10.0	8.0	7.0	7.5	2.0	1.5	1.5	0.0	0.0	0.0
22	10.5	9.5	10.0	8.0	7.5	7.5	1.5	1.0	1.5	0.0	0.0	0.0
23	9.5	7.5	8.5	8.0	7.5	7.5	3.0	1.5	2.5	0.0	0.0	0.0
24	8.0	6.5	7.5	8.0	7.0	7.5	3.5	3.0	3.5	0.0	0.0	0.0
25	8.0	6.5	7.0	8.0	6.5	7.5	3.5	3.0	3.5	0.0	0.0	0.0
26	9.0	7.5	8.0	6.5	5.5	6.0	3.5	3.5	3.5	0.0	0.0	0.0
27	11.0	9.0	10.0	6.5	5.5	6.0	4.0	3.5	3.5	0.0	0.0	0.0
28	11.0	10.0	10.0	7.0	6.0	6.5	3.5	3.0	3.5	0.0	0.0	0.0
29	10.0	9.5	10.0	7.5	6.5	7.0	3.0	2.5	3.0	0.0	0.0	0.0
30	10.0	9.5	10.0	6.5	5.0	5.5	3.5	3.0	3.0	0.0	0.0	0.0
31	10.5	10.0	10.0	---	---	---	3.5	3.0	3.5	0.0	0.0	0.0
MONTH	16.5	6.5	11.2	12.0	3.5	7.5	5.5	0.0	2.5	4.5	0.0	0.7

DELAWARE RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.0	0.0	0.0	0.5	0.0	0.0	7.0	6.5	6.5	15.0	13.0	14.0
2	0.0	0.0	0.0	0.5	0.0	0.5	6.5	6.0	6.5	15.5	15.0	15.0
3	0.0	0.0	0.0	0.5	0.0	0.0	6.5	5.5	6.0	15.5	12.5	14.0
4	0.0	0.0	0.0	0.5	0.0	0.0	6.5	5.5	6.0	12.5	11.0	12.0
5	0.0	0.0	0.0	0.5	0.0	0.0	5.5	4.0	4.5	11.5	10.0	10.5
6	0.0	0.0	0.0	0.5	0.0	0.5	5.0	3.0	4.0	12.5	10.0	11.5
7	0.0	0.0	0.0	1.0	0.0	0.5	6.5	4.5	5.5	14.5	12.5	13.5
8	0.0	0.0	0.0	2.0	0.0	1.0	7.0	6.0	6.5	14.5	13.5	14.0
9	0.0	0.0	0.0	2.5	2.0	2.0	7.5	6.0	6.5	14.0	13.0	13.5
10	0.0	0.0	0.0	3.5	2.0	2.5	8.0	6.0	7.0	15.0	13.0	14.0
11	0.0	0.0	0.0	4.0	2.5	3.5	7.5	7.0	7.0	17.5	14.5	16.0
12	0.0	0.0	0.0	4.0	3.5	3.5	8.5	7.0	7.5	18.0	17.0	17.5
13	0.0	0.0	0.0	3.5	2.0	2.5	7.5	7.0	7.5	19.0	17.5	18.5
14	0.0	0.0	0.0	2.5	1.5	2.0	7.5	7.0	7.0	19.0	17.5	18.5
15	0.0	0.0	0.0	3.5	2.0	2.5	8.5	6.5	7.5	20.0	18.0	19.0
16	0.0	0.0	0.0	3.0	2.0	2.5	9.5	7.0	8.0	19.5	18.5	19.0
17	0.0	0.0	0.0	2.0	1.5	2.0	10.5	8.5	9.5	18.5	17.5	18.0
18	0.0	0.0	0.0	2.5	1.5	2.0	12.0	10.0	11.0	20.0	18.0	19.0
19	0.0	0.0	0.0	3.0	2.0	2.5	13.5	11.5	12.5	20.5	19.0	19.5
20	0.0	0.0	0.0	4.0	1.5	3.0	14.5	12.5	13.5	20.5	18.0	19.0
21	0.5	0.0	0.0	4.0	2.5	3.5	14.0	12.5	13.0	20.0	18.5	19.0
22	0.0	0.0	0.0	3.0	1.5	2.5	14.0	12.5	13.0	22.0	18.5	20.0
23	0.5	0.0	0.0	3.0	1.0	2.0	14.0	12.0	13.5	23.0	20.0	21.5
24	0.0	0.0	0.0	5.0	2.0	3.5	13.5	11.5	12.5	25.0	21.5	23.0
25	0.0	0.0	0.0	5.5	4.0	5.0	12.0	10.5	11.5	24.5	21.5	23.0
26	0.0	0.0	0.0	7.0	5.0	6.0	10.5	8.5	9.5	22.0	20.0	21.0
27	0.5	0.0	0.0	7.5	6.5	7.0	10.5	8.5	9.5	22.0	19.5	21.0
28	0.5	0.0	0.0	8.5	7.0	8.0	11.0	9.0	10.0	21.0	19.5	20.5
29	0.5	0.0	0.0	8.5	7.0	8.0	12.0	9.5	10.5	19.5	17.5	18.5
30	---	---	---	8.0	6.5	7.5	13.5	11.0	12.5	18.0	16.5	17.5
31	---	---	---	7.5	6.5	7.0	---	---	---	17.5	15.5	16.5
MONTH	0.5	0.0	0.0	8.5	0.0	3.0	14.5	3.0	8.8	25.0	10.0	17.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.5	15.5	15.5	25.5	22.0	24.0	23.0	22.0	22.5	21.5	20.0	21.0
2	17.0	15.5	16.0	28.0	23.0	25.0	24.0	22.5	23.0	22.0	20.0	21.0
3	18.5	16.5	17.5	27.5	22.5	25.0	26.0	23.0	24.5	22.5	20.0	21.0
4	19.0	17.0	18.0	27.0	23.0	25.0	26.5	24.0	25.0	23.5	20.0	21.5
5	18.0	16.5	17.5	27.0	23.5	25.0	25.5	22.5	24.0	21.5	20.0	20.5
6	16.5	15.5	16.0	26.0	23.0	24.0	22.5	20.0	21.5	22.5	19.0	20.5
7	19.0	15.0	17.0	26.0	22.0	24.0	21.0	19.0	20.0	23.5	19.5	21.5
8	21.5	17.5	19.5	26.5	23.0	24.5	22.0	18.0	20.0	22.0	20.5	21.0
9	25.0	20.5	22.5	24.5	22.5	23.5	23.5	19.0	21.0	21.5	20.5	21.0
10	23.5	22.0	23.0	25.0	21.0	23.0	24.5	20.5	22.5	20.5	19.0	19.5
11	23.0	20.5	21.5	27.0	22.0	24.5	24.0	22.0	23.0	19.5	18.0	18.5
12	24.0	19.0	21.5	24.5	22.0	23.0	24.5	21.0	23.0	18.5	17.0	18.0
13	21.5	19.5	20.5	23.0	21.5	22.0	21.0	18.5	19.0	20.0	18.0	18.5
14	22.0	19.0	20.5	22.0	21.0	21.5	19.0	18.0	18.5	19.0	18.0	18.5
15	25.5	20.0	22.5	22.0	20.0	21.0	20.0	18.5	19.0	20.0	18.0	18.5
16	27.5	22.0	25.0	21.5	19.5	20.5	19.5	18.0	19.0	21.0	18.5	19.5
17	26.5	24.5	25.5	24.0	20.0	22.0	18.5	17.0	18.0	20.0	19.0	19.5
18	27.0	24.0	25.5	22.5	21.0	22.0	19.5	18.0	19.0	19.0	15.5	17.0
19	26.0	22.5	24.5	22.5	20.5	21.5	20.0	19.0	19.5	17.0	15.5	16.5
20	24.5	20.5	22.5	23.5	21.0	22.0	21.0	19.5	20.0	17.5	16.5	17.0
21	25.0	20.0	22.5	25.5	21.5	23.5	20.5	19.0	20.0	18.0	17.0	17.5
22	22.5	21.0	22.0	26.0	23.0	24.5	19.0	18.0	18.5	18.5	17.0	17.5
23	26.0	20.5	23.0	25.5	23.5	24.5	19.5	17.5	18.5	19.0	17.5	18.5
24	26.0	21.5	24.0	25.0	22.5	23.5	20.5	19.0	19.5	20.0	18.0	19.0
25	25.5	23.0	24.0	24.0	22.0	23.0	20.5	19.5	20.0	19.5	18.0	18.5
26	25.5	22.5	24.0	25.0	22.0	23.5	19.5	18.5	19.0	18.0	17.0	17.5
27	24.5	21.0	22.5	23.5	20.5	22.0	20.0	18.5	19.0	17.0	15.5	16.0
28	22.0	20.0	21.0	20.5	17.0	18.0	21.0	18.5	20.0	16.0	15.0	15.5
29	25.0	20.0	22.0	19.5	17.5	18.5	23.0	20.0	21.5	16.0	15.0	15.5
30	25.5	20.5	23.0	20.5	19.0	20.0	22.5	21.0	22.0	15.5	14.5	15.5
31	---	---	---	22.5	20.5	21.5	23.5	21.5	22.0	---	---	---
MONTH	27.5	15.0	21.3	28.0	17.0	22.8	26.5	17.0	20.7	23.5	14.5	18.7
YEAR	28.0	0.0	11.2									

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 mi downstream from Johnson Creek, and 2.0 mi northwest of Aldenville.

DRAINAGE AREA.--40.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional discharge measurements and annual maximums, water years 1975-86. October 1986 to current year. Published as station number 01427950, 1975-88.

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 29	1115	1,070	5.04
Sept. 8	2245	1,040	5.00
Sept. 18	0830	*2,980	*7.05

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	151	121	e100	e29	e54	149	75	39	15	58	40
2	67	124	103	e98	e28	e64	139	73	38	14	69	32
3	55	112	e86	e130	e27	e115	108	130	42	13	53	29
4	52	96	e80	e190	e28	e160	106	88	29	12	39	28
5	69	152	e76	e540	e28	e290	92	77	34	15	48	25
6	60	163	e65	e210	e29	e500	79	78	43	15	33	31
7	55	115	e59	160	e31	349	71	83	35	14	28	32
8	52	99	e56	e130	e29	240	64	69	27	13	24	204
9	47	82	54	e120	e27	159	56	98	25	12	23	764
10	43	74	50	e120	e29	126	49	112	25	11	21	350
11	40	74	e840	e110	e28	107	45	275	23	14	25	154
12	38	85	e460	e110	e27	97	45	136	20	15	50	107
13	36	77	e270	e100	e28	80	196	120	19	31	316	87
14	35	67	e210	e91	e26	e70	313	97	20	42	125	72
15	365	62	e180	e74	e25	67	151	92	20	80	86	60
16	151	58	e160	e73	e24	61	109	118	17	67	198	50
17	105	59	e150	e63	e24	63	91	81	28	39	100	125
18	86	56	e150	e62	e23	58	80	67	71	29	68	1980
19	82	173	e140	e55	e23	53	72	57	30	59	55	568
20	73	518	e120	e50	e24	e54	61	46	22	43	43	274
21	65	241	e100	e47	e26	105	56	50	19	29	79	166
22	61	157	e85	e43	e28	79	52	42	19	24	63	119
23	55	126	e75	e42	e26	75	81	36	19	29	48	93
24	51	108	e140	e38	e29	74	88	31	15	25	44	74
25	47	108	e440	e37	e33	110	71	27	17	19	34	62
26	47	93	e200	e35	e35	121	273	55	74	18	29	53
27	371	83	e160	e35	e40	161	179	112	30	181	27	46
28	327	154	e140	e35	e45	139	126	54	21	215	47	418
29	670	319	e120	e35	e48	109	100	37	20	113	38	391
30	406	152	e130	e33	---	92	85	31	16	73	28	192
31	217	---	e120	e31	---	84	---	32	---	64	90	---
TOTAL	3906	3938	5140	2997	847	3916	3187	2479	857	1343	1989	6626
MEAN	126	131	166	96.7	29.2	126	106	80.0	28.6	43.3	64.2	221
MAX	670	518	840	540	48	500	313	275	74	215	316	1980
MIN	35	56	50	31	23	53	45	27	15	11	21	25
CFSM	3.10	3.23	4.08	2.38	0.72	3.11	2.62	1.97	0.70	1.07	1.58	5.44
IN.	3.58	3.61	4.71	2.75	0.78	3.59	2.92	2.27	0.79	1.23	1.82	6.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	58.9	94.8	94.5	85.4	84.0	139	158	96.8	57.5	25.6	28.8	49.9
MAX	142	199	232	228	192	259	419	258	200	63.0	155	221
(WY)	2003	1987	1997	1996	1990	2003	1993	1989	1989	1989	1994	2004
MIN	6.46	12.0	15.5	21.9	29.2	87.0	58.7	34.6	13.7	6.92	5.89	7.41
(WY)	1992	1999	1999	1989	2004	1989	1988	2001	1999	1999	1999	1991

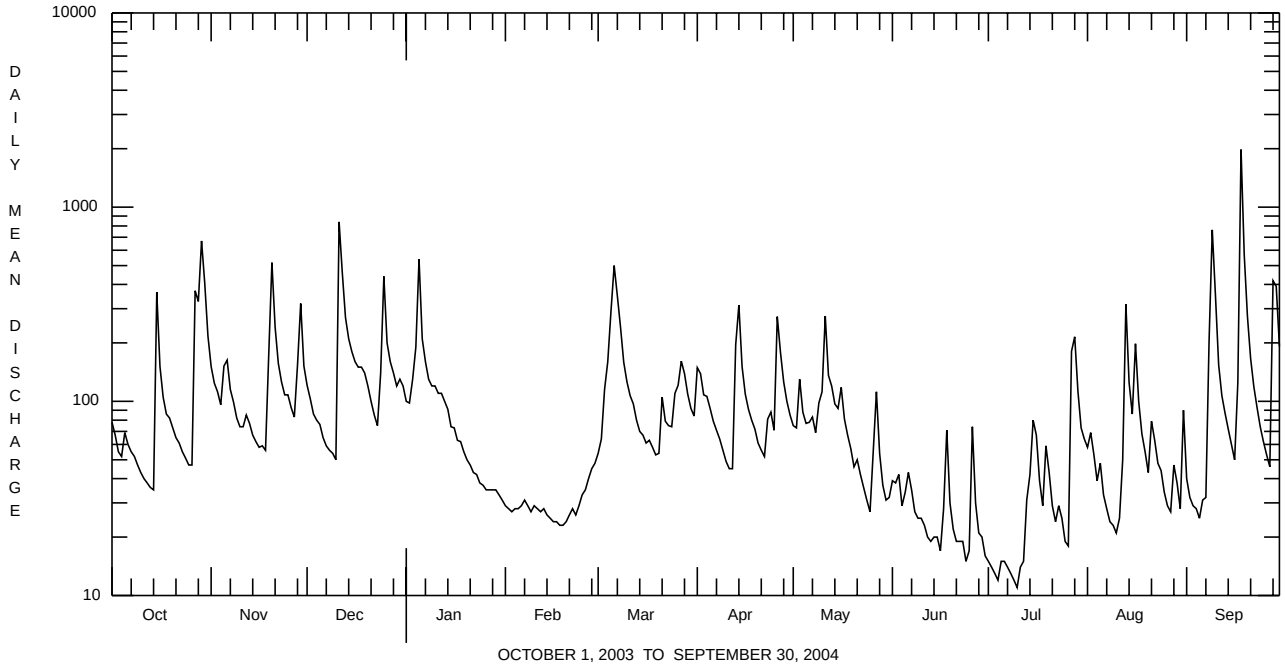
e Estimated.

LACKAWAXEN RIVER BASIN

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	44186		37230			
ANNUAL MEAN	121		102		80.9	
HIGHEST ANNUAL MEAN					113	2003
LOWEST ANNUAL MEAN					48.0	1999
HIGHEST DAILY MEAN	1180	Sep 4	1980	Sep 18	1980	Sep 18 2004
LOWEST DAILY MEAN	13	Aug 24,25	11	Jul 10	**e**4.0	Aug 6 1999
ANNUAL SEVEN-DAY MINIMUM	14	Aug 21	13	Jul 4	**a**4.4	Jul 31 1999
MAXIMUM PEAK FLOW			**b**2980	Sep 18	**b**4340	Jan 19 1996
MAXIMUM PEAK STAGE			7.05	Sep 18	8.00	Jan 19 1996
ANNUAL RUNOFF (CFSM)	2.98		2.51		1.99	
ANNUAL RUNOFF (INCHES)	40.49		34.11		27.09	
10 PERCENT EXCEEDS	246		193		179	
50 PERCENT EXCEEDS	76		65		44	
90 PERCENT EXCEEDS	21		24		10	

a Computed using estimated daily discharges.
b From rating curve extended above 2,000 ft^3/s.
e Estimated.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

LACKAWAXEN RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water years 1988 to September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 27.5°C, July 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 22.5°C, June 9, Aug. 3; minimum, 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	12.5	10.5	11.5	11.5	8.5	10.0	4.5	2.5	4.0	2.5	1.0	2.0
2	11.0	9.0	10.0	11.0	10.0	10.5	2.5	0.0	1.5	2.5	1.0	2.0
3	10.5	7.0	9.0	13.0	9.5	11.0	0.5	0.0	0.0	4.5	2.5	3.5
4	9.5	8.5	9.0	11.0	10.0	10.5	0.0	0.0	0.0	4.5	3.0	4.0
5	10.0	7.5	8.5	10.5	10.0	10.0	1.0	0.0	0.5	3.0	2.5	2.5
6	9.5	6.5	8.0	11.0	9.5	10.0	0.0	0.0	0.0	2.5	0.0	1.5
7	10.0	6.0	8.0	9.5	8.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0
8	11.5	7.5	9.5	8.0	3.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0
9	13.5	9.5	11.5	4.5	2.5	3.5	1.0	0.0	0.5	0.0	0.0	0.0
10	14.5	11.0	12.5	4.5	1.5	3.0	2.5	1.0	2.0	0.0	0.0	0.0
11	14.0	10.5	12.0	4.5	2.5	3.5	4.5	2.5	3.0	0.0	0.0	0.0
12	13.5	9.5	11.5	8.0	4.5	6.5	2.5	1.5	2.0	0.0	0.0	0.0
13	13.5	10.5	12.0	8.0	3.5	6.0	1.5	0.5	1.0	0.0	0.0	0.0
14	12.0	9.0	10.5	3.5	2.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0
15	11.5	9.5	11.0	4.0	2.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0
16	10.5	8.5	9.5	4.5	2.5	3.5	2.0	0.5	1.0	0.0	0.0	0.0
17	9.0	7.5	8.5	6.0	4.5	5.5	2.0	1.0	1.5	0.0	0.0	0.0
18	9.0	7.0	8.0	7.0	5.5	6.0	1.5	0.5	1.0	0.0	0.0	0.0
19	8.5	7.5	8.0	10.5	7.0	8.5	1.5	0.5	1.0	0.0	0.0	0.0
20	9.0	5.5	7.5	9.0	6.0	7.0	1.5	0.0	1.0	0.0	0.0	0.0
21	11.5	7.5	9.5	7.0	5.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
22	10.0	7.0	9.0	7.0	5.0	6.0	2.0	0.0	1.0	0.0	0.0	0.0
23	7.0	5.0	6.0	7.0	5.0	6.0	4.0	2.0	2.5	0.0	0.0	0.0
24	6.0	4.0	5.0	7.5	5.5	6.5	2.5	1.5	2.0	0.0	0.0	0.0
25	7.0	3.5	5.5	6.0	3.5	4.5	2.5	1.5	2.0	0.0	0.0	0.0
26	10.5	7.0	9.0	4.0	3.0	3.5	2.0	1.0	1.5	0.0	0.0	0.0
27	11.0	9.0	10.5	5.5	3.5	4.5	3.0	1.5	2.0	0.0	0.0	0.0
28	9.0	7.5	8.5	7.5	5.5	6.0	2.5	0.5	1.5	0.0	0.0	0.0
29	9.0	8.0	8.5	7.0	3.5	5.0	3.0	1.0	2.0	0.0	0.0	0.0
30	9.0	7.5	8.0	4.5	3.0	3.5	3.5	2.0	2.5	0.0	0.0	0.0
31	10.0	7.0	8.5	---	---	---	3.0	1.5	2.0	0.0	0.0	0.0
MONTH	14.5	3.5	9.2	13.0	1.5	6.2	4.5	0.0	1.3	4.5	0.0	0.5

LACKAWAXEN RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.0	0.0	0.0	1.5	0.0	0.0	6.0	5.5	5.5	17.0	11.0	13.5
2	0.0	0.0	0.0	2.5	0.0	0.5	5.5	5.0	5.5	15.0	13.5	14.0
3	0.0	0.0	0.0	1.0	0.0	0.5	6.5	5.0	5.5	14.5	9.5	11.5
4	0.0	0.0	0.0	1.5	0.5	1.0	5.5	3.0	5.0	11.5	7.5	9.5
5	0.0	0.0	0.0	2.0	1.0	1.5	4.5	1.0	2.5	11.5	7.0	9.0
6	0.0	0.0	0.0	3.0	1.5	2.0	6.0	0.0	3.0	14.5	7.5	11.0
7	0.0	0.0	0.0	3.5	1.5	2.5	8.0	3.5	5.5	16.0	11.0	13.0
8	0.0	0.0	0.0	2.5	2.0	2.5	7.0	4.0	5.5	13.5	10.0	11.5
9	0.0	0.0	0.0	3.0	1.0	2.0	8.5	4.0	6.0	14.0	9.5	11.5
10	0.0	0.0	0.0	4.0	1.5	2.5	8.0	3.5	5.5	16.5	11.0	13.5
11	0.0	0.0	0.0	5.0	0.5	3.0	7.0	4.0	5.5	17.5	13.0	15.0
12	0.0	0.0	0.0	3.5	1.0	2.5	8.0	5.0	6.5	17.5	13.5	15.5
13	0.0	0.0	0.0	3.0	0.0	1.0	6.0	5.0	5.5	18.0	14.0	16.0
14	0.0	0.0	0.0	1.5	0.0	0.5	6.5	5.5	6.0	18.5	14.5	16.0
15	0.0	0.0	0.0	5.0	1.5	3.0	9.0	4.0	6.5	20.0	15.0	17.0
16	0.0	0.0	0.0	2.5	0.0	1.0	10.0	4.0	7.0	16.5	14.5	15.0
17	0.0	0.0	0.0	1.5	0.0	0.5	12.5	6.0	9.0	17.0	12.0	15.0
18	0.0	0.0	0.0	2.5	0.0	1.0	13.0	8.5	11.0	19.5	15.0	17.0
19	0.0	0.0	0.0	3.5	0.0	1.5	15.0	9.0	12.0	18.0	15.0	16.5
20	0.0	0.0	0.0	3.5	0.0	1.5	14.0	10.0	12.0	17.0	12.0	15.0
21	0.0	0.0	0.0	4.0	0.5	2.5	14.0	8.5	11.0	17.5	15.0	16.0
22	0.0	0.0	0.0	2.0	0.0	0.5	15.0	10.5	12.5	19.5	15.0	17.0
23	0.0	0.0	0.0	1.5	0.0	0.5	13.0	9.5	11.0	21.5	16.0	18.5
24	0.0	0.0	0.0	6.0	0.0	3.0	13.5	9.0	10.5	21.5	17.0	19.0
25	0.0	0.0	0.0	4.0	2.5	3.5	10.0	7.0	8.0	19.5	16.0	17.5
26	0.0	0.0	0.0	8.0	3.0	5.5	8.5	6.5	7.5	17.5	15.5	16.5
27	0.0	0.0	0.0	7.5	5.5	6.5	12.0	7.5	9.5	19.0	15.0	17.0
28	0.0	0.0	0.0	9.0	4.5	6.5	11.0	6.0	8.5	18.5	15.5	17.0
29	0.0	0.0	0.0	8.5	4.0	6.0	14.0	6.5	10.0	16.5	12.5	14.5
30	---	---	---	8.5	4.0	6.0	15.5	10.0	12.5	16.5	10.0	13.0
31	---	---	---	6.5	5.0	6.0	---	---	---	13.0	11.5	12.0
MONTH	0.0	0.0	0.0	9.0	0.0	2.5	15.5	0.0	7.7	21.5	7.0	14.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	15.5	11.5	13.5	21.0	15.5	18.0	21.5	18.5	20.0	19.5	15.5	17.5
2	16.5	12.5	14.0	21.5	16.0	18.5	22.0	18.5	20.0	18.5	14.5	16.5
3	17.0	13.0	15.0	21.5	14.5	18.0	22.5	18.5	20.5	18.5	14.5	16.5
4	17.5	11.5	14.5	21.0	15.5	18.5	21.5	18.5	20.0	20.0	16.0	18.0
5	14.5	12.5	13.0	22.0	17.5	19.5	19.5	17.0	18.5	18.0	16.0	17.0
6	12.5	12.0	12.5	20.0	17.5	19.0	17.0	14.5	16.0	19.0	15.5	17.0
7	18.5	12.0	15.0	20.0	15.5	18.0	17.0	14.0	15.5	19.5	16.5	18.0
8	20.5	14.5	17.5	22.0	18.0	19.5	17.5	13.5	15.5	18.5	17.5	18.0
9	22.5	15.5	19.0	19.5	17.0	18.5	20.0	14.0	17.0	19.5	17.5	18.5
10	19.5	16.5	18.0	21.0	16.0	18.5	20.5	15.5	18.0	18.5	17.0	17.5
11	18.0	14.0	16.0	22.0	16.0	19.5	21.0	17.0	19.0	17.5	15.0	16.5
12	18.5	12.0	15.5	19.5	17.0	17.5	19.0	17.5	18.5	17.5	14.5	16.0
13	16.0	12.5	14.5	19.0	16.5	17.5	19.0	17.5	18.0	18.5	15.0	16.5
14	17.0	14.0	15.5	18.0	16.5	17.0	19.5	17.5	18.5	17.0	15.0	16.0
15	22.0	15.5	18.5	19.0	16.5	17.5	19.5	17.5	18.0	18.0	15.5	16.5
16	21.5	16.5	19.0	19.0	16.5	17.5	19.5	17.5	18.0	18.5	16.0	17.0
17	19.5	18.0	18.5	21.0	16.5	18.5	19.0	15.5	17.5	17.5	16.5	17.0
18	21.5	18.0	19.5	18.5	17.0	17.5	19.5	16.0	17.5	---	---	---
19	20.0	16.0	18.5	18.5	16.5	17.5	19.5	17.0	18.0	---	---	---
20	18.0	13.5	16.0	20.5	16.5	18.5	20.5	17.5	19.0	---	---	---
21	19.0	12.0	16.0	21.5	16.0	19.0	19.0	16.5	18.0	---	---	---
22	17.5	15.0	16.0	21.5	17.0	19.5	18.0	14.0	16.0	---	---	---
23	20.5	15.0	17.5	21.5	18.5	19.5	19.0	14.0	16.5	17.0	13.5	15.5
24	21.0	14.5	17.5	21.5	17.5	19.5	20.0	16.5	18.0	17.0	14.0	15.5
25	18.5	16.0	17.5	20.5	16.0	18.5	19.5	17.0	18.0	17.0	14.5	15.5
26	18.5	15.5	17.0	19.0	16.5	18.0	18.5	15.5	17.0	17.0	14.5	16.0
27	18.0	13.5	16.0	18.0	16.0	17.0	20.0	16.5	18.0	16.0	13.0	14.5
28	16.0	13.0	14.5	19.0	16.0	17.5	22.0	18.0	19.5	15.5	14.0	15.0
29	19.0	14.0	16.5	19.5	17.0	18.0	21.5	18.5	20.0	16.0	14.5	15.0
30	20.0	14.0	17.0	19.5	16.5	18.0	21.5	18.5	20.0	15.0	13.5	14.5
31	---	---	---	21.0	18.5	19.5	20.5	17.5	19.5	---	---	---
MONTH	22.5	11.5	16.3	22.0	14.5	18.3	22.5	13.5	18.2	20.0	13.0	16.5
YEAR	22.5	0.0	9.2									

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

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)
MAR 2004					
29...	1238	111	10	0.10	7.1
29...	1239	--	20	0.20	7.2
29...	1240	--	30	0.20	7.3
JUL					
12...	1105	11	12	1.20	17.6
12...	1106	--	24	1.50	17.6
12...	1107	--	36	1.60	17.7

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^2.

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 except those for estimated daily discharges, which are poor. Flow regulated since 1960 by Prompton Reservoir (station 01428900) 500 ft upstream. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1942 reached a stage of 16.7 ft, from floodmark, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	334	250	193	59	53	150	156	58	36	88	61
2	125	269	221	177	58	57	178	137	57	35	78	52
3	105	228	193	179	57	115	180	158	58	34	74	45
4	96	197	171	244	57	198	174	161	56	32	65	42
5	109	180	154	398	57	280	164	145	53	30	63	41
6	105	202	143	424	58	406	151	136	57	29	58	39
7	93	194	133	348	58	500	139	131	58	29	49	39
8	82	172	124	283	60	436	128	129	54	29	43	e45
9	74	156	117	234	59	360	117	138	50	28	40	e400
10	67	145	109	187	58	295	106	146	48	26	38	492
11	62	137	341	155	58	244	98	221	46	25	38	286
12	57	133	790	142	57	208	92	236	42	24	38	195
13	53	126	563	133	57	180	136	217	40	26	168	149
14	49	105	411	125	57	156	271	192	39	27	225	116
15	149	102	327	113	57	138	283	164	38	35	157	97
16	210	99	269	100	56	125	233	156	38	40	178	81
17	187	96	230	94	55	116	195	145	36	44	167	77
18	157	93	232	90	54	109	166	125	40	44	123	1970
19	132	97	215	87	53	101	144	109	42	44	96	1870
20	117	333	192	82	52	94	124	97	41	51	78	1020
21	104	395	170	77	52	104	111	87	39	50	81	560
22	94	345	153	73	52	117	102	80	38	46	88	344
23	86	288	140	69	53	111	105	72	37	44	77	253
24	79	241	194	66	54	109	120	67	35	44	69	186
25	73	212	355	62	54	118	119	59	33	42	61	132
26	68	201	343	60	53	133	177	56	36	39	53	104
27	121	189	295	60	53	153	266	81	40	47	47	89
28	324	177	251	60	52	172	247	87	39	167	44	229
29	512	265	217	61	51	171	212	78	38	172	50	453
30	616	278	202	60	---	161	181	67	36	128	47	344
31	448	---	209	61	---	149	---	59	---	101	59	---
TOTAL	4707	5989	7714	4497	1611	5669	4869	3892	1322	1548	2540	9811
MEAN	152	200	249	145	55.6	183	162	126	44.1	49.9	81.9	327
MAX	616	395	790	424	60	500	283	236	58	172	225	1970
MIN	49	93	109	60	51	53	92	56	33	24	38	39

e Estimated.

LACKAWAXEN RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.6	98.6	118	103	121	213	226	132	76.5	39.2	31.6	52.5
MAX	307	362	309	312	369	620	556	329	260	133	127	365
(WY)	1978	1973	1997	1979	1981	1977	1993	1989	1973	1984	1994	2003
MIN	7.15	7.65	17.3	19.1	19.0	60.4	86.5	45.8	17.5	9.66	6.82	6.67
(WY)	1965	1965	1999	1981	1980	1981	1988	1965	1962	1999	1999	1964

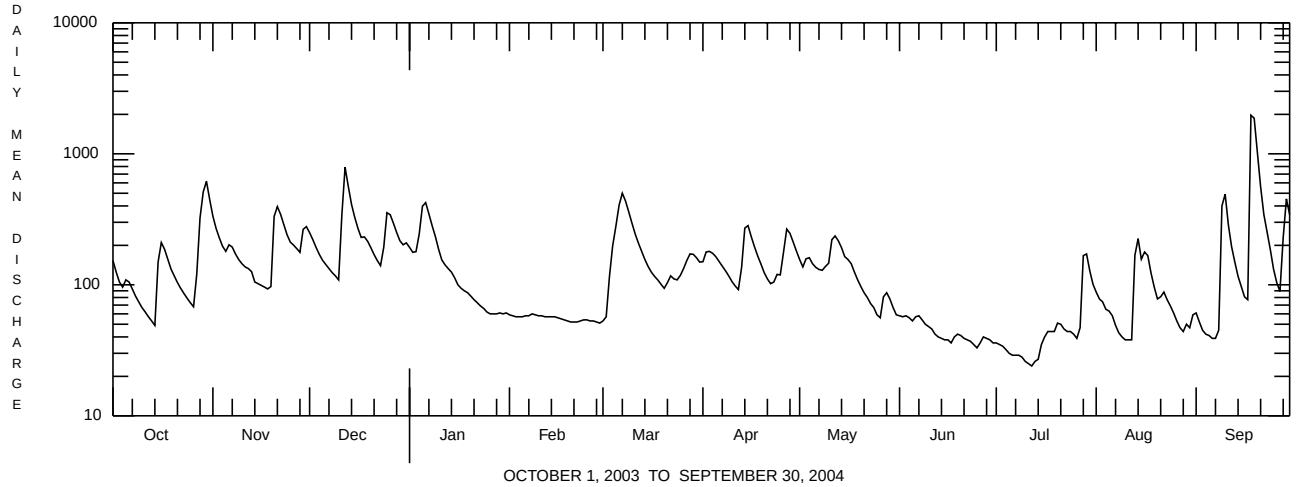
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	69025		54169			
ANNUAL MEAN	189		148		106	
HIGHEST ANNUAL MEAN					178	2003
LOWEST ANNUAL MEAN					49.7	1965
HIGHEST DAILY MEAN	1590	Sep 4	1970	Sep 18	2340	Jun 30 1973
LOWEST DAILY MEAN	31	Aug 29	24	Jul 12	1.8	Oct 22 1966
ANNUAL SEVEN-DAY MINIMUM	33	Aug 25	26	Jul 8	2.0	Oct 22 1966
MAXIMUM PEAK FLOW			2560	Sep 18	3610	Mar 14 1977
MAXIMUM PEAK STAGE			5.82	Sep 18	7.00	Mar 14 1977
INSTANTANEOUS LOW FLOW					1.8	Oct 22 1966
10 PERCENT EXCEEDS	398		283		245	
50 PERCENT EXCEEDS	121		105		58	
90 PERCENT EXCEEDS	44		40		14	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1960, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.2	113	136	130	125	221	264	139	63.6	54.3	45.8	47.0
MAX	376	213	243	245	230	409	539	301	155	190	304	153
(WY)	1956	1946	1951	1952	1951	1945	1958	1947	1960	1947	1955	1960
MIN	15.2	23.7	28.8	36.2	46.4	104	57.4	38.6	16.4	10.3	1.33	11.6
(WY)	1958	1958	1947	1948	1958	1960	1946	1951	1959	1955	1960	1957

SUMMARY STATISTICS	WATER YEARS 1945 - 1960	
ANNUAL MEAN	117	
HIGHEST ANNUAL MEAN	152	1952
LOWEST ANNUAL MEAN	78.1	1957
HIGHEST DAILY MEAN	2440	Aug 19 1955
LOWEST DAILY MEAN	.00	Jul 27 1960
ANNUAL SEVEN DAY MINIMUM	.00	Jul 27 1960
MAXIMUM PEAK FLOW	**a**5860	Aug 18 1955
MAXIMUM PEAK STAGE	9.24	Aug 18 1955
INSTANTANEOUS LOW FLOW	**b**.00	Jul 26 1960
ANNUAL RUNOFF (CFSM)	1.95	
ANNUAL RUNOFF (INCHES)	26.56	
10 PERCENT EXCEEDS	257	
50 PERCENT EXCEEDS	62	
90 PERCENT EXCEEDS	15	

a From rating curve extended above 3,600 ft^3/s.
b No flow July 26 to Aug. 25, 1960, result of construction work upstream.



LACKAWAXEN RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to 1987.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water years 1987 to September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 26.5°C, Sept. 10, 1989; minimum, 0.0°C, several days during March and April 1994 and January 1996.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 23.5°C, July 29; minimum, 1.0°C, Mar. 5, 6.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	16.0	15.0	15.5	10.0	8.5	9.0	5.5	5.0	5.5	2.5	2.5	2.5
2	15.0	14.5	15.0	9.5	9.5	9.5	5.0	4.0	4.5	2.5	2.5	2.5
3	14.5	14.0	14.5	10.5	9.5	10.0	4.0	3.5	3.5	2.5	2.5	2.5
4	14.0	13.0	13.5	10.0	8.5	9.5	3.5	3.0	3.5	2.5	2.5	2.5
5	13.5	13.0	13.0	10.0	8.5	9.0	3.5	3.0	3.0	3.0	2.5	2.5
6	13.5	12.5	13.0	10.5	10.0	10.0	3.5	3.0	3.0	3.0	3.0	3.0
7	12.5	11.5	12.0	10.5	10.0	10.0	3.0	2.5	2.5	3.0	2.5	3.0
8	12.5	11.5	12.0	10.0	9.0	9.5	2.5	2.0	2.5	2.5	2.5	2.5
9	12.0	11.5	11.5	9.0	8.5	8.5	2.5	2.5	2.5	2.5	2.0	2.5
10	12.5	11.0	11.5	8.5	8.0	8.5	3.0	2.5	2.5	2.0	2.0	2.0
11	12.0	11.5	12.0	8.0	7.5	8.0	3.5	2.5	3.0	2.0	2.0	2.0
12	13.0	11.5	12.0	8.0	7.0	7.5	2.5	2.0	2.5	2.0	2.0	2.0
13	15.5	12.0	13.0	7.5	6.5	7.0	2.5	2.5	2.5	2.0	2.0	2.0
14	12.5	11.5	12.0	6.5	6.0	6.0	2.5	2.5	2.5	2.0	1.5	2.0
15	13.5	12.0	13.0	6.0	5.5	5.5	2.5	2.0	2.0	2.0	1.5	2.0
16	13.0	12.5	13.0	5.5	5.5	5.5	2.0	2.0	2.0	2.0	1.5	2.0
17	12.5	12.0	12.0	5.5	5.5	5.5	2.0	1.5	1.5	2.0	2.0	2.0
18	12.0	11.5	11.5	5.5	5.0	5.5	2.0	1.5	1.5	2.0	2.0	2.0
19	11.5	11.0	11.5	6.0	5.0	5.5	2.0	1.5	1.5	2.0	2.0	2.0
20	11.0	10.5	11.0	6.0	6.0	6.0	1.5	1.5	1.5	2.0	2.0	2.0
21	11.5	10.0	10.5	6.5	6.0	6.5	1.5	1.5	1.5	2.5	2.0	2.0
22	11.0	10.0	10.5	7.0	6.5	6.5	2.0	1.5	1.5	2.5	2.0	2.5
23	10.0	9.0	9.5	7.0	6.5	7.0	2.0	1.5	2.0	2.5	2.0	2.5
24	9.0	8.5	9.0	6.5	6.5	6.5	2.0	2.0	2.0	2.5	2.5	2.5
25	8.5	8.5	8.5	6.5	6.5	6.5	2.0	2.0	2.0	2.5	2.5	2.5
26	9.0	8.5	8.5	6.5	6.0	6.0	2.0	2.0	2.0	2.5	2.5	2.5
27	9.0	8.5	9.0	6.0	6.0	6.0	2.0	2.0	2.0	2.5	2.5	2.5
28	9.0	8.5	9.0	6.5	6.0	6.0	2.0	2.0	2.0	2.5	2.5	2.5
29	9.5	9.0	9.0	6.5	5.5	6.0	2.5	2.0	2.0	2.5	2.5	2.5
30	9.5	9.0	9.0	5.5	5.5	5.5	2.0	2.0	2.0	2.5	2.5	2.5
31	9.0	8.5	9.0	---	---	---	2.5	2.0	2.5	2.5	2.0	2.5
MONTH	16.0	8.5	11.4	10.5	5.0	7.3	5.5	1.5	2.4	3.0	1.5	2.3

LACKAWAXEN RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	2.5	2.5	2.5	2.0	1.5	1.5	4.5	4.5	4.5	12.5	11.0	12.0
2	2.5	2.0	2.5	2.0	1.5	1.5	4.5	4.5	4.5	12.5	11.0	12.0
3	2.5	2.0	2.5	1.5	1.5	1.5	4.5	4.5	4.5	14.0	12.5	13.5
4	2.5	2.0	2.0	1.5	1.5	1.5	4.5	4.0	4.5	13.5	13.0	13.5
5	2.0	2.0	2.0	1.5	1.0	1.5	4.5	4.0	4.0	13.5	13.0	13.5
6	2.0	2.0	2.0	1.5	1.0	1.0	4.5	3.5	4.0	14.5	13.0	13.5
7	2.0	2.0	2.0	1.5	1.5	1.5	5.5	4.5	5.0	15.5	13.0	14.0
8	2.0	1.5	2.0	2.0	1.5	1.5	6.0	5.0	5.5	15.0	13.0	13.5
9	2.0	2.0	2.0	2.0	1.5	2.0	6.0	5.5	6.0	15.0	13.0	14.0
10	2.0	2.0	2.0	2.0	2.0	2.0	6.5	5.5	6.0	15.0	14.0	14.5
11	2.0	1.5	2.0	2.5	2.0	2.5	7.0	6.0	6.5	17.5	14.5	16.0
12	2.0	1.5	2.0	2.5	2.5	2.5	6.5	6.0	6.5	17.0	16.0	16.5
13	2.0	1.5	2.0	2.5	2.5	2.5	6.5	6.0	6.0	17.5	15.0	16.5
14	2.0	1.5	1.5	3.0	2.5	2.5	7.0	6.5	6.5	17.0	16.0	16.5
15	2.0	1.5	1.5	3.0	3.0	3.0	7.5	6.5	7.0	19.0	17.0	18.0
16	2.0	1.5	1.5	3.0	3.0	3.0	8.5	7.0	7.5	18.5	18.0	18.0
17	2.0	1.5	1.5	3.0	3.0	3.0	9.5	8.0	8.5	18.0	15.5	17.0
18	2.0	1.5	1.5	3.0	3.0	3.0	8.5	7.5	8.0	17.5	16.5	17.0
19	2.0	1.5	1.5	3.0	3.0	3.0	10.0	7.5	8.5	18.5	17.0	18.0
20	2.0	1.5	1.5	3.0	2.5	3.0	12.0	10.0	11.5	18.0	16.0	17.0
21	2.0	1.5	1.5	3.0	2.5	3.0	11.5	9.5	10.5	18.0	17.0	17.5
22	1.5	1.5	1.5	3.0	3.0	3.0	13.0	10.5	11.5	18.5	17.5	18.0
23	2.0	1.5	1.5	3.5	3.0	3.5	12.5	12.0	12.0	19.0	17.5	18.0
24	2.0	1.5	1.5	3.5	3.5	3.5	13.5	12.0	12.5	19.0	17.5	18.0
25	2.0	1.5	1.5	3.5	3.5	3.5	12.5	12.0	12.5	18.0	16.5	17.5
26	2.0	1.5	1.5	4.0	3.5	3.5	12.0	11.5	12.0	18.0	17.0	17.5
27	2.0	1.5	1.5	4.0	4.0	4.0	12.5	11.5	12.0	20.5	18.0	19.0
28	2.0	1.5	1.5	4.0	4.0	4.0	12.0	11.5	12.0	22.5	18.5	20.0
29	2.0	1.5	1.5	4.5	4.0	4.0	11.5	11.0	11.5	21.5	18.0	20.5
30	---	---	---	4.5	4.0	4.5	12.0	11.0	11.0	20.5	19.0	19.5
31	---	---	---	4.5	4.0	4.5	---	---	---	19.5	18.5	18.5
MONTH	2.5	1.5	1.8	4.5	1.0	2.7	13.5	3.5	8.1	22.5	11.0	16.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	18.5	17.5	18.0	19.5	19.0	19.0	23.0	21.5	22.0	21.5	20.5	21.0
2	18.0	16.0	17.5	20.0	18.5	19.5	23.0	21.5	22.0	21.0	20.0	20.5
3	18.0	17.0	17.5	20.5	18.5	19.5	23.0	22.0	22.5	20.5	20.0	20.0
4	18.5	17.0	17.5	20.5	19.0	20.0	22.5	22.0	22.0	20.0	19.5	20.0
5	18.0	17.0	17.5	20.5	20.0	20.0	22.0	21.0	21.5	20.0	19.5	19.5
6	17.5	17.0	17.0	22.0	19.0	20.5	22.0	20.0	21.0	20.0	19.0	19.5
7	18.0	17.0	17.5	21.0	19.0	20.0	21.0	19.5	20.0	20.0	19.5	20.0
8	17.5	17.0	17.0	21.5	20.5	21.0	20.0	19.0	19.5	---	---	---
9	18.0	17.0	17.5	23.5	19.5	21.0	19.5	19.0	19.5	---	---	---
10	17.5	17.0	17.5	22.0	20.0	21.0	19.5	19.0	19.5	21.5	21.0	21.5
11	17.5	16.5	17.0	21.5	20.5	21.0	19.5	19.0	19.5	21.0	19.5	20.0
12	17.5	16.5	17.0	21.5	20.5	21.0	20.0	19.0	19.5	20.5	19.5	20.0
13	17.5	16.5	17.0	22.0	21.0	21.5	23.0	20.0	22.0	21.5	20.0	20.5
14	17.5	16.5	17.0	21.5	20.5	21.0	23.0	22.0	22.5	20.5	18.5	19.5
15	18.0	17.0	17.5	21.5	20.0	20.5	22.0	20.5	21.5	19.0	18.5	18.5
16	18.0	17.0	17.5	20.5	19.5	20.0	23.0	21.0	22.0	19.5	19.0	19.0
17	18.0	17.5	18.0	20.5	19.5	20.0	23.0	21.0	21.5	19.5	18.5	19.0
18	18.5	17.5	18.0	20.0	20.0	20.0	21.0	20.0	20.5	20.0	17.0	19.0
19	20.5	17.0	18.5	20.5	20.0	20.0	21.0	20.0	20.5	17.0	16.0	16.5
20	19.5	17.0	18.5	21.0	20.0	20.5	21.0	20.0	20.5	17.0	15.5	16.0
21	19.5	18.0	19.0	21.0	20.5	20.5	21.0	20.0	20.5	17.5	15.5	16.0
22	18.5	18.0	18.5	21.0	20.0	20.5	21.0	20.0	20.5	17.5	15.5	16.0
23	20.5	18.0	19.0	21.0	20.0	20.5	21.0	20.0	20.0	18.0	16.0	16.5
24	19.0	18.5	19.0	21.0	20.0	20.5	21.0	20.0	20.5	17.5	16.5	16.5
25	20.0	18.5	19.0	21.0	20.0	21.0	20.5	19.0	19.5	18.0	16.5	17.0
26	21.0	18.5	19.5	21.0	20.5	21.0	19.5	19.0	19.0	18.0	17.0	17.5
27	19.5	18.5	18.5	22.0	20.5	21.0	19.5	19.0	19.0	17.5	17.0	17.0
28	19.5	18.0	19.0	23.0	22.0	22.5	20.0	19.0	19.5	18.5	17.0	17.5
29	19.5	18.5	19.0	23.5	22.0	23.0	20.5	19.5	20.0	18.0	17.0	17.5
30	20.0	18.5	19.0	22.5	20.5	21.5	20.0	19.5	20.0	17.0	16.5	17.0
31	---	---	---	21.5	20.0	21.0	21.5	19.5	21.0	---	---	---
MONTH	21.0	16.0	18.0	23.5	18.5	20.6	23.0	19.0	20.6	21.5	15.5	18.5
YEAR	23.5	1.0	10.8									

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

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
MAR 2004					
29...	1400	170	2.00	4.3	10
29...	1401	--	2.00	4.3	25
29...	1402	--	1.50	4.3	40
JUL					
13...	0717	26	0.40	21.8	14
13...	0718	--	0.70	22.1	29
13...	0719	--	1.20	22.1	31

LACKAWAXEN RIVER BASIN

01429500 DYBERRY CREEK NEAR HONESDALE, PA

LOCATION.--Lat 41°36'26", long 75°16'03", 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^2.

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.--Records good except those for estimated daily discharges, which are poor. Flow regulated since October 1959 by General Edgar Jadwin Reservoir (station 01429400) 1,700 ft upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1942 reached a stage of 15.86 ft, from floodmarks, site and datum then in use, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	268	193	163	49	48	161	130	62	26	70	48
2	115	209	166	149	48	93	204	120	56	23	60	37
3	101	187	141	194	46	292	155	228	75	20	52	34
4	105	160	126	341	51	396	144	168	55	19	45	30
5	139	175	127	714	48	433	124	135	51	20	73	28
6	106	275	126	456	48	582	105	133	78	25	53	27
7	92	189	117	253	58	537	99	137	64	25	41	24
8	85	151	111	191	50	344	97	123	50	34	37	37
9	79	128	103	159	47	255	89	148	44	25	33	382
10	75	118	100	e120	46	200	80	138	42	21	30	204
11	69	116	782	122	44	175	74	257	39	19	33	105
12	63	128	1270	129	42	162	70	169	35	19	67	75
13	57	122	612	126	42	135	207	151	32	42	710	61
14	53	107	262	e100	41	114	402	126	30	60	273	52
15	430	99	246	e95	e34	111	229	110	31	166	142	46
16	226	92	207	e92	35	108	161	112	29	106	178	42
17	134	89	207	92	38	107	136	99	30	76	135	69
18	111	87	267	89	36	100	121	87	78	55	97	2160
19	105	133	200	83	36	92	113	86	54	127	78	2290
20	100	915	166	76	35	90	101	72	39	102	69	1910
21	92	477	143	68	37	148	96	72	31	64	108	1380
22	89	267	134	68	40	132	89	65	29	49	99	382
23	80	196	137	62	40	100	130	60	30	46	71	142
24	74	168	481	58	38	106	161	55	26	48	61	117
25	68	175	696	55	35	143	125	48	25	36	52	102
26	65	154	358	56	40	153	353	69	89	32	46	94
27	310	138	244	55	36	164	374	191	65	139	43	79
28	648	167	202	59	34	151	218	97	41	300	41	443
29	819	525	178	56	38	123	168	65	36	140	47	623
30	838	277	189	51	---	108	144	51	30	93	39	292
31	417	---	195	51	---	109	---	46	---	73	55	---
TOTAL	5878	6292	8486	4383	1212	5811	4730	3548	1376	2030	2938	11315
MEAN	190	210	274	141	41.8	187	158	114	45.9	65.5	94.8	377
MAX	838	915	1270	714	58	582	402	257	89	300	710	2290
MIN	53	87	100	51	34	48	70	46	25	19	30	24

e Estimated.

LACKAWAXEN RIVER BASIN

01429500 DYBERRY CREEK NEAR HONESDALE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.9	112	127	114	138	233	238	141	80.1	42.9	33.0	58.4
MAX	292	413	388	402	466	552	572	397	291	170	145	506
(WY)	1977	1973	1997	1996	1981	1977	1993	1989	1972	1973	1994	2003
MIN	4.17	5.48	17.4	20.8	20.2	73.0	83.6	43.3	12.0	3.23	5.21	2.26
(WY)	1965	1965	1999	1981	1980	1981	1985	1965	1962	1962	1999	1980

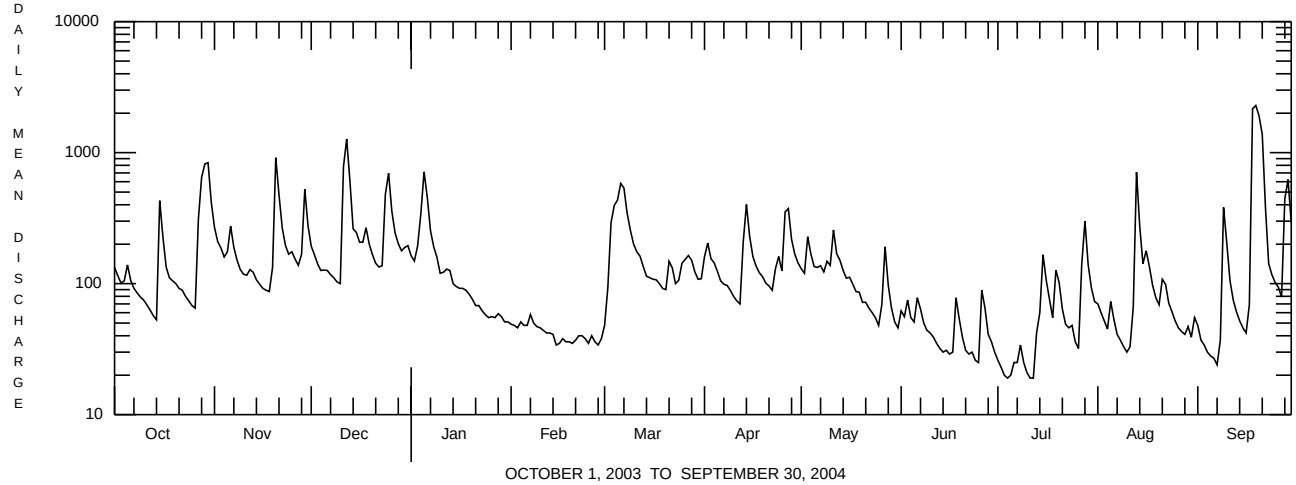
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	75667		57999			
ANNUAL MEAN	207		158		115	
HIGHEST ANNUAL MEAN					189	2003
LOWEST ANNUAL MEAN					51.4	1965
HIGHEST DAILY MEAN	1760	Sep 4	2290	Sep 19	2460	Jan 20 1996
LOWEST DAILY MEAN	26	Aug 28,29	19	Jul 4,11,12	1.2	Jul 29 1970
ANNUAL SEVEN-DAY MINIMUM	30	Aug 23	23	Jul 1	1.8	Oct 5 1980
MAXIMUM PEAK FLOW			2750	Sep 18	2750	Sep 18 2004
MAXIMUM PEAK STAGE			7.44	Sep 18	7.44	Sep 18 2004
INSTANTANEOUS LOW FLOW					**a**0.00	Oct 2 1968
10 PERCENT EXCEEDS	431		294		251	
50 PERCENT EXCEEDS	121		99		58	
90 PERCENT EXCEEDS	53		35		11	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1959, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.7	110	128	119	109	236	262	145	55.8	68.9	45.7	30.5
MAX	348	263	255	248	227	539	628	345	127	293	339	90.8
(WY)	1956	1946	1953	1952	1951	1945	1958	1947	1946	1952	1955	1952
MIN	10.2	18.8	20.4	29.0	47.4	91.8	59.9	44.4	19.2	8.16	5.82	5.30
(WY)	1948	1947	1947	1944	1958	1949	1946	1955	1959	1955	1953	1953

SUMMARY STATISTICS	WATER YEARS 1944 - 1959	
ANNUAL MEAN	114	
HIGHEST ANNUAL MEAN	170	1952
LOWEST ANNUAL MEAN	77.2	1957
HIGHEST DAILY MEAN	5880	Jul 10 1952
LOWEST DAILY MEAN	2.0	Oct 5 1953
ANNUAL SEVEN DAY MINIMUM	2.3	Sep 29 1953
MAXIMUM PEAK FLOW	**b**15500	Jul 10 1952
MAXIMUM PEAK STAGE	**c**14.60	Jul 10 1952
ANNUAL RUNOFF (CFSM)	1.76	
ANNUAL RUNOFF (INCHES)	23.91	
10 PERCENT EXCEEDS	252	
50 PERCENT EXCEEDS	54	
90 PERCENT EXCEEDS	9.4	

a Result of shutoff at General Jadwin Reservoir.
b From rating curve extended above 2,500 ft^3/s on basis of slope-area measurement at gage height 13.78 ft.
c Site and datum then in use.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

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 Lemnitzer Bridge (Brown Street), on U.S. Highway 6, and 1.2 mi downstream from Dyberry Creek and Honesdale.

DRAINAGE AREA.--164 mi^2.

PERIOD OF RECORD.--October 1948 to September 1969, October 1985 to current year. Occasional discharge measurements and annual maximums, water years 1974-85.

REVISED RECORDS.--WDR PA 90-1: 1989. WDR PA 94-1: 1989(M).

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1960 by Prompton Reservoir (station 01428900) and at high flow since 1959 by General Edgar Jadwin Reservoir (station 01429400). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 1942 reached a stage of 24.5 ft, from data furnished by Corps of Engineers, discharge about 34,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351	781	552	442	e150	111	355	325	158	80	187	128
2	299	619	475	399	e140	195	483	294	153	75	163	108
3	259	537	406	474	e140	539	398	533	175	67	141	98
4	256	459	351	775	144	796	365	433	146	63	119	90
5	317	466	331	1520	e140	937	316	339	138	61	165	85
6	270	607	323	1160	134	1230	266	321	185	64	135	84
7	238	502	303	768	135	1300	240	323	173	62	107	83
8	210	414	277	596	e130	999	222	297	144	78	93	112
9	189	350	257	e460	e120	775	202	368	130	66	84	1040
10	171	321	248	e410	115	601	179	367	127	58	78	981
11	158	313	1920	e320	112	498	163	597	116	54	81	517
12	147	323	2680	319	124	434	153	526	105	59	239	329
13	132	318	1520	306	107	355	444	501	97	84	1430	240
14	122	266	883	e270	e100	289	885	424	93	82	808	195
15	706	250	733	e240	e100	264	639	344	92	217	428	164
16	576	235	607	e230	e98	245	456	322	89	158	437	145
17	402	228	575	e220	e97	237	367	287	94	134	365	217
18	327	221	659	210	e95	220	307	247	138	110	265	6920
19	295	335	540	e210	e95	205	270	224	125	177	209	4660
20	272	1660	456	e200	e91	196	229	196	105	162	182	3020
21	247	1120	391	e200	93	308	206	186	93	123	256	2140
22	230	770	352	e190	99	301	190	173	88	102	249	944
23	208	611	349	e180	99	233	261	157	88	103	192	494
24	187	517	967	e170	95	228	325	149	80	99	163	376
25	172	490	1390	e170	e94	285	266	131	76	84	141	289
26	165	441	912	e160	99	316	711	154	136	77	125	239
27	591	399	684	e160	93	354	896	332	130	198	116	205
28	1220	432	564	e160	91	360	602	231	102	588	109	836
29	1860	961	490	e160	95	312	466	178	93	383	121	1440
30	1930	704	496	e150	---	275	384	143	85	249	109	896
31	1120	---	512	e150	---	265	---	130	---	197	127	---
TOTAL	13627	15650	21203	11379	3225	13663	11246	9232	3554	4114	7424	27075
MEAN	440	522	684	367	111	441	375	298	118	133	239	902
MAX	1930	1660	2680	1520	150	1300	896	597	185	588	1430	6920
MIN	122	221	248	150	91	111	153	130	76	54	78	83

e Estimated.

LACKAWAXEN RIVER BASIN

01430000 LACKAWAXEN RIVER NEAR HONESDALE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1969, 1986 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	159	289	300	276	280	564	548	344	207	93.6	90.4	164
MAX	504	650	925	884	716	1133	1464	985	634	255	364	1140
(WY)	2003	1987	1997	1996	1990	1986	1993	1989	2003	1996	1994	2003
MIN	14.5	16.5	39.1	73.5	106	261	240	123	43.9	20.3	17.2	12.3
(WY)	1965	1965	1999	1961	1963	1965	1988	2001	1962	1965	1964	1964

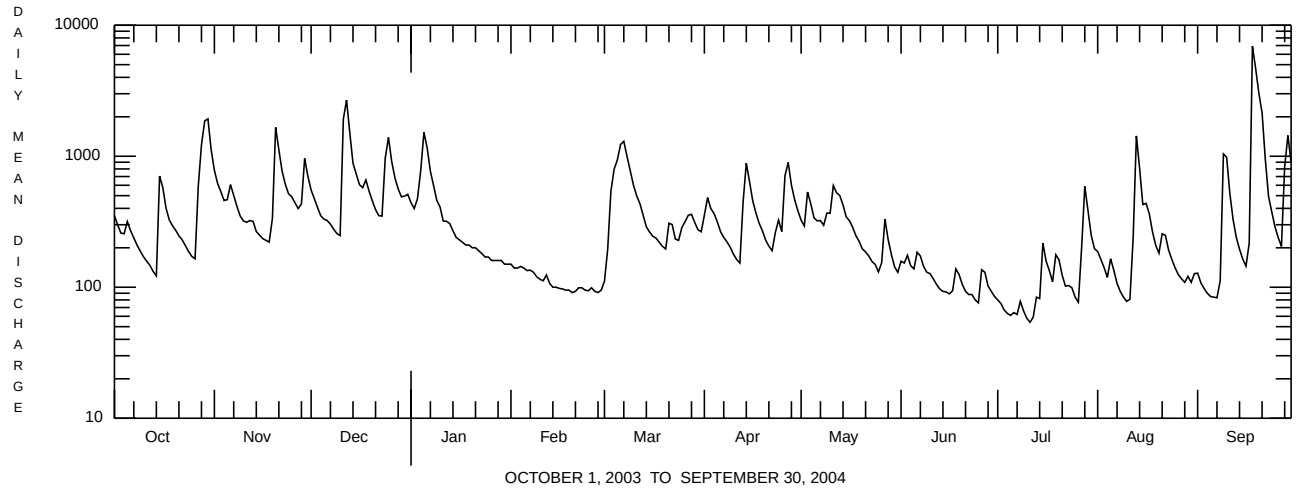
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 1969, 1986 - 2004	
ANNUAL TOTAL	188482		141392			
ANNUAL MEAN	516		386		276	
HIGHEST ANNUAL MEAN					484	2003
LOWEST ANNUAL MEAN					130	1965
HIGHEST DAILY MEAN	4840	Sep 4	6920	Sep 18	6920	Sep 18 2004
LOWEST DAILY MEAN	69	Jul 20,21**a**	54	Jul 11	8.8	Sep 25 1964
ANNUAL SEVEN-DAY MINIMUM	76	Jul 15	63	Jul 6	9.7	Sep 21 1964
MAXIMUM PEAK FLOW			10100	Sep 18	10100	Sep 18 2004
MAXIMUM PEAK STAGE			10.54	Sep 18	10.54	Sep 18 2004
INSTANTANEOUS LOW FLOW					6.2	Sep 25 1964
10 PERCENT EXCEEDS	1120		777		608	
50 PERCENT EXCEEDS	321		239		150	
90 PERCENT EXCEEDS	125		93		30	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1959, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	151	281	412	377	364	538	746	322	126	112	125	83.1
MAX	955	520	649	669	664	788	1458	592	304	425	865	189
(WY)	1956	1956	1951	1962	1951	1951	1958	1952	1956	1952	1955	1952
MIN	37.9	80.6	154	130	127	291	379	108	47.8	26.2	20.6	26.2
(WY)	1949	1958	1956	1956	1958	1949	1955	1951	1959	1955	1953	1957

SUMMARY STATISTICS	WATER YEARS 1949 - 1959	
ANNUAL MEAN	302	
HIGHEST ANNUAL MEAN	428	1952
LOWEST ANNUAL MEAN	209	1957
HIGHEST DAILY MEAN	8920	Aug 19 1955
LOWEST DAILY MEAN	12	Aug 29 1953
ANNUAL SEVEN DAY MINIMUM	12	Aug 29 1953
MAXIMUM PEAK FLOW	**b**18600	Aug 18 1955
MAXIMUM PEAK STAGE	15.52	Aug 18 1955
ANNUAL RUNOFF (CFSM)	1.84	
ANNUAL RUNOFF (INCHES)	25.06	
10 PERCENT EXCEEDS	695	
50 PERCENT EXCEEDS	152	
90 PERCENT EXCEEDS	32	

a Also Aug. 28.
b From rating curve extended above 11,000 ft^3/s.



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 bridge on Church Street in Hawley, 700 ft upstream from Wallenpaupack Creek, and 3,000 ft downstream from Middle Creek.

DRAINAGE AREA.--290 mi^2.

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, and Aug 20, 1955, to Feb. 13, 1956, nonrecording gage at site 1,000 ft downstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Regulation since 1960 by Prompton Reservoir (station 01428900) 14.9 mi upstream, and at high flow since 1959 by General Edgar Jadwin Reservoir (station 01429400) 13.0 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	659	1330	966	797	e260	e300	629	577	320	138	339	206
2	571	1070	829	713	e250	e450	909	540	409	133	295	175
3	499	951	700	783	e250	e1000	756	1070	408	124	245	156
4	484	815	609	1240	e260	1460	683	889	328	114	205	144
5	634	789	577	2600	e250	1620	601	683	290	108	277	135
6	548	1010	576	2060	e240	1910	502	642	405	107	258	130
7	464	869	548	1310	e250	2030	453	649	382	103	198	132
8	408	727	510	1000	e240	1560	418	584	306	118	166	161
9	368	614	465	833	e240	1260	390	681	259	113	146	1430
10	337	557	448	e670	e220	1010	355	699	289	97	134	1460
11	310	541	3740	e590	e220	869	327	838	251	88	143	791
12	286	576	5030	566	e230	778	312	772	212	95	467	522
13	258	569	2600	546	e210	657	802	937	186	159	3570	399
14	236	491	1510	480	e210	545	1510	721	171	155	1920	322
15	1210	442	1260	e450	e210	499	1110	569	167	257	917	278
16	1150	413	1070	e420	e210	476	801	499	163	228	731	247
17	752	402	1030	e410	e210	461	648	441	161	211	613	280
18	630	389	1250	e400	e210	433	552	376	204	183	463	12700
19	568	505	1020	e390	e210	408	485	342	212	266	374	7800
20	529	2850	848	e390	e200	391	417	304	204	262	324	4310
21	467	1970	724	e380	e210	595	388	297	170	197	519	2960
22	427	1290	658	e370	e210	636	363	284	156	162	539	1510
23	389	1020	659	e350	e220	477	487	264	160	193	387	837
24	355	867	1780	e330	e210	455	624	280	153	217	312	671
25	319	839	2600	e310	210	536	502	237	143	156	267	542
26	303	762	1640	e310	200	587	1050	260	188	133	237	453
27	1080	686	1220	e300	192	625	1560	455	224	229	215	391
28	2310	708	1010	e300	e180	648	1050	371	178	912	202	1190
29	3320	1630	884	e290	e190	566	819	294	164	606	207	2460
30	3540	1260	886	e270	---	494	680	246	150	387	189	1530
31	1930	---	927	e260	---	482	---	233	---	307	206	---
TOTAL	25341	26942	38574	20118	6402	24218	20183	16034	7013	6558	15065	44322
MEAN	817	898	1244	649	221	781	673	517	234	212	486	1477
MAX	3540	2850	5030	2600	260	2030	1560	1070	409	912	3570	12700
MIN	236	389	448	260	180	300	312	233	143	88	134	130

e Estimated.

LACKAWAXEN RIVER BASIN

01431500 LACKAWAXEN RIVER AT HAWLEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	264	451	552	499	561	1006	994	614	375	179	144	244
MAX	1056	1643	1671	1915	1434	2651	2392	1826	1475	680	522	1830
(WY)	1977	1973	1997	1996	1976	1977	1994	1989	1972	1984	1994	2003
MIN	20.8	25.7	62.6	92.0	133	280	348	196	63.6	29.7	26.1	20.5
(WY)	1965	1965	1999	1981	1980	1981	1988	1962	1965	1965	1999	1964

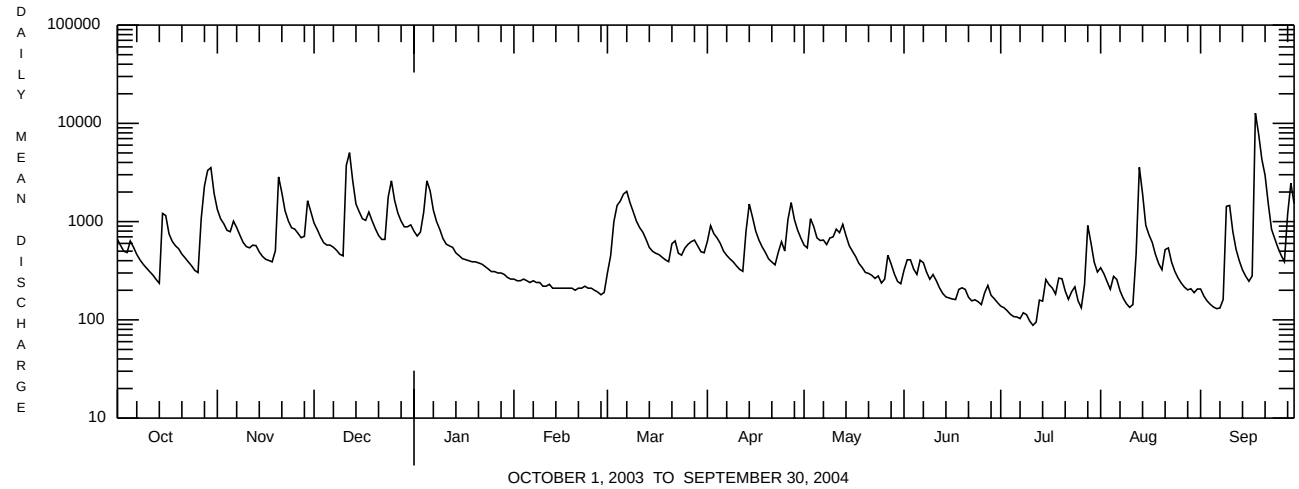
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	330631		250770			
ANNUAL MEAN	906		685		490	
HIGHEST ANNUAL MEAN					841	2003
LOWEST ANNUAL MEAN					204	1965
HIGHEST DAILY MEAN	6320	Sep 4	12700	Sep 18	12700	Sep 18 2004
LOWEST DAILY MEAN	101	Aug 29	88	Jul 11	14	Aug 12 1999
ANNUAL SEVEN-DAY MINIMUM	123	Aug 23	103	Jul 6	15	Aug 7 1999
MAXIMUM PEAK FLOW			**a**17700	Sep 18	**a**17700	Sep 18 2004
MAXIMUM PEAK STAGE			14.49	Sep 18	14.49	Sep 18 2004
10 PERCENT EXCEEDS	1950		1300		1130	
50 PERCENT EXCEEDS	576		449		256	
90 PERCENT EXCEEDS	236		169		55	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909-17, 1939-59, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	239	388	482	527	555	1019	1117	629	296	236	209	156
MAX	1773	1116	1166	1235	1279	2985	2644	1531	680	1246	2485	601
(WY)	1956	1956	1951	1913	1909	1945	1940	1942	1916	1947	1955	1945
MIN	25.4	28.6	89.0	116	180	353	280	166	79.7	38.2	32.1	24.6
(WY)	1910	1910	1909	1944	1940	1915	1946	1941	1959	1955	1957	1909

SUMMARY STATISTICS	WATER YEARS 1909 - 1917 1939 - 1959	
ANNUAL MEAN	487	
HIGHEST ANNUAL MEAN	748	1952
LOWEST ANNUAL MEAN	316	1917
HIGHEST DAILY MEAN	28100	May 23 1942
LOWEST DAILY MEAN	8.0	Sep 8 1909
ANNUAL SEVEN DAY MINIMUM	12	Sep 4 1909
MAXIMUM PEAK FLOW	**a**51900	Aug 19 1955
MAXIMUM PEAK STAGE	**b**24.80	Aug 19 1955
ANNUAL RUNOFF (CFSM)	1.68	
ANNUAL RUNOFF (INCHES)	22.83	
10 PERCENT EXCEEDS	1110	
50 PERCENT EXCEEDS	242	
90 PERCENT EXCEEDS	49	

a From rating curve extended above 12,000 ft^3/s on basis of slope-area measurement at gage height 20.1 ft.
b From floodmark.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

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, and 1.2 mi south of Hawley.

DRAINAGE AREA.--228 mi^2.

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). WDR PA-92-1: 1990.

GAGE.--Daily discharge determined from flow through turbines, computed from records of generator output and flow over roller gates 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. 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 Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	596	1060	0	100	347	0	345	184	416	570
2	0	0	796	1060	350	128	338	0	264	147	578	599
3	0	696	713	1020	320	75	0	272	314	0	580	613
4	0	643	897	831	391	95	0	690	296	0	441	377
5	0	972	903	1020	342	170	998	1020	0	0	308	284
6	0	1040	1060	1030	340	2	1020	960	0	338	402	299
7	0	1070	945	908	0	0	465	1010	333	453	0	489
8	0	1040	986	985	0	417	449	0	440	280	0	602
9	0	1060	984	977	378	358	505	0	611	382	402	748
10	0	1090	678	1100	432	341	14	676	474	0	445	973
11	12	1070	1160	900	339	373	0	889	430	0	528	922
12	0	1060	1680	860	336	281	315	952	0	242	790	929
13	672	1100	1720	800	335	46	356	975	0	383	1030	935
14	611	1070	1720	715	0	0	425	1060	377	349	1620	896
15	526	1040	1700	444	0	303	355	8	280	290	1620	858
16	556	1080	1670	714	353	304	278	158	293	526	1570	946
17	466	638	1720	877	344	278	0	955	382	0	1420	1050
18	0	695	1730	826	301	249	0	910	348	0	1570	794
19	0	625	1090	780	353	291	106	965	0	288	1570	1590
20	481	872	1090	714	339	0	158	1040	0	268	1390	1580
21	508	647	1040	762	0	0	191	966	277	275	500	1560
22	529	576	1060	634	0	410	169	27	262	327	438	1560
23	430	500	1100	711	106	421	173	0	325	328	451	1560
24	587	460	1410	915	82	301	0	840	347	352	550	1560
25	0	488	1670	714	70	711	0	769	294	396	534	864
26	0	476	1030	680	105	413	0	577	0	487	393	857
27	705	0	1050	475	64	0	0	501	0	797	602	827
28	761	519	1050	710	0	0	0	270	177	815	479	896
29	796	823	1070	516	0	327	0	0	229	782	515	774
30	654	588	1060	547	---	393	0	0	231	996	635	903
31	685	---	1040	22	---	240	---	0	---	505	602	---
TOTAL	8979	21938	36418	24307	5680	7027	6662	16490	7329	10190	22379	27415
MEAN	290	731	1175	784	196	227	222	532	244	329	722	914
MAX	796	1100	1730	1100	432	711	1020	1060	611	996	1620	1590
MIN	0.00	0.00	596	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	284

01432000 WALLENPAUPACK CREEK AT WILSONVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	271	250	362	450	438	405	460	350	386	344	306	343
MAX	750	1012	1242	1070	1112	1125	1500	1849	1573	965	995	1018
(WY)	1956	1956	1997	1978	1978	1998	1958	1996	1972	1928	1969	1987
MIN	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1996	2001	1926	1926	1926	1926	1926	1926	1958	1956	1956	1956

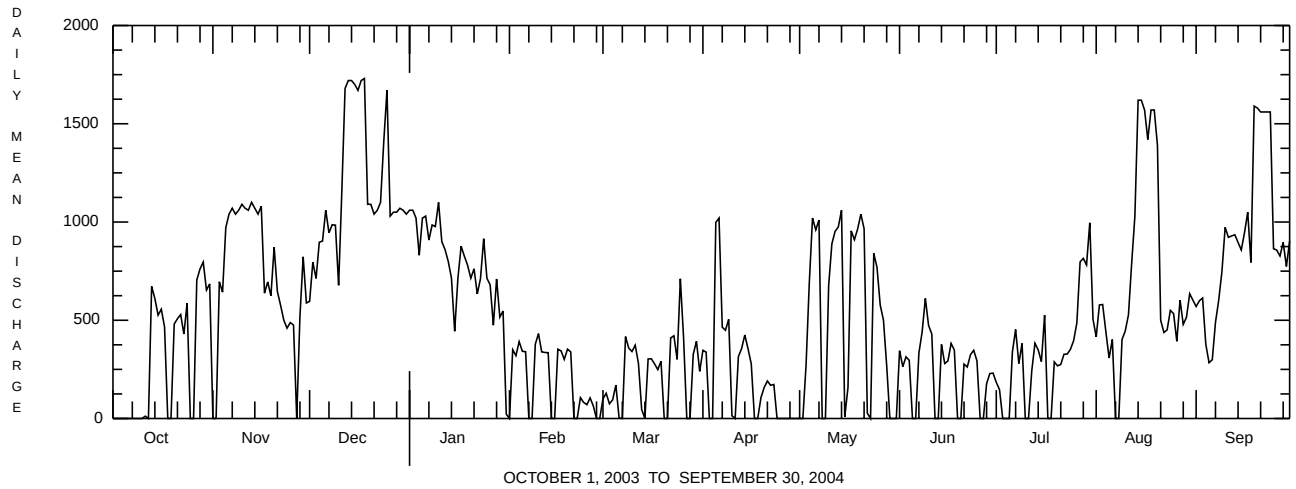
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1926 - 2004	
ANNUAL TOTAL	237395.00		194814.00			
ANNUAL MEAN	650		532		363	
HIGHEST ANNUAL MEAN					638	1996
LOWEST ANNUAL MEAN					86.9	1926
HIGHEST DAILY MEAN	1730	Dec 18	1730	Dec 18	9650	May 25 1996
LOWEST DAILY MEAN	0.00	Mar 15**a**	0.00	Oct 1**a**	0.00	Nov 4 1925**a**
ANNUAL SEVEN-DAY MINIMUM	0.00	May 2	0.00	Oct 1	0.00	Nov 4 1925
10 PERCENT EXCEEDS	1400		1060		921	
50 PERCENT EXCEEDS	598		447		245	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1925, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	235	271	384	490	426	868	831	468	307	206	143	144
MAX	542	627	1043	1219	1031	1656	1677	682	838	575	532	366
(WY)	1913	1920	1921	1911	1915	1920	1916	1924	1917	1916	1915	1915
MIN	28.0	32.0	69.5	104	156	344	396	283	115	57.0	49.0	35.0
(WY)	1910	1910	1923	1918	1920	1924	1925	1922	1921	1912	1910	1910

SUMMARY STATISTICS	WATER YEARS 1910 - 1925	
MEAN	397	
HIGHEST MEAN	527	1916
LOWEST MEAN	279	1923
HIGHEST DAILY MEAN	4840	Mar 29 1914
LOWEST DAILY MEAN	8.0	Sep 30 1917
SEVEN-DAY MINIMUM	10	Aug 14 1911
10 PERCENT EXCEEDS	910	
50 PERCENT EXCEEDS	240	
90 PERCENT EXCEEDS	60	

a Many days each year.



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 Auken Creek. DRAINAGE AREA, 59.6 mi^2. PERIOD OF RECORD, December 1960 to current year. GAGE, data collection platform (U.S. Army Corps of Engineers datum).

REMARKS.--Reservoir formed by an earth and rockfill 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 is 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 ungated tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,170 acre-ft, June 29, 1973, elevation, 1,138.40 ft; minimum (after first filling), 2,500 acre-ft, June 5, 1991, elevation, 1,121.46 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,020 acre-ft, Sept. 18, elevation, 1,138.01 ft; minimum contents, 3,120 acre-ft, July 13, elevation, 1,123.66 ft.

01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15'55", Wayne County, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.4 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, and 2.9 mi upstream from mouth. DRAINAGE AREA, 64.5 mi^2. PERIOD OF RECORD, October 1959 to current year. GAGE, data collection platform (U.S. Army Corps of Engineers datum).

REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 1,053.00 ft. Storage began October 1959. Capacity at elevation of 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. Since Oct. 1, 1996, pool elevations below 990 ft NGVD are not recorded.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,810 acre-ft, Sept. 19, 2004, elevation, 1,018.16 ft; minimum contents, no storage many times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,810 acre-ft, Sept. 19, elevation, 1,018.16 ft; minimum contents, no storage many times.

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^2. PERIOD OF RECORD, January 1926 to current year. GAGE, vertical staff. Datum of gage is sea level (levels by Pennsylvania Power and Light Co.).

REMARKS.--Lake formed by concrete gravity-type and earthfill dam, with concrete spillway in two sections at elevation 1,176.00 ft. Spillway equipped with 14 ft high roller gate on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation January 1926. Minimum pool elevation for controlled storage is 1,170.00 ft. Prior to 1984, minimum pool elevation was 1,160.00 ft. Reservoir is used for generation of hydroelectric power. Figures given herein represent usable contents. Records prior to 1984 included additional usable contents of 48,900 acre-ft.

COOPERATION.--Records provided by Pennsylvania Power and Light Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 178,200 acre-ft, (pre-1984 contents), Aug. 19-21, 1955, elevation, 1,193.45 ft; minimum (after first filling), 12,280 acre-ft (pre-1984 contents), Mar. 28, 1958, elevation, 1,162.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 92,390 acre-ft, May 16, elevation, 1,187.3 ft; minimum contents, 51,960 acre-ft, Feb. 26, elevation 1,179.9 ft.

LACKAWAXEN RIVER BASIN

Lakes and Reservoirs in Lackawaxen River Basin--Continued

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
	01428900 Prompton Reservoir			01429400 General Edgar Jadwin Reservoir		
Sept. 30	1,126.05	3,790	---	--	0	---
Oct. 31	1,128.44	4,460	+10.9	--	0	0
Nov. 30	1,128.03	4,350	-1.8	--	0	0
Dec. 31	1,127.13	4,100	-4.1	--	0	0
CAL YR 2003	--	--	+0.6	--	--	0
Jan. 31	1,124.78	3,440	-10.7	--	0	0
Feb. 29	1,124.29	3,300	-2.4	--	0	0
Mar. 31	1,126.22	3,840	+8.8	--	0	0
Apr. 30	1,126.37	3,880	+0.7	--	0	0
May 31	1,125.08	3,520	-5.9	--	0	0
June 30	1,124.32	3,310	-3.5	--	0	0
July 31	1,125.38	3,610	+4.8	--	0	0
Aug. 31	1,125.08	3,520	-1.5	--	0	0
Sept. 30	1,126.60	3,950	+7.2	--	0	0
WTR YR 2004	--	--	+0.2	--	--	0

	01431700 Lake Wallenpaupack		
Sept. 30	1,181.7	60,830	---
Oct. 31	1,185.1	80,790	+325
Nov. 30	1,184.9	79,630	-19.5
Dec. 31	1,184.6	77,640	-32.4
CAL YR 2003	--	--	-9.9
Jan. 31	1,180.8	56,380	-346
Feb. 29	1,180.5	54,970	-24.5
Mar. 31	1,183.9	73,200	+296
Apr. 30	1,186.1	85,880	+213
May 31	1,186.4	87,460	+25.7
June 30	1,186.1	85,880	-26.6
July 31	1,183.7	71,980	-226
Aug. 31	1,182.0	62,380	-156
Sept. 30	1,186.1	85,880	+395
WTR YR 2004	--	--	+34.5

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 Creek.

DRAINAGE AREA.--2,659 mi^2.

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 recorder provides 15-minute-interval readings. From March 1975 to February 1994, water-temperature recorder provided one-hour-interval readings. 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.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-73, 1976-78, 1980-82, 1986-88, 1990-2002, 2004), 32.0°C, July 20, 21, 1980; minimum, 0.0°C on many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 27.0°C, July 5; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	13.5	14.0	11.0	10.0	10.5	5.5	5.0	5.0	3.0	2.0	2.5
2	13.5	12.5	13.0	11.5	11.0	11.5	5.0	3.0	4.0	3.0	2.5	2.5
3	13.0	11.5	12.0	12.5	11.0	11.5	3.5	2.0	2.5	3.5	3.0	3.0
4	12.0	11.0	11.5	12.0	11.5	12.0	2.5	1.5	2.0	4.0	3.5	4.0
5	11.5	10.5	11.0	12.0	11.5	11.5	2.5	1.5	2.0	4.0	3.0	3.5
6	11.0	10.0	10.5	11.5	11.0	11.0	2.0	1.5	2.0	3.0	1.5	2.5
7	11.5	10.0	11.0	11.0	10.5	11.0	2.0	1.0	1.5	1.5	0.0	1.0
8	12.5	11.0	11.5	10.5	8.0	9.5	2.0	1.0	1.0	0.5	0.0	0.0
9	13.5	12.0	13.0	8.0	6.5	7.5	2.5	1.0	1.5	0.0	0.0	0.0
10	15.5	13.0	14.0	7.0	6.0	6.5	3.0	2.0	2.5	0.0	0.0	0.0
11	16.0	14.5	15.0	6.5	6.0	6.0	4.5	3.0	4.0	0.0	0.0	0.0
12	15.5	14.5	15.0	8.0	6.5	7.0	4.0	3.0	3.5	0.5	0.0	0.0
13	15.5	14.0	14.5	8.0	7.0	8.0	3.0	2.5	3.0	1.0	0.0	0.5
14	15.0	13.5	14.0	7.0	6.0	6.0	2.5	1.0	2.0	0.0	0.0	0.0
15	14.5	12.0	13.5	6.0	5.5	6.0	1.5	1.0	1.5	0.0	0.0	0.0
16	12.0	11.0	11.5	6.0	5.0	5.5	2.5	1.0	2.0	0.0	0.0	0.0
17	11.0	10.0	10.5	6.5	6.0	6.0	2.5	2.0	2.5	0.0	0.0	0.0
18	10.5	9.5	10.0	7.5	6.0	6.5	2.5	2.0	2.0	0.5	0.0	0.0
19	9.5	9.0	9.5	9.0	7.0	8.0	2.0	1.5	2.0	0.0	0.0	0.0
20	10.5	8.5	9.5	9.0	8.0	9.0	2.0	1.5	2.0	0.0	0.0	0.0
21	12.0	10.0	10.5	8.0	7.0	7.5	1.5	1.0	1.5	0.0	0.0	0.0
22	11.0	10.0	10.5	8.0	7.0	7.5	1.5	0.5	1.0	0.0	0.0	0.0
23	10.0	8.0	9.0	8.0	7.0	7.5	3.0	1.5	2.0	0.0	0.0	0.0
24	8.5	7.5	8.0	8.0	7.0	7.5	3.5	2.5	3.0	0.0	0.0	0.0
25	8.0	7.0	7.5	8.0	6.5	7.0	3.5	3.0	3.0	0.0	0.0	0.0
26	9.0	7.5	8.5	6.5	5.5	6.0	3.5	3.0	3.0	0.0	0.0	0.0
27	11.0	9.0	10.0	6.0	5.5	5.5	3.5	3.0	3.0	0.0	0.0	0.0
28	11.0	10.0	10.5	7.5	6.0	6.5	3.0	2.5	3.0	0.0	0.0	0.0
29	10.0	9.5	10.0	7.5	6.0	7.0	3.0	2.0	2.5	0.0	0.0	0.0
30	10.0	9.5	10.0	6.0	5.0	5.5	3.0	2.5	2.5	0.5	0.0	0.0
31	10.5	9.5	10.0	---	---	---	3.0	2.5	3.0	0.5	0.0	0.0
MONTH	16.0	7.0	11.3	12.5	5.0	7.9	5.5	0.5	2.5	4.0	0.0	0.6

DELAWARE RIVER BASIN

01432160 DELAWARE RIVER AT BARRYVILLE, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.5	0.0	0.0	2.0	0.0	1.0	7.0	6.5	6.5	16.0	13.5	14.5
2	0.5	0.0	0.0	2.5	1.0	1.5	6.5	6.0	6.5	16.0	15.0	15.5
3	0.0	0.0	0.0	1.5	0.5	1.0	7.0	6.0	6.5	15.5	12.5	14.5
4	0.0	0.0	0.0	1.5	0.5	1.0	7.0	5.5	6.5	13.0	11.0	12.0
5	0.5	0.0	0.0	1.5	1.0	1.0	5.5	4.0	5.0	11.5	10.5	11.0
6	0.0	0.0	0.0	1.5	0.0	1.5	5.5	3.0	4.5	13.5	10.5	12.0
7	0.0	0.0	0.0	1.5	0.0	1.0	7.5	4.5	6.0	15.0	12.5	13.5
8	0.5	0.0	0.0	2.0	0.5	1.5	7.5	5.5	6.5	14.5	13.0	14.0
9	0.5	0.0	0.0	3.0	2.0	2.5	7.5	6.0	6.5	14.5	13.0	13.5
10	0.0	0.0	0.0	3.5	2.0	2.5	8.5	5.5	7.0	15.5	13.5	14.5
11	0.5	0.0	0.0	4.5	2.0	3.0	8.0	6.5	7.5	17.0	14.0	16.0
12	0.5	0.0	0.0	4.0	3.0	3.5	8.5	7.0	7.5	17.5	16.0	16.5
13	0.5	0.0	0.0	3.5	2.0	3.0	7.5	7.0	7.0	18.5	16.0	17.5
14	0.5	0.0	0.0	2.5	1.5	2.0	7.5	7.0	7.0	18.0	16.5	17.5
15	0.5	0.0	0.0	4.0	2.0	3.0	9.0	6.5	7.5	20.5	17.0	18.5
16	0.5	0.0	0.0	3.5	2.0	2.5	9.5	7.0	8.0	20.0	18.5	19.5
17	0.5	0.0	0.0	2.5	1.5	2.0	11.0	8.0	9.5	18.5	16.0	17.5
18	0.5	0.0	0.0	3.0	1.5	2.0	13.0	10.5	11.5	19.5	16.5	18.0
19	0.5	0.0	0.0	3.0	1.5	2.5	14.0	11.5	13.0	19.5	17.5	18.5
20	0.5	0.0	0.0	4.0	1.5	3.0	15.0	12.5	13.5	19.5	16.0	18.0
21	0.5	0.0	0.0	4.0	3.0	3.5	14.0	12.0	13.0	19.0	17.0	18.0
22	0.5	0.0	0.0	3.0	1.5	2.5	14.5	12.0	13.5	21.5	17.0	19.5
23	0.5	0.0	0.5	3.5	1.0	2.0	14.5	12.0	13.0	23.0	20.0	21.5
24	0.5	0.0	0.0	5.0	2.0	3.5	14.0	11.5	12.5	23.0	21.5	22.0
25	0.5	0.0	0.0	5.0	4.0	4.5	12.5	10.5	11.5	22.5	19.5	21.0
26	0.5	0.0	0.5	7.0	4.5	6.0	10.5	9.5	10.0	21.0	19.0	20.0
27	1.0	0.0	0.5	8.0	6.5	7.0	11.0	9.0	10.0	21.5	18.0	20.0
28	1.5	0.0	0.5	9.0	7.0	8.0	11.5	9.5	10.5	21.0	19.0	20.0
29	1.5	0.0	0.5	9.0	7.0	8.0	13.0	10.0	11.5	19.0	17.5	18.5
30	---	---	---	8.5	6.5	7.5	14.5	11.5	13.0	18.5	16.5	17.5
31	---	---	---	7.5	6.5	7.0	---	---	---	17.5	15.5	16.5
MONTH	1.5	0.0	0.1	9.0	0.0	3.2	15.0	3.0	9.1	23.0	10.5	17.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.5	15.0	16.0	25.0	21.0	23.0	24.0	21.5	22.5	21.5	20.0	20.5
2	17.5	15.0	16.0	26.0	22.0	24.0	24.5	21.5	22.5	21.5	19.5	20.5
3	18.5	16.0	17.5	26.5	22.0	24.5	25.5	22.0	23.5	22.0	19.5	20.5
4	19.5	16.5	18.0	26.0	23.0	24.5	25.5	22.5	24.0	23.0	19.5	21.0
5	17.5	16.5	17.0	27.0	23.5	25.0	24.5	22.5	23.5	22.0	19.5	20.5
6	16.5	15.5	16.0	25.5	22.5	24.5	22.5	20.0	21.0	21.5	18.5	20.0
7	19.0	15.0	17.0	25.5	21.5	23.5	20.5	18.5	19.5	22.5	19.5	21.0
8	21.5	17.0	19.5	26.0	22.5	24.0	21.0	18.0	19.5	21.5	20.0	21.0
9	24.0	19.0	21.5	24.0	21.5	23.0	22.5	19.5	21.0	21.0	20.0	20.5
10	23.0	21.0	22.0	24.5	20.0	22.5	23.5	19.5	21.5	20.5	19.0	20.0
11	22.0	20.0	21.0	26.5	22.0	24.0	24.0	21.5	22.5	19.5	18.5	19.0
12	22.5	18.0	20.5	24.5	21.5	23.0	23.5	19.5	22.0	19.5	18.0	18.5
13	21.5	19.5	20.5	22.0	20.5	21.0	19.5	18.5	19.0	20.5	18.0	19.0
14	21.0	19.0	20.0	21.5	20.0	20.5	19.5	18.0	19.0	19.5	18.5	19.0
15	24.0	19.5	22.0	21.5	19.5	20.5	20.0	18.5	19.0	20.0	18.0	19.0
16	25.5	21.5	24.0	21.0	19.0	20.0	19.5	18.5	19.0	21.0	19.0	20.0
17	25.0	22.5	24.0	23.5	19.5	21.5	19.5	17.5	18.5	20.5	19.5	20.0
18	25.5	21.5	24.0	23.0	21.5	22.0	20.0	18.0	19.0	19.5	15.5	17.0
19	25.0	22.5	24.0	22.5	20.5	21.5	20.5	19.0	19.5	17.0	15.5	16.0
20	23.5	20.5	22.0	23.0	20.0	21.5	21.5	19.5	20.5	17.0	16.0	16.5
21	24.0	20.0	22.0	24.5	20.5	23.0	20.5	18.5	20.0	17.0	16.5	17.0
22	21.5	20.0	21.0	25.5	22.0	24.0	19.5	18.0	18.5	17.5	16.5	17.0
23	24.5	19.5	22.0	25.0	23.0	24.0	20.0	17.5	18.5	18.0	17.0	17.5
24	24.5	20.0	22.5	25.0	22.0	23.5	21.0	19.0	20.0	18.5	17.5	18.0
25	24.5	21.0	22.5	23.5	21.5	22.5	20.5	19.5	20.0	18.5	18.0	18.5
26	24.0	21.0	22.5	24.0	21.0	22.5	19.5	18.5	19.0	18.5	17.5	18.0
27	23.5	21.0	22.5	22.5	19.5	21.0	20.5	18.5	19.5	18.0	17.0	17.0
28	22.0	20.0	21.0	19.5	17.0	18.0	22.0	19.0	20.5	17.0	16.5	16.5
29	23.5	19.0	21.0	20.0	18.0	19.0	23.5	20.0	21.5	16.5	16.0	16.5
30	24.5	19.5	22.0	20.5	19.0	20.0	22.5	21.0	21.5	16.5	16.0	16.0
31	---	---	---	23.0	20.0	21.5	23.0	21.0	22.0	---	---	---
MONTH	25.5	15.0	20.7	27.0	17.0	22.4	25.5	17.5	20.6	23.0	15.5	18.7
YEAR	27.0	0.0	11.2									

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^2.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1973 to current year.

INSTRUMENTATION.--Water-temperature recorder provides 15-minute-interval readings. Prior to August 1994, water-temperature recorder provided one-hour-interval readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1976, 1978, 1980-81, 1983-84, 1986, 1989-90, 1992-2004) 31.5°C, July 5, 1999; minimum (water years 1974, 1977-78, 1980, 1983-2004), 0.0°C on many days during winters, except 1978, 1980, 1985.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 27.5°C, July 5; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.0	13.5	14.0	11.0	10.0	10.5	5.0	5.0	5.0	3.0	2.5	2.5
2	13.5	12.5	13.0	11.5	11.0	11.5	5.0	3.0	4.0	3.0	2.5	2.5
3	13.0	12.0	12.5	12.0	11.0	11.5	3.0	1.5	2.5	3.5	3.0	3.0
4	12.5	11.0	11.5	12.0	12.0	12.0	1.5	1.0	1.5	4.0	3.5	4.0
5	11.5	10.5	11.0	12.0	11.5	11.5	1.5	1.0	1.5	4.0	3.5	3.5
6	11.0	10.5	11.0	11.5	11.0	11.0	1.5	1.0	1.5	3.5	2.0	2.5
7	11.5	10.5	11.0	11.0	10.5	11.0	1.5	1.0	1.0	2.0	0.0	1.0
8	12.5	11.0	11.5	10.5	8.0	9.5	1.0	0.0	0.5	0.0	0.0	0.0
9	13.5	12.0	12.5	8.0	6.5	7.0	1.5	0.5	1.0	0.0	0.0	0.0
10	15.0	13.0	14.0	6.5	5.5	6.0	3.0	1.5	2.0	0.0	0.0	0.0
11	16.0	14.0	15.0	6.0	5.0	5.5	4.5	3.0	3.5	0.0	0.0	0.0
12	15.5	14.5	15.0	7.0	5.5	6.0	4.0	3.0	3.5	0.0	0.0	0.0
13	15.5	14.0	15.0	7.5	6.5	7.5	3.0	2.5	2.5	0.5	0.0	0.0
14	15.0	14.0	14.5	6.5	5.5	6.0	2.5	1.0	1.5	0.0	0.0	0.0
15	14.5	12.0	13.5	5.5	5.0	5.0	1.0	0.5	1.0	0.0	0.0	0.0
16	12.0	11.0	11.5	5.0	4.5	4.5	2.0	1.0	1.5	0.0	0.0	0.0
17	11.0	10.0	10.5	5.5	5.0	5.5	2.5	2.0	2.0	0.0	0.0	0.0
18	10.5	9.5	10.0	6.5	5.5	6.0	2.5	2.0	2.0	0.0	0.0	0.0
19	10.0	9.5	9.5	9.0	6.5	7.5	2.0	1.5	2.0	0.0	0.0	0.0
20	10.0	8.5	9.5	9.0	8.5	8.5	2.0	1.5	1.5	0.0	0.0	0.0
21	11.0	9.5	10.0	8.5	7.0	7.5	1.5	1.0	1.0	0.0	0.0	0.0
22	11.0	9.5	10.5	8.0	7.0	7.5	1.5	0.5	1.0	0.0	0.0	0.0
23	9.5	8.0	9.0	7.5	7.0	7.5	2.5	1.5	2.0	0.0	0.0	0.0
24	8.0	7.5	7.5	8.0	7.0	7.5	3.5	2.5	3.0	0.0	0.0	0.0
25	8.0	7.0	7.5	8.0	6.5	7.0	3.0	2.5	3.0	0.0	0.0	0.0
26	9.0	7.5	8.0	6.5	5.5	6.0	3.0	3.0	3.0	0.0	0.0	0.0
27	10.5	9.0	10.0	6.0	5.5	5.5	3.5	3.0	3.0	0.0	0.0	0.0
28	10.5	10.0	10.5	7.5	6.0	6.5	3.0	2.5	3.0	0.0	0.0	0.0
29	10.0	9.5	10.0	7.5	6.5	7.0	3.0	2.0	2.5	0.0	0.0	0.0
30	10.0	9.5	9.5	6.5	5.0	5.5	3.0	2.5	2.5	0.0	0.0	0.0
31	10.5	9.5	10.0	---	---	---	3.0	2.5	3.0	0.0	0.0	0.0
MONTH	16.0	7.0	11.2	12.0	4.5	7.7	5.0	0.0	2.2	4.0	0.0	0.6

DELAWARE RIVER BASIN

01432805 DELAWARE RIVER AT POND EDDY, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	0.0	0.0	0.0	7.0	6.5	6.5	15.5	13.5	14.5
2	0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.0	6.5	16.0	15.0	15.5
3	0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.0	6.5	16.0	13.0	14.5
4	0.0	0.0	0.0	0.5	0.0	0.0	7.0	5.5	6.5	13.0	11.5	12.5
5	0.0	0.0	0.0	0.5	0.5	0.5	5.5	4.5	5.0	12.0	11.0	11.0
6	0.0	0.0	0.0	1.0	0.5	0.5	5.0	3.0	4.0	13.0	10.5	12.0
7	0.0	0.0	0.0	1.0	0.0	0.5	7.0	4.5	5.5	14.5	12.5	13.5
8	0.0	0.0	0.0	2.0	0.5	1.0	7.0	6.0	6.5	14.5	13.0	14.0
9	0.0	0.0	0.0	2.5	1.5	2.0	7.5	6.0	6.5	14.5	13.0	14.0
10	0.0	0.0	0.0	3.0	2.0	2.5	8.0	6.0	7.0	16.0	13.5	14.5
11	0.0	0.0	0.0	4.0	2.5	3.0	8.0	6.5	7.5	17.5	14.5	16.0
12	0.0	0.0	0.0	4.0	3.0	3.5	8.0	7.0	7.5	17.5	16.5	17.0
13	0.0	0.0	0.0	3.5	2.5	3.0	8.0	7.0	7.5	19.0	17.0	18.0
14	0.0	0.0	0.0	2.5	1.5	2.0	7.5	7.0	7.0	18.5	17.5	18.0
15	0.0	0.0	0.0	3.5	1.5	2.5	8.5	6.5	7.5	20.0	17.5	19.0
16	0.0	0.0	0.0	3.5	2.0	2.5	9.0	7.0	8.0	20.5	19.0	19.5
17	0.0	0.0	0.0	2.5	1.5	2.0	10.5	8.5	9.5	19.0	17.5	18.0
18	0.0	0.0	0.0	2.5	1.5	2.0	12.5	10.0	11.5	19.5	17.5	18.5
19	0.0	0.0	0.0	3.0	1.5	2.5	14.0	11.5	13.0	20.0	18.5	19.0
20	0.0	0.0	0.0	4.0	1.5	2.5	14.5	12.5	13.5	19.0	17.0	18.5
21	0.0	0.0	0.0	4.0	3.0	3.5	14.0	12.5	13.5	19.0	17.5	18.5
22	0.0	0.0	0.0	3.0	1.5	2.5	14.5	12.5	13.5	21.0	18.0	19.5
23	0.0	0.0	0.0	3.0	1.0	2.0	14.5	13.0	13.5	23.0	20.5	21.5
24	0.0	0.0	0.0	4.5	2.0	3.0	14.0	11.5	13.0	23.5	21.5	22.5
25	0.0	0.0	0.0	5.0	4.0	4.5	13.0	11.0	12.0	22.0	20.5	21.0
26	0.0	0.0	0.0	7.0	5.0	5.5	11.0	9.5	10.0	21.5	19.5	20.5
27	0.0	0.0	0.0	8.0	6.5	7.0	10.5	9.0	10.0	21.5	19.0	20.5
28	0.0	0.0	0.0	9.0	7.0	8.0	11.0	9.5	10.5	21.0	20.0	20.5
29	0.0	0.0	0.0	8.5	7.5	8.0	12.5	10.0	11.0	20.0	18.0	19.0
30	---	---	---	8.0	7.0	7.5	14.0	11.5	13.0	19.0	16.5	18.0
31	---	---	---	7.5	7.0	7.0	---	---	---	18.0	16.0	17.0
MONTH	0.0	0.0	0.0	9.0	0.0	2.9	14.5	3.0	9.1	23.5	10.5	17.3
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.5	15.5	16.0	25.5	22.0	23.5	23.5	21.5	22.5	22.0	20.5	21.0
2	17.5	15.0	16.5	27.0	22.5	24.0	24.5	21.5	23.0	21.5	19.5	20.5
3	18.5	16.5	17.5	27.0	22.5	24.5	25.5	22.5	24.0	22.0	20.0	21.0
4	19.5	16.5	18.0	26.5	23.0	24.5	25.5	23.0	24.5	23.0	20.5	21.5
5	18.5	17.0	17.5	27.5	24.0	25.5	25.0	23.0	23.5	22.0	20.0	21.0
6	17.0	16.0	16.5	26.5	24.0	25.0	23.0	21.0	21.5	22.0	19.0	20.0
7	18.5	15.5	17.0	25.5	22.5	24.0	21.0	19.5	20.0	23.0	20.0	21.0
8	21.0	18.0	19.5	25.5	23.0	24.5	21.5	19.0	20.0	21.5	20.5	21.5
9	23.0	20.0	21.5	24.5	23.0	24.0	24.5	19.5	21.5	21.0	20.0	20.5
10	23.0	21.5	22.0	25.0	21.5	23.0	24.5	21.0	22.5	20.5	19.5	20.0
11	21.5	20.5	21.0	27.0	22.5	24.0	24.5	22.0	23.0	19.5	19.0	19.0
12	22.0	19.0	20.5	24.5	22.5	23.5	23.0	20.5	22.0	19.0	18.0	18.5
13	21.5	20.0	20.5	22.5	21.0	22.0	20.5	19.0	19.5	20.0	18.0	19.0
14	22.0	19.5	20.5	21.5	20.5	21.0	19.0	18.5	19.0	20.0	18.5	19.0
15	24.5	20.0	22.0	21.5	20.0	21.0	20.0	19.0	19.5	19.5	18.5	19.0
16	26.0	22.5	24.0	21.0	20.0	20.5	20.0	18.5	19.5	20.5	19.0	20.0
17	25.5	24.0	24.5	23.0	20.0	21.5	19.0	17.5	18.5	20.5	20.0	20.0
18	25.5	23.0	24.0	22.5	21.5	22.0	20.0	18.0	19.0	20.0	15.5	17.5
19	24.5	23.0	24.0	22.5	21.0	21.5	20.5	19.0	19.5	16.5	15.5	16.0
20	24.0	21.5	22.5	23.0	21.0	22.0	21.5	19.5	20.5	17.0	16.0	16.5
21	25.0	20.0	22.0	24.5	22.0	23.0	21.0	19.5	20.0	17.5	16.5	17.0
22	22.0	21.0	21.5	25.5	23.5	24.5	19.5	18.0	19.0	18.0	16.5	17.5
23	25.0	20.0	22.0	24.5	24.0	24.0	19.5	17.5	19.0	19.0	17.0	18.0
24	25.5	21.5	23.0	25.0	22.5	23.5	20.5	19.0	20.0	19.5	18.0	18.5
25	24.0	22.0	23.0	24.0	22.0	23.0	20.5	19.5	20.0	19.0	18.5	19.0
26	25.0	22.0	23.0	23.5	22.0	23.0	20.0	19.0	19.5	18.5	17.5	18.0
27	24.0	21.0	22.5	23.5	20.5	22.0	20.5	18.5	19.5	17.5	16.5	17.0
28	22.5	21.0	21.5	20.5	17.5	18.5	21.5	19.5	20.5	16.5	15.5	16.0
29	24.0	20.0	21.5	20.0	18.0	19.0	23.0	21.0	22.0	16.0	15.5	15.5
30	24.5	20.5	22.5	20.5	19.0	20.0	23.0	21.5	22.5	16.0	15.5	15.5
31	---	---	---	22.5	20.0	21.5	23.5	21.5	22.5	---	---	---
MONTH	26.0	15.0	20.9	27.5	17.5	22.7	25.5	17.5	20.9	23.0	15.5	18.8
YEAR	27.5	0.0	11.2									

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY
(Pennsylvania Water-Quality Network Station

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.

DRAINAGE AREA.--3,070 mi^2.

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, non-recording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Service prior to June 20, 1914.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Lake Wallenpaupack (station 01431700) and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs 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^2 of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir. Information on the above lakes and reservoirs can be found in the annual Water-Data Report NY-04-1. 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. Satellite and telephone gage-height telemeters and National Weather Service telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to current degree of regulation, 233,000 ft^3/s, Aug. 19, 1955, gage height, 23.91 ft, from floodmarks in gage house, from rating curve extended above 89,000 ft^3/s, on basis of slope-area measurement of peak flow; maximum discharge since current degree of regulation, 134,000 ft^3/s, Jan. 20, 1996, gage height, 18.37 ft; maximum gage height, 26.6 ft, Feb. 12, 1981 (ice jam), from floodmarks; minimum observed discharge, 175 ft^3/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^3/s, Oct. 10, 1903, gage height, 23.1 ft, from rating curve extended above 70,000 ft^3/s, by velocity-area studies; maximum gage height, 25.5 ft, Mar. 8, 1904 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,500 ft^3/s, Mar. 22, gage height, 10.51 ft; minimum, 977 ft^3/s, Oct. 3, gage height, 1.93 ft.

REVISIONS.--Revised daily (in **Bold**), monthly and yearly discharges for 2003 water year and statistical summaries for period of record through 2003 water year are given below. These figures supersede those published in the report for 2003.

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,430	2,950	4,210	e5,000	**2,920**	**4,330**	16,000	5,240	10,100	5,180	2,370	1,970
2	1,190	2,890	**e4,000**	14,800	**2,760**	**3,970**	14,000	5,170	16,700	4,760	2,840	13,200
3	1,140	2,730	**e3,800**	15,800	**2,870**	**e4,100**	13,500	8,510	12,300	4,110	3,720	25,300
4	1,370	2,380	**e3,400**	11,700	**3,210**	**e4,200**	12,500	9,050	10,900	3,410	3,520	31,700
5	1,840	2,250	**e2,900**	9,600	**3,680**	**4,360**	12,200	7,800	10,200	3,320	5,720	31,900
6	1,730	2,460	**e3,000**	8,440	**e4,500**	**e4,200**	12,400	6,920	9,040	3,330	7,070	20,100
7	1,690	3,730	**e2,700**	7,540	**4,250**	**e3,900**	12,000	6,190	8,290	3,070	7,080	14,100
8	1,740	3,660	**e2,600**	e5,800	**4,040**	**3,650**	11,300	5,520	9,750	2,870	5,460	11,100
9	1,540	3,090	**e2,500**	**e6,400**	**3,540**	**3,550**	10,500	5,180	8,390	2,650	5,830	8,830
10	1,710	2,560	**e2,400**	**e6,000**	**3,410**	**e3,400**	9,800	4,440	7,210	2,540	5,760	7,450
11	2,100	2,530	**e2,500**	**e5,600**	**3,410**	**e3,300**	9,860	3,880	6,430	2,610	5,820	6,600
12	7,980	2,600	**3,160**	**e5,200**	**e3,200**	**3,190**	10,300	4,310	6,800	4,090	13,400	5,570
13	11,700	4,070	**4,110**	**e4,900**	**e2,800**	**e3,100**	9,520	5,560	8,760	2,740	10,500	4,300
14	7,270	5,070	5,700	**e4,500**	**e2,900**	**e3,100**	8,670	5,250	11,200	2,340	9,100	3,880
15	5,260	4,370	7,510	**e4,000**	**e2,900**	**3,100**	8,040	4,980	14,000	2,510	8,320	5,360
16	5,090	4,270	7,410	**e3,700**	**e2,900**	**3,320**	7,450	4,610	10,800	2,160	6,850	13,300
17	20,300	8,130	6,340	**e3,400**	**e2,700**	6,420	6,860	4,310	8,780	2,260	4,970	10,800
18	14,700	14,200	5,270	**e3,300**	**e2,900**	13,900	6,330	3,840	7,770	2,430	4,650	8,670
19	9,330	12,400	4,590	**e3,200**	**e2,900**	24,300	5,590	3,560	7,230	2,200	4,180	8,180
20	7,030	9,680	5,310	**e3,200**	**2,990**	21,200	4,950	3,450	6,330	1,840	3,760	7,640
21	5,650	8,570	10,300	**e2,900**	**3,070**	36,500	4,830	3,250	11,800	1,930	3,430	6,510
22	4,640	8,250	9,150	**e3,000**	**3,510**	45,600	5,140	3,100	19,500	2,690	3,140	5,530
23	3,900	9,620	8,030	**e3,000**	**4,500**	41,900	5,090	3,000	18,800	5,120	2,570	13,000
24	3,070	9,480	7,050	**e3,100**	**5,930**	30,700	4,860	2,690	14,500	5,170	2,020	23,900
25	2,940	8,110	e6,200	**e3,200**	**6,150**	23,900	4,290	2,780	11,000	4,130	2,080	15,700
26	3,590	7,040	e5,000	**e3,300**	**6,050**	21,300	3,970	3,630	9,230	3,090	2,530	12,500
27	5,820	6,460	e5,200	**e3,000**	**5,530**	19,300	6,110	4,890	8,070	2,880	2,320	10,100
28	4,840	5,740	e4,800	**e2,900**	**5,180**	15,800	6,990	4,610	7,190	3,300	2,270	11,600
29	3,950	4,860	e4,500	**e3,100**	---	14,300	6,210	4,290	6,170	3,370	1,840	17,600
30	3,530	4,420	e4,300	**e3,300**	---	18,700	5,590	3,920	5,670	3,100	2,360	13,700
31	3,200	---	e4,200	**e3,400**	---	18,800	---	3,480	---	3,010	1,980	---
TOTAL	151,270	168,570	152,140	166,280	104,700	411,390	254,850	147,410	302,910	98,210	147,460	370,090
MEAN	4,880	5,619	4,908	5,364	3,739	13,270	8,495	4,755	10,100	3,168	4,757	12,340
MAX	20,300	14,200	10,300	15,800	6,150	45,600	16,000	9,050	19,500	5,180	13,400	31,900
MIN	1,140	2,250	2,400	2,900	2,700	3,100	3,970	2,690	5,670	1,840	1,840	1,970

e Estimated.

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**--Continued

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)												
MEAN	2,981	4,026	5,061	4,724	5,038	8,059	9,380	6,100	4,102	2,684	2,277	2,629
MAX	10,440	10,310	17,280	12,980	13,730	17,520	23,650	12,670	12,650	6,680	4,757	12,340
(WY)	(1978)	(1973)	(1997)	(1996)	(1976)	(1977)	(1993)	(1984)	(1972)	(1973)	(2003)	(2003)
MIN	1,001	884	1,475	1,216	1,601	2,583	2,954	1,890	993	699	963	1,144
(WY)	(1965)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1995)	(1965)	(1965)	(1965)	(1965)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	1,480,735		2,475,280			
ANNUAL MEAN	4,057		6,782		4,750	
HIGHEST ANNUAL MEAN					7,216	1973
LOWEST ANNUAL MEAN					2,028	1965
HIGHEST DAILY MEAN	23,900	May 14	45,600	Mar 22	95,200	Jan 20, 1996
LOWEST DAILY MEAN	666	Jan 20	1,140	Oct 3	385	Jul 6, 1965
ANNUAL SEVEN-DAY MINIMUM	842	Jan 16	1,480	Oct 1	432	Jul 1, 1965
10 PERCENT EXCEEDS	8,470		13,400		10,300	
50 PERCENT EXCEEDS	2,900		4,860		2,860	
90 PERCENT EXCEEDS	1,440		2,540		1,500	

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004**
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,400	21,200	14,300	10,800	2,590	1,660	7,020	6,480	4,510	1,810	4,850	7,180
2	9,720	16,000	12,300	9,780	2,460	2,140	8,690	5,810	5,110	1,600	5,520	5,380
3	8,450	13,600	10,600	8,890	e2,600	3,840	8,060	8,060	5,420	1,590	4,950	4,260
4	7,000	11,800	9,350	10,100	2,680	6,810	7,130	9,490	5,150	1,700	3,860	3,520
5	7,740	10,800	8,590	16,200	2,660	9,110	7,110	8,180	4,390	1,690	3,430	2,760
6	7,880	11,400	8,200	16,400	2,500	11,900	6,790	8,010	3,940	1,750	3,780	2,530
7	6,820	10,500	7,730	13,200	2,430	19,400	5,900	7,960	4,190	2,110	3,140	2,690
8	6,340	8,720	6,780	11,100	e2,400	16,000	5,520	6,770	3,860	2,330	2,260	2,920
9	5,680	7,710	6,140	e9,000	e2,400	12,700	5,410	6,040	3,660	2,160	2,040	6,830
10	5,270	7,300	5,830	e8,000	e2,400	10,500	4,860	6,300	3,520	2,000	2,300	12,400
11	4,800	7,030	15,800	e7,200	2,520	9,090	4,060	7,430	3,020	1,780	2,370	9,940
12	4,360	6,960	38,000	e6,600	2,570	8,270	3,700	8,210	2,650	1,640	3,180	7,320
13	4,130	7,350	25,800	e6,000	2,350	7,250	5,030	9,280	2,020	1,950	35,900	6,080
14	4,170	6,680	18,700	e5,600	2,240	6,140	8,550	8,840	1,910	2,020	25,400	5,370
15	7,320	6,240	15,900	e5,200	1,940	5,900	9,560	7,180	2,020	2,600	13,900	4,840
16	10,700	5,960	13,700	e5,000	e2,000	6,200	8,050	6,310	1,900	3,350	13,300	4,370
17	8,470	5,410	12,200	e4,700	e2,100	5,540	6,980	6,380	2,030	3,030	13,900	4,450
18	7,060	5,230	14,200	e4,400	e2,000	5,110	5,990	6,070	2,210	2,400	11,700	90,400
19	6,130	5,420	12,900	e4,200	1,980	4,830	5,590	5,810	2,400	2,650	9,530	88,500
20	6,490	22,300	11,200	e4,000	1,990	4,400	5,440	5,330	2,040	3,310	8,180	42,400
21	6,440	28,700	10,200	e3,800	1,900	4,440	5,190	4,670	1,650	2,820	7,460	26,900
22	6,000	21,000	8,910	e3,600	1,590	5,370	4,680	3,880	1,830	2,640	8,700	18,600
23	5,730	16,400	8,380	e3,400	1,660	5,060	4,970	3,170	1,690	2,640	7,640	13,800
24	5,460	13,500	13,000	e3,200	1,860	4,590	5,740	3,520	1,730	3,340	6,190	11,600
25	4,640	12,300	34,300	e3,100	1,800	5,090	5,110	3,830	1,680	3,830	5,410	9,700
26	4,000	11,300	28,000	e3,000	1,710	5,440	5,870	3,620	1,630	2,980	4,990	7,730
27	6,760	9,480	20,800	e2,900	1,710	5,730	10,900	4,470	1,770	2,830	4,840	7,040
28	27,400	8,990	16,400	e2,800	1,570	7,710	9,260	5,770	1,790	11,900	4,310	9,340
29	33,700	15,900	13,700	e2,800	1,510	8,060	7,970	5,880	1,640	11,200	3,860	18,100
30	44,600	17,200	12,200	e2,700	---	7,650	7,260	5,300	1,610	8,630	4,380	16,600
31	30,400	---	11,700	e2,600	---	7,070	---	4,480	---	5,750	4,870	---
TOTAL	315,060	352,380	445,810	200,270	62,120	223,000	196,390	192,530	82,970	102,030	236,140	453,550
MEAN	10,160	11,750	14,380	6,460	2,142	7,194	6,546	6,211	2,766	3,291	7,617	15,120
MAX	44,600	28,700	38,000	16,400	2,680	19,400	10,900	9,490	5,420	11,900	35,900	90,400
MIN	4,000	5,230	5,830	2,600	1,510	1,660	3,700	3,170	1,610	1,590	2,040	2,530
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)												
MEAN	3,156	4,214	5,288	4,766	4,966	8,038	9,311	6,103	4,070	2,699	2,407	2,934
MAX	10,440	11,750	17,280	12,980	13,730	17,520	23,650	12,670	12,650	6,680	7,617	15,120
(WY)	(1978)	(2004)	(1997)	(1996)	(1976)	(1977)	(1993)	(1984)	(1972)	(1973)	(2004)	(2004)
MIN	1,001	884	1,475	1,216	1,601	2,583	2,954	1,890	993	699	963	1,144
(WY)	(1965)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1995)	(1965)	(1965)	(1965)	(1965)

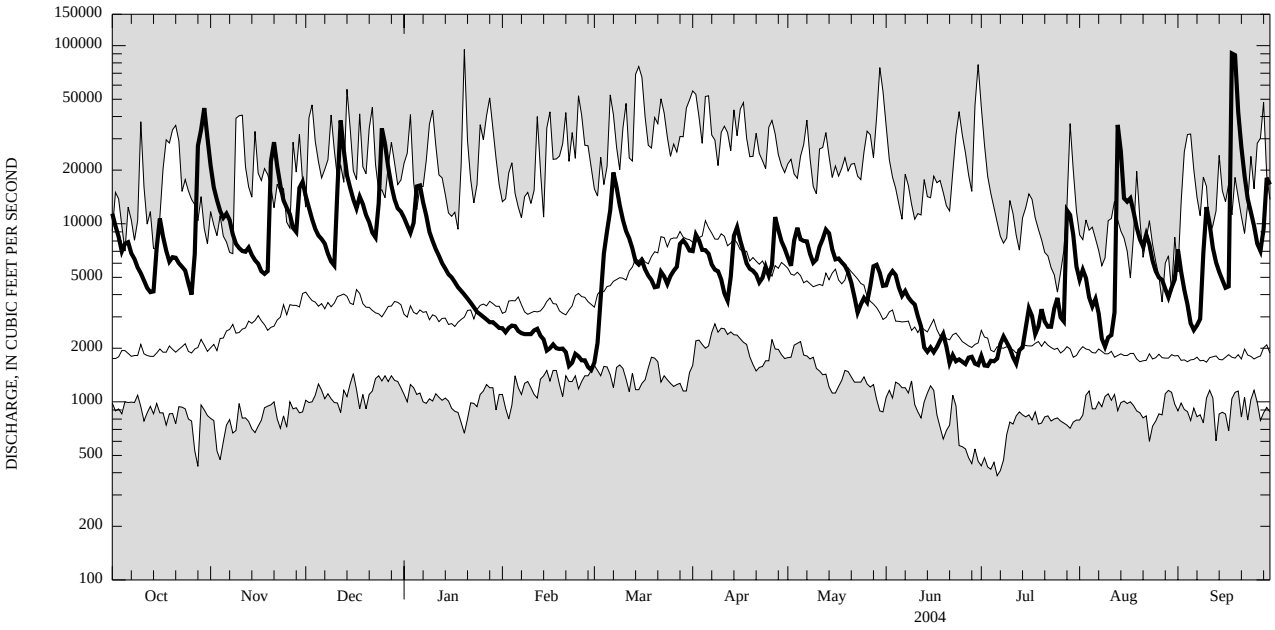
e Estimated.

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, **WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004**--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	3,116,550		2,862,250			
ANNUAL MEAN	8,538		7,820		4,825	
HIGHEST ANNUAL MEAN					7,820	2004
LOWEST ANNUAL MEAN					2,028	1965
HIGHEST DAILY MEAN	45,600	Mar 22	90,400	Sep 18	95,200	Jan 20, 1996
LOWEST DAILY MEAN	1,840	Jul 20	1,510	Feb 29	385	Jul 6, 1965
ANNUAL SEVEN-DAY MINIMUM	2,180	Aug 26	1,660	Jun 29	432	Jul 1, 1965
10 PERCENT EXCEEDS	16,400		14,000		10,400	
50 PERCENT EXCEEDS	6,140		5,740		2,900	
90 PERCENT EXCEEDS	2,900		2,000		1,510	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-60, 1964 to January 1994, June 1997, 1999 to August 2001, April 2002 to current year.
CHEMICAL DATA: 1958-59 (e), 1964-65 (c), 1966 (a), 1967-68 (c), 1969-76 (d), 1987 (b), 1988-89 (c), 1990-91 (b), 1992, 1997 (a), 1999-2001 (d).
MINOR ELEMENTS DATA: 1970, 1972-73 (a), 1974-76 (c), 1987 (b), 1988-89 (c), 1990-91 (b), 1992 (a).
PESTICIDE DATA: 1974 (a), 1987 (b), 1988-89 (c), 1990 (b), 1997 (a), 1999 (c), 2000-01 (d).
ORGANIC DATA: OC--1974 (b), 1975, 1999-2001 (d).
NUTRIENT DATA: 1968 (a), 1969-76 (d), 1987 (b), 1988-89 (c), 1990 (b), 1999-2001 (d).
BIOLOGICAL DATA:
Bacteria--1973-76 (d).
Phytoplankton--1974 (b), 1975-76 (c).
Periphyton--1976 (a).
SEDIMENT DATA: 1959, 1976 (c), 1988 (b), 1989 (c), 1990-91 (b), 1992 (a), 1999-2001 (d).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January to September 1973
WATER TEMPERATURE: February 1957 to September 1960, January to September 1973, June 1974 to January 1994, October 1998 to August 2001.
SUSPENDED-SEDIMENT DISCHARGE: February 1957 to September 1960, March 1970 to June 1976.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum (water years 1957-59, 1973-81, 1983-84, 1988-93, 1999-2000), 30.5°C, July 5, 1999; minimum (water years 1958-60, 1973, 1975-93, 1999, 2001), 0.0°C on many days during winter periods, except 1984.
SUSPENDED-SEDIMENT CONCENTRATION: (water years 1957-60, 1970-76): Maximum daily mean, 760 mg/L, June 29, 1973; minimum daily mean, less than 1 mg/L on many days.
SUSPENDED-SEDIMENT DISCHARGE: (water years 1957-60, 1970-76): Maximum daily, 187,000 tons, June 29, 1973; minimum daily, 1 ton, Aug. 29, 1957.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
08...	1800	1028	9813	6340	11.2	7.6	7.4	72	69	13.2	15	5.5	.2
DEC													
17...	1330	1028	9813	12200	14.1	7.2	7.1	68	65	2.7	19	5.5	1.2
FEB 2004													
19...	1430	1028	9813	1980	16.6	7.5	7.5	90	89	1.1	23	6.8	1.4
APR													
14...	0800	1028	9813	8550	12.4	6.8	6.9	79	79	7.9	20	6.1	1.3
JUN													
24...	1240	1028	9813	1730	9.6	8.0	7.1	90	88	22.6	22	6.6	1.4
AUG													
17...	0950	1028	9813	13900	9.1	7.1	6.5	56	56	18.2	18	5.1	1.3

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
08...	14	5.7	78	2	<.020	.13	<.040	<.01	.014	.40	3.1	<200	<10
DEC													
17...	11	6.2	34	<2	<.020	.31	<.040	.02	.017	.32	2.9	<200	<10
FEB 2004													
19...	14	7.0	62	2	<.020	.29	<.040	.01	.013	.45	2.3	<200	<10
APR													
14...	14	6.2	50	4	<.020	.25	<.040	.01	.018	.26	2.8	<200	<10
JUN													
24...	16	6.4	82	<2	.030	.10	<.040	<.01	.017	.30	2.5	<200	<10
AUG													
17...	17	4.8	68	58	<.020	.17	<.040	.07	.081	.66	3.8	2400	<10

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, unfltrd recover -able, µg/L (01092)
OCT 2003					
08...	110	<1.0	40	<50	<10
DEC					
17...	150	<1.0	20	<50	<10
FEB 2004					
19...	60	<1.0	<10	<50	40
APR					
14...	130	2.5	30	<50	<10
JUN					
24...	80	<1.0	40	<50	<10
AUG					
17...	2660	3.1	200	<50	<10

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	08/19/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Hydrobiidae	
Amnicola	4
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	13
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	6
Baetis	14
Ephemerellidae	
Drunella	1
Serratella	2
Heptageniidae	
Leucrocuta	3
Stenonema	4
Isonychiidae	
Isonychia	19
Odonata	
Coenagrionidae (DAMSELFLIES)	
Argia	2
Plecoptera (STONEFLIES)	
Perlidae	
Agnetina	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	1
Trichoptera (CADDISFLIES)	
Brachycentridae	
Brachycentrus	1
Micrasema	1
Glossosomatidae	1
Helicopsychidae	
Helicopsyche	2
Hydropsychidae	
Cheumatopsyche	3
Hydropsche	2
Potamyia	10
Lepidostomatidae	
Lepidostoma	2
Leptoceridae	
Oecetis	2
Philopotamidae	
Chimarra	2

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/19/03
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	1
Promoresia	8
Stenelmis	15
Psephenidae (WATER PENNIES)	
Psephenus	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	4
Simuliidae (BLACK FLIES)	
Simulium	4
Total Organisms	130
Total Taxa	29

DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'43", 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^2.

WATER-DISCHARGE RECORDS

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 NGVD 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 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, Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs. Information on the above lakes and reservoir can be found in the annual Water-Data Report NJ-04-1. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12,400	24,200	16,000	12,100	e3,000	2,000	8,030	7,420	4,770	1,840	5,040	8,820
2	10,600	18,400	13,700	11,100	e2,750	2,530	9,860	6,640	5,480	1,720	5,570	6,560
3	9,250	15,600	12,000	10,200	e2,900	4,330	9,450	8,320	5,640	1,610	5,110	5,130
4	7,750	13,500	10,800	11,400	e3,100	7,760	8,270	10,800	5,540	1,720	4,280	4,240
5	8,140	12,200	9,930	18,100	e2,900	10,200	7,990	9,170	4,790	1,770	3,780	3,350
6	8,710	12,900	9,480	19,000	e2,850	12,200	7,750	8,940	4,230	1,810	3,990	2,920
7	7,360	12,000	9,000	15,300	e3,150	19,400	6,880	8,820	4,420	2,170	3,620	2,820
8	6,830	10,100	7,950	12,700	e2,900	17,400	6,200	7,880	4,230	2,340	2,520	3,180
9	6,100	8,810	7,130	e10,500	e2,700	14,600	6,080	6,790	3,950	2,230	2,220	7,110
10	5,620	8,120	6,790	e7,500	e2,850	12,200	5,610	6,940	3,870	2,080	2,470	14,200
11	5,210	7,780	15,200	e6,100	e3,000	10,600	4,700	7,960	3,290	1,870	2,550	11,800
12	4,760	7,690	43,600	e7,250	e2,900	9,710	4,200	9,110	3,040	1,730	2,890	8,780
13	4,450	8,190	29,400	e7,850	e2,900	8,590	5,450	9,880	2,260	2,010	32,200	6,980
14	4,450	7,450	21,600	e7,200	e2,900	7,300	9,400	9,720	2,050	2,170	28,900	5,940
15	7,390	6,830	18,300	e5,650	e2,450	6,740	11,100	8,100	2,210	2,390	16,300	5,290
16	11,500	6,520	15,800	e4,500	e2,150	7,060	9,510	6,850	2,080	3,400	13,600	4,730
17	9,310	6,020	14,100	e5,000	e2,350	6,430	8,290	6,900	2,150	3,300	15,200	4,700
18	7,790	5,710	16,400	e5,450	e2,600	5,970	7,050	6,510	2,700	2,540	13,000	81,700
19	6,700	5,930	15,000	e5,450	e2,500	5,620	6,470	6,360	2,750	2,660	10,500	116,000
20	6,850	21,900	12,900	e5,200	e2,500	5,260	6,180	5,910	2,300	3,510	9,140	49,200
21	6,920	30,700	11,800	e4,600	e2,700	5,160	5,870	5,170	1,760	3,070	8,690	31,000
22	6,520	22,900	10,400	e4,350	2,430	6,040	5,450	4,470	1,910	2,750	10,300	22,100
23	6,190	18,200	9,790	e3,900	2,230	5,780	5,450	3,650	1,840	2,680	8,710	16,800
24	5,800	14,900	14,000	e3,550	2,490	5,250	6,430	3,750	1,820	4,510	6,710	13,900
25	5,260	13,500	38,600	e3,350	2,410	5,580	5,960	4,350	1,790	4,430	5,700	12,300
26	4,500	12,500	32,000	e3,350	2,190	6,050	6,060	3,950	1,740	3,360	5,280	9,850
27	6,950	10,700	24,000	e3,250	2,140	6,330	11,600	4,660	1,730	3,010	4,790	e7,650
28	28,500	10,000	19,100	e3,200	2,060	8,130	10,700	6,140	1,930	10,700	4,490	e10,500
29	36,000	17,700	15,900	e3,350	1,870	8,730	9,160	6,300	1,780	11,800	3,980	20,100
30	49,900	19,300	14,000	e3,300	---	8,390	8,290	5,770	1,700	9,780	4,420	18,500
31	34,300	---	13,200	e3,250	---	8,010	---	4,860	---	6,350	8,020	---
TOTAL	342,010	390,250	507,870	227,000	75,870	249,350	223,440	212,090	89,750	107,310	253,970	516,150
MEAN	11,030	13,010	16,380	7,323	2,616	8,044	7,448	6,842	2,992	3,462	8,193	17,200
MAX	49,900	30,700	43,600	19,000	3,150	19,400	11,600	10,800	5,640	11,800	32,200	116,000
MIN	4,450	5,710	6,790	3,200	1,870	2,000	4,200	3,650	1,700	1,610	2,220	2,820

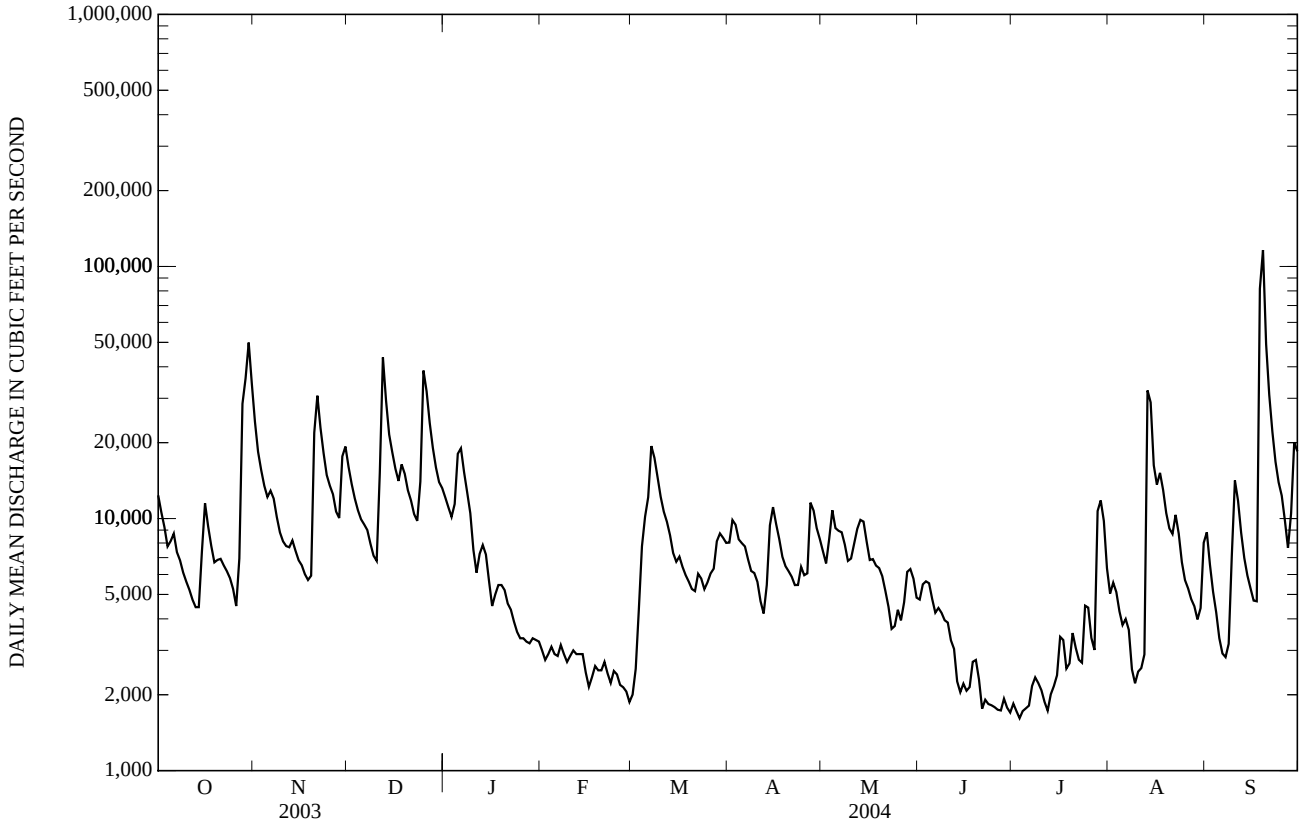
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	3,430	5,135	6,247	5,787	5,837	9,912	11,710	7,348	4,554	3,052	2,699	3,015
MAX	15,690	13,010	18,830	15,600	15,120	24,480	31,560	16,090	15,200	11,220	14,230	17,200
(WY)	(1956)	(2004)	(1997)	(1996)	(1976)	(1945)	(1940)	(1943)	(1972)	(1945)	(1955)	(2004)
MIN	807	995	1,665	1,318	1,748	3,191	3,322	2,215	1,214	864	715	892
(WY)	(1942)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1965)	(1965)	(1954)	(1954)	(1941)

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	3,430,550		3,195,060			
ANNUAL MEAN	9,399		8,730		5,722	
HIGHEST ANNUAL MEAN					8,730	2004
LOWEST ANNUAL MEAN					2,309	1965
HIGHEST DAILY MEAN	49,900	Mar 22	116,000	Sep 19	187,000	Aug 19, 1955
LOWEST DAILY MEAN	1,940	Feb 17	1,610	Jul 3	412	Aug 23, 1954
ANNUAL SEVEN-DAY MINIMUM	2,310	Aug 25	1,730	Jun 29	565	Jul 1, 1965
MAXIMUM PEAK FLOW			168,000	Sep 18	250,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			28.37	Sep 18	35.15	Aug 19, 1955
INSTANTANEOUS LOW FLOW			1,410	Jul 3	382	Aug 24, 1954
10 PERCENT EXCEEDS	18,600		16,100		12,100	
50 PERCENT EXCEEDS	6,810		6,360		3,470	
90 PERCENT EXCEEDS	3,090		2,290		1,610	

a From rating curve extended above 90,000 ft^3/s on basis of flood-routing study.
e Estimated.



DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-73, 1976-78, July 1991 to current year.

REMARKS.-- Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.--Field data and samples for laboratory analyses were provided by the New Jersey Department of Environmental Protection. Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, total suspended solids, total ammonia + organic nitrogen in bed sediment, total phosphorus in bed sediment, fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services.

COOPERATIVE NETWORK SITE DESCRIPTOR.-- Delaware River Main Stem, New Jersey Department of Environmental Protection Watershed Management Area 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
NOV													
06...	1045	13,100	2.3	.114	.087	755	9.9	92	7.2	71	13.5	11.6	19
MAR													
03...	1200	4,390	3.2	.060	.046	759	14.3	103	7.2	110	6.0	1.9	26
MAY													
27...	1145	4,710	2.5	.076	.058	745	8.7	99	7.5	90	23.5	20.4	22
AUG													
26...	1115	5,240	2.0	.101	.077	759	7.6	83	7.2	81	22.5	19.8	23

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
NOV													
06...	5.59	1.17	.82	5.13	13	7.70	<.2	3.3	6.3	39	46	2	<.20
MAR													
03...	7.73	1.59	.79	10.3	14	17.6	<.2	2.8	7.0	58	70	8	<.20
MAY													
27...	6.78	1.34	.73	7.43	14	11.3	<.2	1.9	6.3	46	52	5	<.20
AUG													
26...	7.04	1.27	.81	5.82	16	9.06	<.2	2.5	6.2	43	49	<13	.21

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)
NOV													
06...	.024	.020	.19	.005	<.02	<.020	.010	.019	--	--	.3	<.1	.3
MAR													
03...	<.020	--	.28	.004	.06	<.020	.009	.034	--	--	.4	<.1	.4
MAY													
27...	E.007	--	.28	.004	.07	E.008	.006	.022	--	--	.5	<.1	.5
AUG													
26...	E.006	--	.16	.003	.02	.012	.011	.018	.37	.39	.3	<.1	.3

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Boron, water, fltrd, µg/L (01020)
NOV 06...	3.2	<1.0	E6.5
MAR 03...	2.0	E1.8	E6.5
MAY 27...	2.2	2.2	E6.9
AUG 26...	2.8	E1.9	E6.8

Remark codes used in this table:
< -- Less than
E -- Estimated value

BED-MATERIAL TRACE-ELEMENT ANALYSES

The mercury-in-bed-sediment determination was not available at the time of publication; it is available in the files of the USGS New Jersey Water Science Center.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	pH bed sedimnt std units (70310)	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Phos-phorus, bed sedimnt total, mg/kg (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Inor-ganic carbon, bed sedimnt total, g/kg (00686)	Arsenic bed sedimnt total, µg/g (01003)	Cadmium bed sedimnt recover-able, µg/g (01028)	Chrom-ium, bed sedimnt recover-able, µg/g (01029)	Cobalt bed sedimnt recover-able, µg/g (01038)	Copper, bed sedimnt recover-able, µg/g (01043)	Iron, bed sedimnt total, µg/g (01170)	Lead, bed sedimnt recover-able, µg/g (01052)
AUG 26...	1115	7.20	450	6,000	7.9	<.2	<1	.150	5.5	3.1	7	9,100	9.1

Date	Mangan-ese, bed sedimnt recover-able, µg/g (01053)	Nickel, bed sedimnt recover-able, µg/g (01068)	Selen-ium, bed sedimnt total, µg/g (01148)	Zinc, bed sedimnt recover-able, µg/g (01093)	1,2-Di-methyl-naphth-alene, bed sed <2 mm, µg/kg (49403)	1,6-Di-methyl-naphth-alene, bed sed <2 mm, µg/kg (49404)	1Methyl -9H-fluor-ene, bed sed <2 mm, µg/kg (49398)	1-Methyl-phenan-threne, bed sed <2 mm, µg/kg (49410)	1-Methyl-pyrene, bed sed <2 mm, wsv nat µg/kg (49388)	236Tri-methyl-naphth-alene, bed sed <2 mm, µg/kg (49405)	2,6-Di-methyl-naphth-alene, bed sed <2 mm, µg/kg (49406)	2-Ethyl naphth-alene bed sed <2 mm wsv nat µg/kg (49948)	2-Methyl-anthra-cene, bed sed <2 mm, µg/kg (49435)
AUG 26...	310	7.0	<1	52	<50	<50	<50	<50	E17	<50	<50	<50	E9

Date	45Meth-ylene-phenan-threne, bed sed <2 mm, µg/kg (49411)	9H-Flour-ene, bed sed <2 mm, wsv nat µg/kg (49399)	Ace-naphth-ene, bed sed <2 mm, wsv nat µg/kg (49429)	Ace-naphth-ylene, bed sed <2 mm, wsv nat µg/kg (49428)	Anthra-cene, bed sed <2 mm, wsv nat field, µg/kg (49434)	Benzo-[a]-anthra-cene, bed sed <2 mm, µg/kg (49436)	Benzo-[a]-pyrene, bed sed <2 mm, wsv nat µg/kg (49389)	Benzo-[b]-fluor-anthene bed sed <2 mm µg/kg (49458)	Benzo-[ghi]-peryl-ene, bed sed <2 mm, µg/kg (49408)	Benzo-[k]-fluor-anthene bed sed <2 mm µg/kg (49397)	Chry-sene, bed sed <2 mm, wsv nat field, µg/kg (49450)	Dibenzo -[a,h]-anthra-cene, bed sed <2 mm, µg/kg (49461)	Fluor-anthene bed sed <2 mm wsv nat field, µg/kg (49466)
AUG 26...	E8	<50	E15	E32	E25	61	52	E43	E31	E42	55	<50	85

DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Indeno-[1,2,-3-cd]-pyrene, bed sed <2 mm µg/kg (49390)	Isophorone bed sed <2 mm, wsv nat field, µg/kg (49400)	Naphthalene, bed sed <2 mm wsv nat µg/kg (49402)	PCBs, bed sedimnt µg/kg (39519)	p-Cresol, bed sed <2 mm, wsv nat field, µg/kg (49451)	Phenanthrene, bed sed <2 mm, wsv nat field, µg/kg (49409)	Phenanthridine, bed sed <2 mm, wsv nat µg/kg (49393)	Pyrene, bed sed <2 mm, wsv nat field, µg/kg (49387)	Bed sediment, dry svd sve dia percent <.063mm (80164)	Bed sediment, falldia dst wat percent <.004mm (80157)
AUG										
26...	<50	<50	<50	<5	<50	E43	<50	68	8	2

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-COLUMN BACTERIA ANALYSES
Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Enterococci, m-EMF, water, col/100 mL (31649)	E coli, m-TECMF, water, col/100 mL (31633)	Fecal coliform, ECbroth water, MPN/100 mL (31615)
MAY					
11...	0735	7,360	230	100	20
AUG					
19...	0750	10,800	210	<100	20
26...	0900	5,880	330	<100	<20
31...	0910	8,870	1,900	1,000	1,300
SEP					
09...	0900	5,610	2,800	4,900	300

Remark codes used in this table:
< -- Less than

BUSH KILL BASIN

01439500 BUSH KILL AT SHOEMAKERS, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°05'17", long 75°02'17", Monroe County, Hydrologic Unit 02040104, on right bank 30 ft downstream from bridge on township route 523, 0.1 mi downstream from Saw Creek, 0.7 mi northwest of Shoemakers, and 2.0 mi southwest of Bushkill.

DRAINAGE AREA.--117 mi^2.

WATER-DISCHARGE RECORDS

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 those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1915	1,540	3.88
Oct. 29	1530	1,970	4.31
Dec. 11	1900	2,800	5.12
Dec. 24	2215	1,590	3.93
Aug. 13	1330	2,260	4.60
Aug. 21	1830	1,750	4.09
Sept. 18	1430	*5,330	*7.27

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	904	658	438	e190	129	226	254	192	43	118	321
2	405	745	569	393	e180	162	243	244	196	40	250	267
3	351	633	488	365	e190	262	230	424	179	37	189	230
4	327	551	426	392	e200	365	219	428	156	33	146	200
5	331	510	401	592	e190	403	197	375	139	31	138	178
6	292	537	391	567	e240	438	177	383	140	29	125	160
7	259	482	359	e470	e440	442	167	407	130	30	111	145
8	235	414	331	e400	e300	429	160	381	120	39	93	199
9	213	359	305	e310	e250	399	156	372	113	33	80	691
10	195	329	293	e300	e220	367	146	357	106	28	68	807
11	176	306	1690	e290	e210	341	140	523	106	24	73	610
12	162	301	1960	e280	e200	317	141	474	95	31	94	499
13	149	293	1280	e280	e190	290	323	775	84	72	1770	421
14	140	272	967	e270	e190	264	500	669	81	72	1450	354
15	457	251	802	e270	e180	249	525	586	84	113	968	308
16	402	236	662	e260	e170	243	464	535	104	76	736	293
17	338	221	694	e250	e170	240	418	448	85	58	550	274
18	314	207	731	e250	e170	231	378	398	88	50	438	3770
19	282	287	599	e240	e170	231	342	364	79	64	368	3380
20	258	826	519	e240	e170	223	305	328	67	64	314	2070
21	241	680	454	e230	e180	274	276	290	59	49	1130	1310
22	236	581	402	e230	e190	275	255	264	64	40	1220	933
23	222	509	369	e220	e180	236	260	229	82	42	824	704
24	212	458	953	e210	e180	221	255	200	65	102	618	558
25	199	465	1330	e210	e170	230	232	183	56	86	499	464
26	188	417	1020	e200	e170	235	318	194	68	59	418	389
27	783	374	822	e200	e160	230	381	391	60	83	363	333
28	1170	468	678	e210	e150	224	321	311	51	232	365	616
29	1660	950	580	e200	e130	207	278	237	53	164	363	913
30	1500	764	527	e200	---	192	264	184	48	121	294	652
31	1130	---	487	e190	---	207	---	166	---	118	370	---
TOTAL	13292	14330	21747	9157	5730	8556	8297	11374	2950	2063	14543	22049
MEAN	429	478	702	295	198	276	277	367	98.3	66.5	469	735
MAX	1660	950	1960	592	440	442	525	775	196	232	1770	3770
MIN	140	207	293	190	130	129	140	166	48	24	68	145
CFSM	3.66	4.08	6.00	2.52	1.69	2.36	2.36	3.14	0.84	0.57	4.01	6.28
IN.	4.23	4.56	6.91	2.91	1.82	2.72	2.64	3.62	0.94	0.66	4.62	7.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2004, BY WATER YEAR (WY)

MEAN	127	212	268	258	270	431	427	304	199	127	102	100
MAX	773	643	841	807	706	1119	1002	773	919	747	864	735
(WY)	1956	1933	1997	1979	1909	1936	1993	1989	1972	1945	1955	2004
MIN	7.74	13.6	21.7	44.2	39.7	156	141	90.7	32.8	13.4	8.33	4.39
(WY)	1965	1965	1999	1981	1934	1981	1985	1941	1962	1999	1964	1964

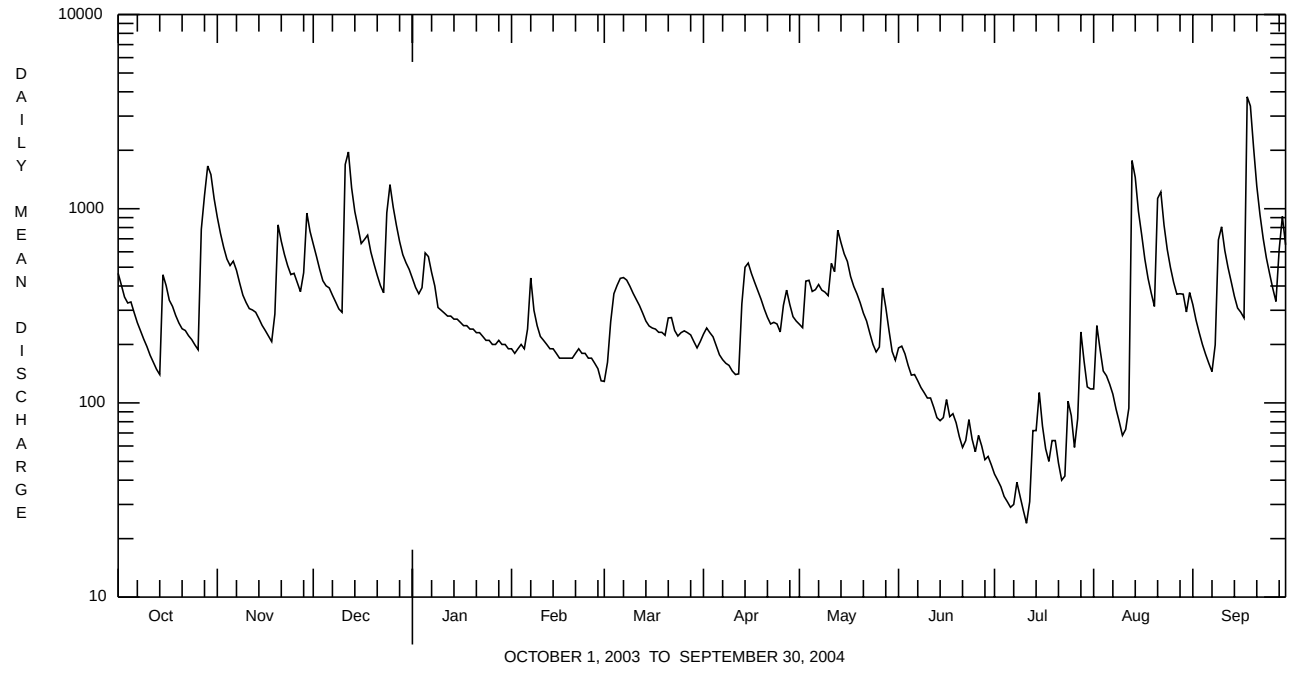
e Estimated.

BUSH KILL BASIN

01439500 BUSH KILL AT SHOEMAKERS, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1909 - 2004	
ANNUAL TOTAL	137257		134088			
ANNUAL MEAN	376		366		235	
HIGHEST ANNUAL MEAN					419	1928
LOWEST ANNUAL MEAN					95.4	1965
HIGHEST DAILY MEAN	2220	Jun 22	3770	Sep 18	11800	Aug 19 1955
LOWEST DAILY MEAN	59	Aug 29	24	Jul 11	2.6	Sep 25 1964
ANNUAL SEVEN-DAY MINIMUM	68	Aug 25	31	Jul 5	2.7	Sep 21 1964
MAXIMUM PEAK FLOW			**a**5330	Sep 18	**a**23400	Aug 19 1955
MAXIMUM PEAK STAGE			7.27	Sep 18	**b**13.95	Aug 19 1955
INSTANTANEOUS LOW FLOW					2.6	Sep 25 1964
ANNUAL RUNOFF (CFSM)	3.21		3.13		2.01	
ANNUAL RUNOFF (INCHES)	43.64		42.63		27.32	
10 PERCENT EXCEEDS	767		697		522	
50 PERCENT EXCEEDS	251		261		160	
90 PERCENT EXCEEDS	103		80		27	

a From rating curve extended above 2,600 ft^3/s on basis of slope-area measurement of peak flow.
b From floodmark.



01439500 BUSH KILL AT SHOEMAKERS, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484. Some values for "*dissolved*" parameters exceed values for the corresponding "*total*" parameter. These results are within the limits of analytical precision and methods.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-tance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)
OCT 2003													
07...	1210	1028	9813	259	11.1	6.9	6.7	38	35	8.5	11	2.7	2.8
DEC													
15...	1540	1028	9813	774	14.3	6.4	6.5	34	32	1.3	9	2.2	2.3
APR 2004													
19...	1440	1028	9813	337	10.9	7.0	6.6	43	37	15.2	10	2.6	2.8
JUN													
21...	1510	1028	9813	59	9.3	7.6	7.2	46	41	21.7	13	3.6	3.5
AUG													
18...	1410	1028	9813	423	9.6	5.9	6.3	33	33	19.1	9	2.3	2.4

Date	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
OCT 2003													
07...	.91	.94	6	.00	5.3	32	8	<.020	<.04	<.040	.01	.012	.31
DEC													
15...	.80	.82	4	.00	6.0	72	8	<.020	<.04	<.040	.01	.021	.15
APR 2004													
19...	.80	.85	6	10	6.1	--	--	<.020	<.04	<.040	.01	.017	.30
JUN													
21...	1.1	1.1	11	5.8	5.7	14	6	<.020	<.04	<.040	.01	.026	.27
AUG													
18...	.75	.78	5	19	5.0	64	2	<.020	<.04	<.040	.01	.022	.25

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover-able, µg/L (01067)
OCT 2003													
07...	1.4	50	70	<4	<4	110	140	<1.0	<1.0	3	9	<4.0	<4.0
DEC													
15...	2.1	40	70	<4	<4	40	90	<1.0	<1.0	6	10	<4.0	<4.0
APR 2004													
19...	1.3	40	60	--	--	50	90	<1.0	<1.0	6	20	<4.0	<4.0
JUN													
21...	1.6	20	30	<4	<4	60	130	<1.0	<1.0	5	10	<4.0	<4.0
AUG													
18...	1.0	80	120	<4	<4	150	240	<1.0	<1.0	6	20	<4.0	<4.0

Date	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003		
07...	5	<5
DEC		
15...	7	7
APR 2004		
19...	6	6
JUN		
21...	<5	<5
AUG		
18...	8	9

01439500 BUSH KILL AT SHOEMAKERS, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	08/19/03
Benthic macroinvertebrate	Count
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	1
Baetis	15
Centroptilum	1
Ephemerellidae	
Dannella	5
Heptageniidae	9
Epeorus	1
Leucrocuta	3
Stenonema	11
Isonychiidae	
Isonychia	7
Leptophlebiidae	
Paraleptophlebia	3
Odonata	
Coenagrionidae (DAMSELFLIES)	
Argia	1
Gomphidae (DRAGONFLIES)	1
Plecoptera (STONEFLIES)	
Perlidae	
Acroneuria	8
Neoperla	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Nigronia	1
Trichoptera (CADDISFLIES)	
Apataniidae	
Apatania	3
Glossosomatidae	
Glossosoma	1
Hydropsychidae	
Cheumatopsyche	19
Hydropsyche	1
Lepidostomatidae	
Lepidostoma	6
Limnephilidae	1
Rhyacophilidae	
Rhyacophila	1

01439500 BUSH KILL AT SHOEMAKERS, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/19/03
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	1
Oulimnius	5
Stenelmis	6
Psephenidae (WATER PENNIES)	
Psephenus	6
Diptera (TRUE FLIES)	
Athericidae	
Atherix	1
Chironomidae (MIDGES)	13
Empididae (DANCE FLIES)	
Hemerodromia	1
Total Organisms	136
Total Taxa	31

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, along State Highway 447, 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^2.

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 those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Nov. 28	2230	1,120	4.47
Dec. 11	1400	4,500	7.74
Dec. 24	1645	1,420	4.89
Aug. 12	2345	3,660	7.12
Aug. 21	1345	1,930	5.51
Sept. 9	1245	1,170	4.54
Sept. 18	1000	*5,720	*8.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	372	368	232	e72	65	134	130	131	29	54	126
2	223	317	309	211	e72	103	133	134	126	28	155	103
3	194	272	257	207	e76	173	122	390	113	27	117	91
4	191	237	226	244	e80	255	119	304	95	26	84	82
5	188	248	209	424	e75	277	110	256	88	25	85	77
6	160	268	208	355	e80	321	98	239	94	24	68	74
7	142	232	186	283	e95	299	94	271	86	25	54	68
8	130	199	167	e240	e85	269	90	235	75	26	47	163
9	119	176	154	e200	e80	237	88	232	68	24	41	904
10	112	163	156	e190	71	212	84	210	63	23	37	648
11	105	157	1850	e180	68	192	81	309	62	22	40	394
12	99	156	1130	e170	e62	178	80	287	57	28	370	294
13	90	152	734	e160	62	158	229	479	53	46	2140	236
14	84	137	577	e150	61	143	308	344	51	38	808	193
15	360	126	444	e150	e56	136	289	292	51	51	573	170
16	238	118	341	e140	e52	135	225	277	51	35	477	169
17	186	113	384	e140	e57	133	197	230	47	32	331	159
18	168	108	382	e130	e55	127	177	200	51	31	257	2720
19	153	227	306	e120	53	126	161	180	47	89	175	1200
20	140	655	265	e120	53	122	148	160	42	56	149	764
21	133	417	232	e110	56	161	137	144	40	41	812	602
22	133	320	213	e100	59	152	129	132	45	34	593	447
23	122	271	213	e94	56	130	137	117	50	32	371	333
24	113	238	837	e88	56	126	129	105	41	44	272	235
25	105	248	857	e82	e52	143	118	94	38	35	220	196
26	102	211	576	e74	e50	146	200	113	38	31	185	170
27	511	189	431	e80	51	144	216	306	35	68	162	148
28	638	373	363	e80	53	137	174	184	32	115	154	303
29	818	754	316	e78	56	127	151	139	33	78	140	423
30	654	469	293	e76	---	120	139	114	30	56	135	291
31	463	---	262	e74	---	126	---	107	---	49	189	---
TOTAL	7129	7923	13246	4982	1854	5173	4497	6714	1833	1268	9295	11783
MEAN	230	264	427	161	63.9	167	150	217	61.1	40.9	300	393
MAX	818	754	1850	424	95	321	308	479	131	115	2140	2720
MIN	84	108	154	74	50	65	80	94	30	22	37	68
CFSM	3.49	4.01	6.48	2.44	0.97	2.53	2.27	3.29	0.93	0.62	4.55	5.96
IN.	4.02	4.47	7.48	2.81	1.05	2.92	2.54	3.79	1.03	0.72	5.25	6.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	77.0	127	175	152	156	248	247	180	114	57.9	48.1	63.5
MAX	237	336	508	559	371	537	596	440	474	380	300	464
(WY)	1977	1973	1997	1996	1981	1977	1983	1989	1972	1969	2004	1987
MIN	8.36	10.2	19.8	15.1	41.8	92.7	84.0	62.3	23.2	10.6	7.91	7.56
(WY)	1964	1965	1999	1981	1980	1989	1985	1962	1962	1999	1999	1964

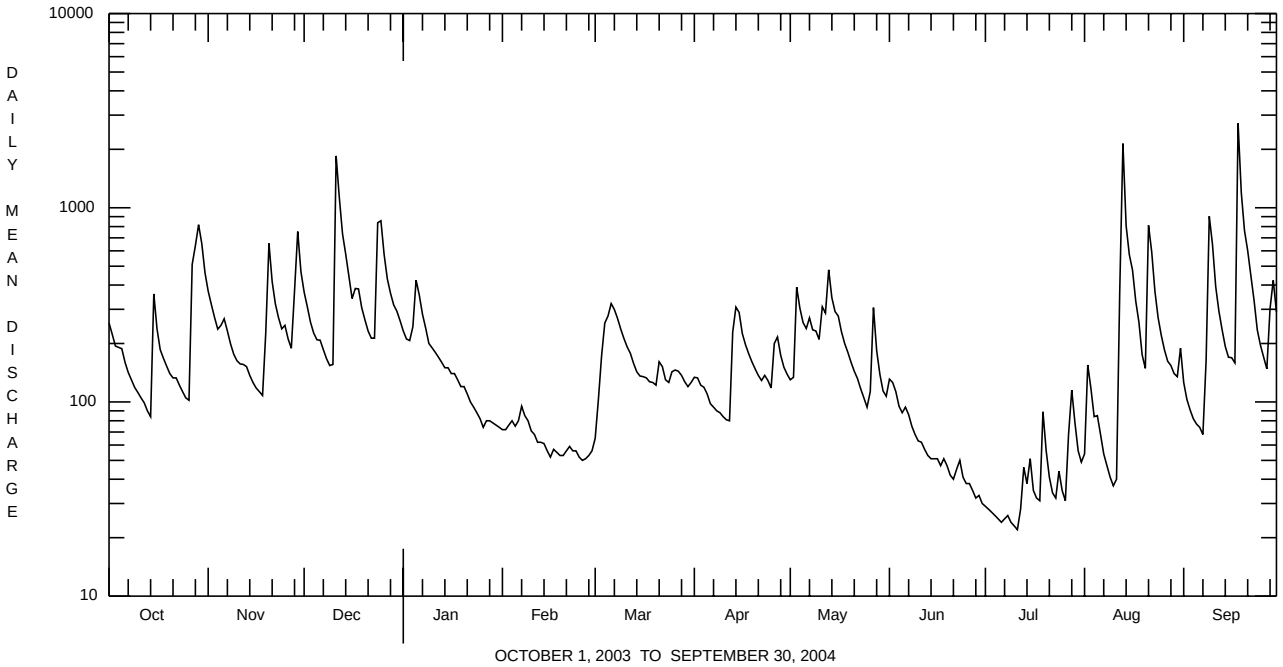
e Estimated.

BRODHEAD CREEK BASIN

01440400 BRODHEAD CREEK NEAR ANALOMINK, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	84287		75697			
ANNUAL MEAN	231		207		137	
HIGHEST ANNUAL MEAN					213	1973
LOWEST ANNUAL MEAN					59.6	1965
HIGHEST DAILY MEAN	1860	Jun 22	2720	Sep 18	6070	Jul 28 1969
LOWEST DAILY MEAN	36	Jul 31	22	Jul 11	5.1	Aug 13 1999
ANNUAL SEVEN-DAY MINIMUM	43	Aug 25	24	Jul 5	5.5	Aug 7 1999
MAXIMUM PEAK FLOW			**a**5720	Sep 18	**a**12900	Jul 28 1969
MAXIMUM PEAK STAGE			8.53	Sep 18	11.82	Jul 28 1969
INSTANTANEOUS LOW FLOW					4.9	Aug 7 1999**b**
ANNUAL RUNOFF (CFSM)	3.50		3.14		2.08	
ANNUAL RUNOFF (INCHES)	47.58		42.73		28.23	
10 PERCENT EXCEEDS	469		386		296	
50 PERCENT EXCEEDS	142		140		86	
90 PERCENT EXCEEDS	58		47		17	

a From rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow.
b Also Aug. 8, 12, 13, Sept. 5, 1999.



PARADISE CREEK BASIN

01440485 SWIFTWATER CREEK AT SWIFTWATER, PA

LOCATION.--Lat 41°05'38", long 75°19'21", Monroe County, Hydrologic Unit 02040104, on left bank at Aventis Pasteur Laboratories complex, at Discovery Drive in Swiftwater, Pocono Township, and 3.0 mi above mouth.

DRAINAGE AREA.--6.59 mi^2.

PERIOD OF RECORD.--April 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,114.73 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 18, 2001, nonrecording gage at site 500 ft downstream (datum undetermined).

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s (revised) and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1230	1,070	3.57	Aug. 21	1245	872	3.37
Aug. 12	2145	831	3.32	Sept. 18	0800	*2,340	*4.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	33	36	31	13	11	18	18	16	7.1	12	17
2	25	30	32	29	12	15	17	21	15	6.8	14	16
3	24	28	29	28	13	19	16	44	14	6.8	16	15
4	24	26	27	31	13	23	16	34	13	6.6	16	14
5	23	28	26	39	12	25	15	29	14	6.5	14	14
6	21	29	26	34	14	31	15	27	15	6.3	12	13
7	20	26	24	30	15	30	15	30	13	6.2	11	13
8	20	24	23	e26	13	27	14	26	12	6.1	10	54
9	19	23	22	e25	12	24	14	26	12	5.8	9.3	157
10	18	23	24	e23	12	22	13	25	12	5.8	9.0	75
11	18	23	305	e22	12	21	13	71	12	5.7	9.4	44
12	17	22	85	e21	12	20	14	47	11	11	99	38
13	16	22	55	e21	11	19	23	37	11	11	179	32
14	17	21	49	e20	11	18	27	32	11	9.4	64	27
15	38	20	43	e20	e10	17	25	30	11	11	40	25
16	28	19	38	e22	e10	17	23	31	10	7.7	31	26
17	23	19	41	e20	e10	17	21	27	10	7.5	27	28
18	21	18	40	e18	11	16	20	25	10	9.8	24	758
19	20	29	35	e18	10	16	19	24	9.7	24	22	115
20	19	48	32	e17	10	16	19	23	9.1	13	22	76
21	19	34	30	e16	11	19	18	22	8.9	9.0	171	55
22	18	30	29	e15	11	18	17	20	10	8.1	71	46
23	18	27	29	e15	10	16	18	19	9.8	7.9	42	37
24	17	26	113	e15	11	16	17	18	8.5	7.6	33	32
25	17	26	72	e14	10	19	16	17	8.3	6.7	27	29
26	17	24	54	e14	9.9	21	22	19	8.4	6.7	25	27
27	54	23	48	e14	9.9	20	23	25	7.7	16	22	24
28	44	47	42	e13	10	19	19	18	7.7	19	21	39
29	62	61	38	e13	10	18	18	16	8.3	12	19	48
30	47	40	36	e13	---	18	18	15	7.4	10	20	31
31	39	---	33	e12	---	18	---	16	---	11	21	---
TOTAL	789	849	1516	649	328.8	606	543	832	325.8	288.1	1112.7	1925
MEAN	25.5	28.3	48.9	20.9	11.3	19.5	18.1	26.8	10.9	9.29	35.9	64.2
MAX	62	61	305	39	15	31	27	71	16	24	179	758
MIN	16	18	22	12	9.9	11	13	15	7.4	5.7	9.0	13
CFSM	3.86	4.29	7.42	3.18	1.72	2.97	2.75	4.07	1.65	1.41	5.45	9.74
IN.	4.45	4.79	8.56	3.66	1.86	3.42	3.07	4.70	1.84	1.63	6.28	10.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	18.9	19.2	28.3	16.1	12.2	24.9	20.2	19.5	27.3	10.4	16.1	30.7
MAX	25.7	28.3	48.9	20.9	15.0	37.3	24.2	26.8	62.1	15.5	35.9	64.2
(WY)	2003	2004	2004	2004	2003	2003	2003	2004	2003	2003	2004	2004
MIN	5.65	5.90	11.3	7.81	10.5	18.0	18.1	13.1	10.9	8.36	5.59	7.63
(WY)	2002	2002	2002	2002	2002	2002	2004	2001	2004	2002	2002	2002

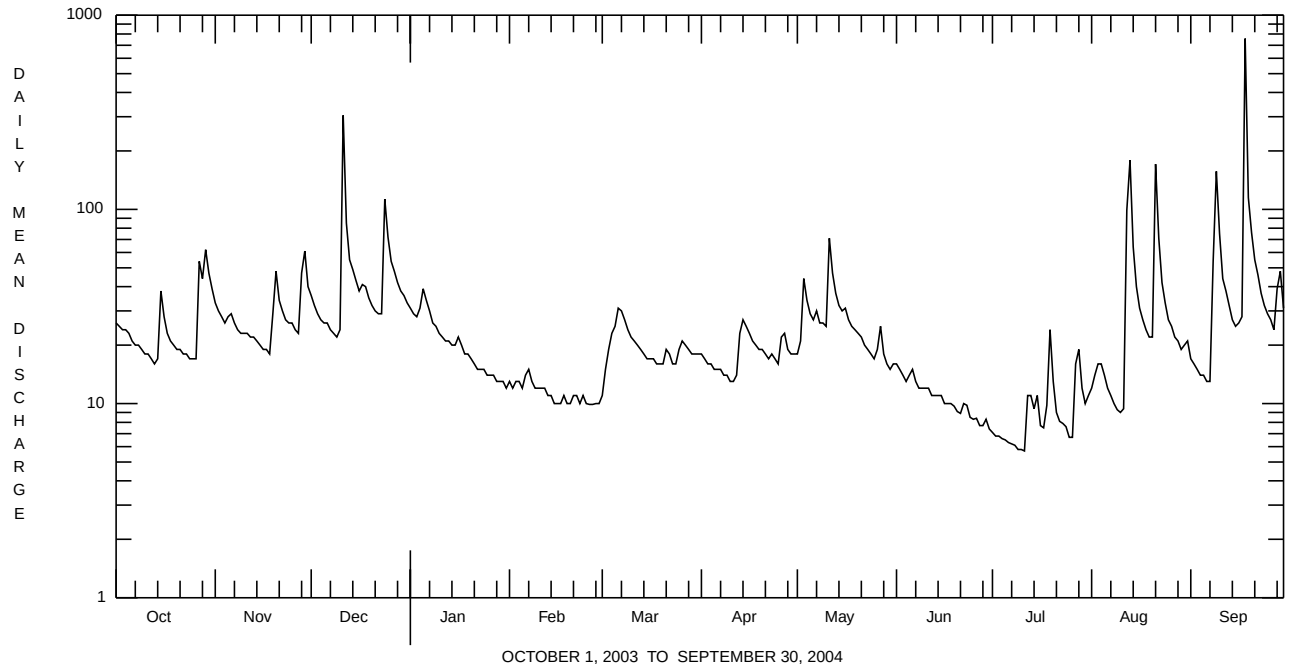
e Estimated.

PARADISE CREEK BASIN

01440485 SWIFTWATER CREEK AT SWIFTWATER, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2001 - 2004	
ANNUAL TOTAL	10643		9764.4			
ANNUAL MEAN	29.2		26.7		21.8	
HIGHEST ANNUAL MEAN					26.7	2003,2004
LOWEST ANNUAL MEAN					12.0	2002
HIGHEST DAILY MEAN	305	Dec 11	758	Sep 18	758	Sep 18 2004
LOWEST DAILY MEAN	10	Feb 20,21**a**	5.7	Jul 11	4.2	Sep 9 2002**b**
ANNUAL SEVEN-DAY MINIMUM	11	Aug 25	6.1	Jul 5	4.2	Sep 8 2002
MAXIMUM PEAK FLOW			**c**2340	Sep 18	**c**2340	Sep 18 2004
MAXIMUM PEAK STAGE			4.57	Sep 18	4.57	Sep 18 2004
ANNUAL RUNOFF (CFSM)	4.42		4.05		3.31	
ANNUAL RUNOFF (INCHES)	60.08		55.12		44.97	
10 PERCENT EXCEEDS	49		41		38	
50 PERCENT EXCEEDS	20		19		16	
90 PERCENT EXCEEDS	12		9.9		6.5	

a Also July 30, 31, Aug. 31.
b Also Sept. 10, 11, 13, 14.
c From rating curve extended above 1,000 ft^3/s.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

McMICHAEL CREEK BASIN

01441495 POCONO CREEK ABOVE WIGWAM RUN NEAR STROUDSBURG, PA

LOCATION.--Lat 40°59'27", long 75°15'20", Monroe County, Hydrologic Unit 02040104, on right bank at bridge on SR2005, 150 ft upstream from Wigwam Run, 4.0 mi upstream from mouth, and 4.0 mi west of Stroudsburg, Pa.

DRAINAGE AREA.--38.9 mi^2.

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 574.57 ft above National Geodetic Vertical Datum of 1929.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s (revised) and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1445	2,680	11.57	Sept. 8	2115	2,050	11.30
Aug. 13	0000	2,860	11.64	Sept. 18	1145	*4,110	*12.04

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	218	203	126	e48	56	75	71	68	18	88	103
2	122	182	164	114	e46	83	73	72	59	17	166	84
3	105	154	131	113	e48	110	68	175	55	16	94	74
4	110	134	115	138	e55	133	66	112	48	15	79	65
5	104	143	112	225	e50	135	60	94	49	14	75	60
6	88	149	109	159	e81	165	54	87	57	13	60	58
7	79	130	97	120	e120	142	54	108	50	18	52	53
8	74	108	89	107	e85	124	53	89	43	22	46	432
9	69	98	86	98	e64	108	53	87	40	15	42	942
10	64	91	96	e94	50	102	51	78	39	13	37	478
11	59	89	1160	e90	48	94	48	454	40	12	40	300
12	56	92	648	e88	45	86	49	282	35	35	351	222
13	52	87	375	86	44	78	146	249	32	64	1270	172
14	50	77	288	80	44	73	154	183	31	87	414	138
15	272	72	247	e78	43	70	189	153	32	108	266	118
16	116	69	201	e80	e41	70	135	198	29	58	197	115
17	94	67	279	e78	e41	71	118	134	28	47	148	105
18	89	64	245	e74	e39	69	105	113	31	57	121	1840
19	82	146	186	e64	39	71	96	106	27	176	101	715
20	75	336	158	e62	39	71	86	94	23	77	90	428
21	73	187	133	e60	43	102	79	85	22	56	555	298
22	69	154	127	e57	44	89	74	78	34	46	309	221
23	64	133	131	e55	42	76	79	69	37	51	208	172
24	61	122	600	e53	44	76	72	63	26	71	159	141
25	58	132	459	e52	42	93	68	57	23	44	130	119
26	57	108	313	e52	40	95	131	73	25	38	110	103
27	409	99	250	e52	40	90	119	158	21	144	97	91
28	337	268	208	e50	42	85	90	103	19	166	88	267
29	529	411	179	e50	47	79	81	74	24	114	79	315
30	360	243	168	e48	---	75	75	62	20	86	145	180
31	269	---	142	e48	---	78	---	62	---	75	193	---
TOTAL	4187	4363	7699	2651	1454	2849	2601	3823	1067	1773	5810	8409
MEAN	135	145	248	85.5	50.1	91.9	86.7	123	35.6	57.2	187	280
MAX	529	411	1160	225	120	165	189	454	68	176	1270	1840
MIN	50	64	86	48	39	56	48	57	19	12	37	53
CFSM	3.47	3.74	6.38	2.20	1.29	2.36	2.23	3.17	0.91	1.47	4.82	7.21
IN.	4.00	4.17	7.36	2.54	1.39	2.72	2.49	3.66	1.02	1.70	5.56	8.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	143	135	195	97.8	54.1	160	105	92.4	180	42.4	89.8	176
MAX	152	145	248	110	58.2	229	122	123	324	57.2	187	280
(WY)	2003	2004	2004	2003	2003	2003	2003	2004	2003	2004	2004	2004
MIN	135	125	141	85.5	50.1	91.9	86.7	61.5	35.6	18.6	9.99	18.0
(WY)	2004	2003	2003	2004	2004	2004	2004	2003	2004	2002	2002	2002

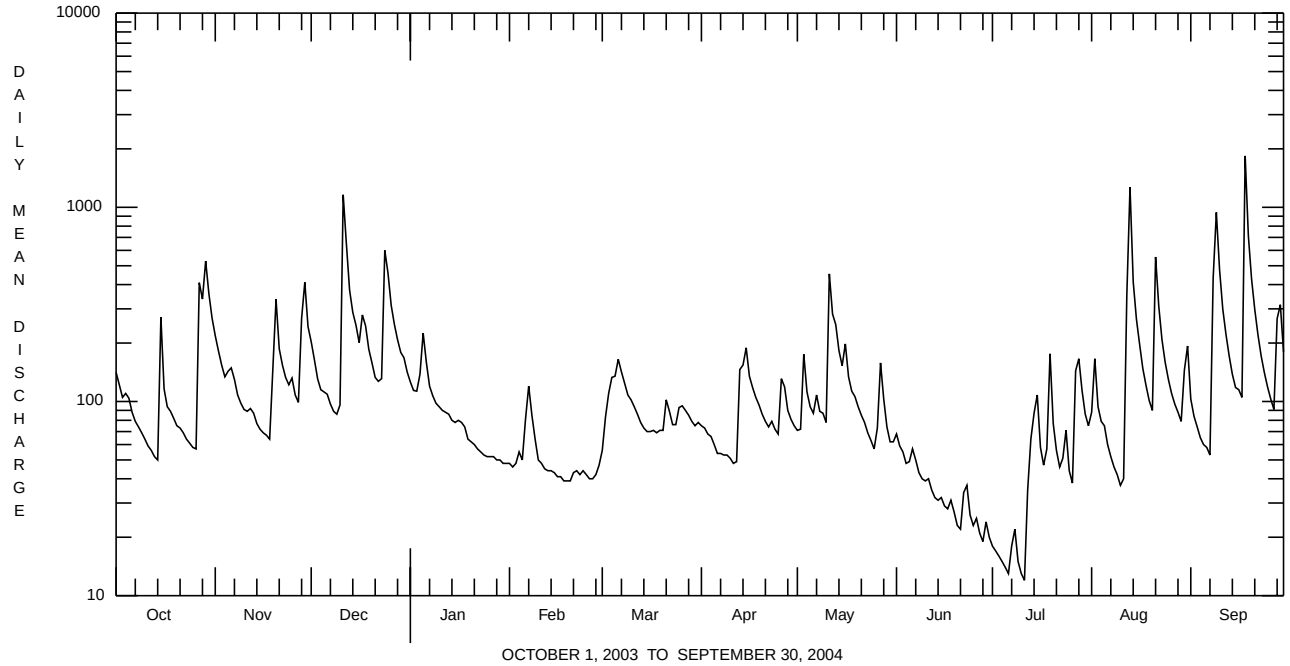
e Estimated.

McMICHAEL CREEK BASIN

01441495 POCONO CREEK ABOVE WIGWAM RUN NEAR STROUDSBURG, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	54404		46686			
ANNUAL MEAN	149		128		134	
HIGHEST ANNUAL MEAN					140	2003
LOWEST ANNUAL MEAN					128	2004
HIGHEST DAILY MEAN	1350	Sep 23	1840	Sep 18	1840	Sep 18 2004
LOWEST DAILY MEAN	28	Jul 31	12	Jul 11	6.6	Aug 15 2002**a**
ANNUAL SEVEN-DAY MINIMUM	31	Aug 25	15	Jul 5	7.2	Sep 8 2002
MAXIMUM PEAK FLOW			4110	Sep 18	4110	Sep 18 2004
MAXIMUM PEAK STAGE			12.04	Sep 18	12.04	Sep 18 2004
INSTANTANEOUS LOW FLOW					5.1	Aug 20 2002
ANNUAL RUNOFF (CFSM)	3.83		3.28		3.44	
ANNUAL RUNOFF (INCHES)	52.03		44.65		46.67	
10 PERCENT EXCEEDS	308		249		272	
50 PERCENT EXCEEDS	89		86		85	
90 PERCENT EXCEEDS	40		39		38	

a Also Sept. 12, 2002.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°59'55", long 75°08'35", Monroe County, Hydrologic Unit 02040104, on left bank at end of township route 646 at Minisink Hills, 500 ft upstream from Marshall Creek, 0.8 mi upstream from mouth, and 3.0 mi southeast of East Stroudsburg.

DRAINAGE AREA.--259 mi^2.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder and crest-stage gage. 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 those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	2030	4,680	6.13
Oct. 29	1415	4,690	6.14
Nov. 29	0015	4,620	6.10
Dec. 11	1700	12,200	9.35
Dec. 24	1845	5,540	6.60
Aug. 13	0215	11,400	9.05
Aug. 21	1530	6,940	7.28
Sept. 9	0045	6,540	7.09
Sept. 18	1315	*18,500	11.66
Sept. 19	0815	**a**	*18.23
Sept. 29	0145	5,150	6.39

a Backwater from Delaware River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	927	1510	1470	942	e280	349	485	491	464	142	445	590
2	817	1260	1210	852	e270	460	476	487	416	136	638	485
3	718	1080	994	810	e280	668	444	1210	382	131	480	430
4	709	929	869	925	e310	844	430	921	328	124	419	394
5	703	927	824	1630	e300	887	403	745	321	121	391	369
6	608	1030	822	1310	e380	1030	365	703	375	118	325	351
7	546	898	741	1000	621	959	355	849	333	121	276	324
8	506	768	675	860	452	847	349	721	288	156	246	1200
9	473	686	636	789	370	755	351	677	261	123	225	5400
10	446	647	635	636	352	699	327	625	250	110	207	3270
11	423	626	6070	e620	342	646	314	2050	276	105	217	2000
12	402	637	4560	e600	315	598	315	1390	235	175	647	1460
13	376	610	2920	e590	304	542	859	1670	216	378	7880	1140
14	356	553	2290	e530	298	499	1180	1170	213	323	3040	913
15	1500	518	1900	e500	287	483	1300	966	213	733	1890	795
16	807	494	1490	e460	e240	477	930	1090	211	322	1450	765
17	642	478	1840	e460	263	486	802	818	198	253	1020	688
18	601	461	1860	e440	267	465	712	697	222	284	814	e13000
19	556	765	1420	e410	267	480	645	645	202	757	647	e8500
20	515	2510	1210	e380	266	463	583	585	182	423	557	e5000
21	494	1460	1030	e360	285	634	538	531	171	294	4020	3160
22	477	1150	935	e350	313	590	509	490	210	243	2640	2190
23	451	974	918	e340	296	503	530	443	240	260	1600	1590
24	425	877	3360	e330	301	488	502	405	192	395	1160	1270
25	405	939	3500	e300	285	547	457	366	173	251	912	1010
26	394	794	2470	e300	271	561	803	424	198	213	753	865
27	2220	720	1890	e310	266	539	852	1070	164	619	657	735
28	2690	1360	1560	e310	276	517	631	663	153	1200	596	2050
29	3490	3130	1350	e300	304	480	552	493	181	713	565	3290
30	3340	1840	1250	e290	---	456	517	410	154	490	571	1780
31	1980	---	1080	e280	---	484	---	389	---	429	1100	---
TOTAL	28997	30631	53779	18214	9061	18436	17516	24194	7422	10142	36388	65014
MEAN	935	1021	1735	588	312	595	584	780	247	327	1174	2167
MAX	3490	3130	6070	1630	621	1030	1300	2050	464	1200	7880	13000
MIN	356	461	635	280	240	349	314	366	153	105	207	324
CFSM	3.61	3.94	6.70	2.27	1.21	2.30	2.25	3.01	0.96	1.26	4.53	8.37
IN.	4.16	4.40	7.72	2.62	1.30	2.65	2.52	3.47	1.07	1.46	5.23	9.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	330	546	740	619	650	977	971	699	448	255	258	285
MAX	1560	1634	2321	2051	1498	2108	2293	1619	1988	923	2505	2167
(WY)	1956	1973	1997	1996	1951	1977	1983	1989	2003	1969	1955	2004
MIN	54.4	68.1	83.4	50.6	196	387	312	268	119	58.1	46.4	40.8
(WY)	1964	1965	1981	1981	1980	1985	1985	1962	1962	1999	1957	1964

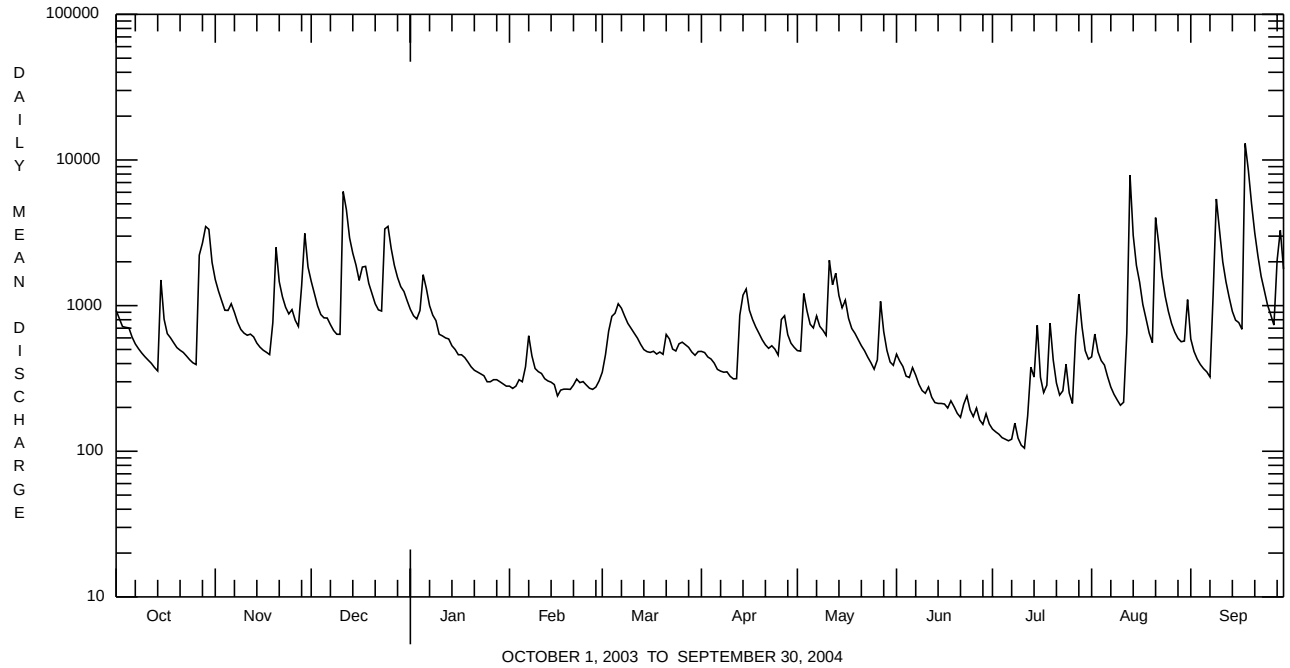
e Estimated.

BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	340770		319794			
ANNUAL MEAN	934		874		564	
HIGHEST ANNUAL MEAN					957	1952
LOWEST ANNUAL MEAN					238	1965
HIGHEST DAILY MEAN	6830	Jun 22	**e**13000	Sep 18	30500	Aug 19 1955
LOWEST DAILY MEAN	178	Jul 31	105	Jul 11	30	Sep 26 1964
ANNUAL SEVEN-DAY MINIMUM	210	Aug 25	122	Jul 5	33	Sep 6 1964
MAXIMUM PEAK FLOW			**b**18500	Sep 18	**b**68800	Aug 19 1955
MAXIMUM PEAK STAGE			**a**18.23	Sep 19	**c**27.00	Aug 19 1955
INSTANTANEOUS LOW FLOW					29	Sep 27 1964
ANNUAL RUNOFF (CFSM)	3.60		3.37		2.18	
ANNUAL RUNOFF (INCHES)	48.94		45.93		29.60	
10 PERCENT EXCEEDS	2040		1700		1210	
50 PERCENT EXCEEDS	579		546		351	
90 PERCENT EXCEEDS	255		242		94	

a Backwater from Delaware River.
b From rating curve extended above 10,100 ft^3/s on basis of slope-area measurement of peak flow.
c From floodmark, at site about 1,300 ft upstream at datum 2.19 ft higher.
e Estimated.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
07...	1340	1028	9813	544	10.9	7.6	7.4	137	124	9.9	36	10.8	2.1
DEC													
16...	1440	1028	9813	1440	14.2	7.0	7.2	120	111	3.5	33	10.1	1.9
FEB 2004													
23...	1330	1028	9813	289	16.0	7.2	7.2	191	188	3.5	49	15.2	2.6
APR													
26...	1520	1028	9813	980	12.7	7.8	7.5	156	152	10.0	37	11.4	2.1
JUN													
21...	1600	1028	9813	173	9.8	8.4	8.0	191	173	20.6	51	16.1	2.5
AUG													
16...	1310	1028	9813	1430	9.6	7.3	6.7	114	115	18.5	28	8.7	1.6

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
07...	23	10.5	90	<2	.050	.49	<.040	.03	.046	.82	2.4	<200	<10
DEC													
16...	18	10.3	106	42	<.020	.48	<.040	.02	.045	.56	2.4	250	<10
FEB 2004													
23...	29	13.3	120	<2	.220	.60	<.040	.05	.056	.96	1.5	<200	<10
APR													
26...	22	10.4	108	12	.090	.41	<.040	.02	.047	.78	2.2	<200	<10
JUN													
21...	34	12.4	146	2	.040	.48	<.040	.05	.062	.77	1.6	<200	<10
AUG													
16...	22	8.6	112	4	.020	.33	<.040	.03	.031	.59	3.8	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
07...	130	<1.0	20	<50	60
DEC					
16...	360	<1.0	40	<50	<10
FEB 2004					
23...	370	<1.0	20	<50	<10
APR					
26...	220	<1.0	40	<50	50
JUN					
21...	80	<1.0	20	<50	<10
AUG					
16...	220	<1.0	30	<50	20

BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	08/21/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Crustacea	
Amphipoda (SCUDS)	
Crangonyctidae	
Crangonyx	2
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	39
Baetis	15
Ephemerellidae	
Serratella	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	1
Hydropsyche	9
Lepidoptera (MOTHS AND BUTTERFLIES)	
Pyralididae	
Petrophila	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Microcylloepus	8
Optioservus	3
Oulimnius	1
Stenelmis	7
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	19
Empididae (DANCE FLIES)	
Hemerodromia	1
Simuliidae (BLACK FLIES)	
Simulium	14
Total Organisms	126
Total Taxa	17

DELAWARE RIVER BASIN

01443000 DELAWARE RIVER AT PORTLAND, PA

LOCATION.--Lat 40°55'26", long 75°05'46", Northampton County, Hydrologic Unit 02040105, at footbridge connecting Portland, PA and Columbia, NJ, 0.5 mi upstream from Paulins Kill, and at river mile 207.5.

DRAINAGE AREA.--4,165 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.--Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, total suspended solids, fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Delaware River Main Stem, New Jersey Department of Environmental Protection Watershed Management Area 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC													
09...	1450	9,370	1.3	.086	.067	758	14.3	102	7.3	80	2.0	1.3	24
FEB													
05...	1220	4,140	.9	.056	.042	768	14.3	97	7.0	119	3.0	.1	32
MAY													
03...	1210	9,460	2.5	.068	.052	753	9.2	94	6.8	92	9.5	15.8	24
AUG													
04...	1210	5,880	2.8	.098	.074	747	8.3	103	7.5	90	--	25.1	24

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
DEC													
09...	7.43	1.44	.70	5.77	16	8.71	<.2	3.8	7.7	47	47	4	<.20
FEB													
05...	9.75	1.76	.67	8.83	20	14.1	<.2	4.4	9.8	63	75	6	<.20
MAY													
03...	7.39	1.41	.58	6.77	16	11.3	<.2	1.9	7.2	47	50	9	<.20
AUG													
04...	7.36	1.33	.68	6.49	18	11.1	<.2	2.6	7.1	48	63	6	.17

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)
DEC													
09...	<.020	<.020	.31	<.003	<.02	.023	.014	.017	--	--	.2	<.1	.2
FEB													
05...	.036	--	.46	.003	<.02	<.020	.014	.025	--	--	.2	<.1	.2
MAY													
03...	.016	--	.26	.004	.09	E.009	.015	.024	--	--	.8	<.1	.8
AUG													
04...	.014	--	.19	.003	.07	.012	.039	.035	.36	.43	.6	<.1	.6

01443000 DELAWARE RIVER AT PORTLAND, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Boron, water, fltrd, µg/L (01020)
DEC			
09...	2.4	E1.7	E5.5
FEB			
05...	1.7	E1.6	E6.6
MAY			
03...	2.0	<1.0	E6.3
AUG			
04...	2.8	<1.0	8.2

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-COLUMN BACTERIA ANALYSES
Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Enterococci, m-EMF, water, col/100 mL (31649)	E coli, m-TECMF, water, col/100 mL (31633)	Fecal coliform, ECbroth water, MPN/100 mL (31615)
AUG					
12...	0940	3,520	50	<100	20
19...	0940	12,400	110	100	40
26...	0930	8,330	100	<100	70
31...	1015	10,200	1,900	200	800
SEP					
09...	0935	11,400	3,100	1,800	3,000

Remark codes used in this table:
< -- Less than

DELAWARE RIVER BASIN

01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'34", long 75°04'57", revised, 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^2.

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 NGVD of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by lakes Wallenpaupack and Cliff, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs and smaller reservoirs. Diversions from Pepacton, Cannonsville, and Neversink Reservoir. Information on the above lakes and reservoirs can be found in the annual Water-Data Report NJ-04-1. U. S. Geological Survey satellite gage-height telemetry and National Weather Service telephone gage-height telemetry 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^3/s, from rating curve extended above 170,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17,700	37,200	23,800	17,100	4,420	3,570	11,000	10,400	6,760	2,410	7,540	10,700
2	15,200	27,500	20,400	15,600	4,030	4,060	12,200	9,400	7,130	2,530	7,030	9,910
3	13,100	22,500	17,800	14,300	4,010	5,570	13,100	10,100	7,500	2,340	7,380	7,850
4	11,500	19,800	15,600	14,500	4,470	9,310	11,600	14,500	7,520	2,240	6,440	6,460
5	10,400	17,500	14,400	19,900	4,540	13,300	10,600	13,200	6,840	2,320	5,340	5,520
6	11,500	17,500	13,600	26,300	4,770	15,300	e10,200	12,200	6,140	2,320	4,990	4,610
7	10,400	17,500	13,000	21,800	5,880	22,700	e9,500	12,400	5,780	2,390	5,000	4,220
8	9,340	15,300	12,000	17,700	5,400	23,500	8,470	12,100	5,970	2,810	4,170	4,700
9	8,530	13,200	10,600	15,400	4,630	19,900	8,270	10,100	5,390	2,920	3,270	11,800
10	7,850	11,700	10,000	12,100	4,560	16,700	7,960	9,800	5,160	2,750	2,980	18,200
11	7,300	11,100	18,900	9,180	4,890	14,600	7,020	12,500	5,060	2,560	3,210	17,800
12	6,700	10,800	53,600	9,890	4,620	13,100	6,350	13,600	4,390	2,570	3,380	13,600
13	6,200	10,900	48,200	11,400	4,430	12,000	7,760	14,900	3,880	3,030	26,600	10,600
14	6,060	10,700	33,800	10,700	4,400	10,400	12,700	14,900	3,210	3,070	44,000	9,170
15	8,490	9,470	27,300	9,350	4,150	9,210	16,700	13,400	3,100	3,990	25,400	8,130
16	14,000	9,120	23,400	7,180	3,460	9,350	15,100	11,400	3,240	4,010	17,100	7,390
17	13,400	8,710	21,500	7,150	3,290	9,310	13,100	10,500	3,050	4,480	18,600	6,950
18	11,100	7,970	23,500	7,960	3,730	8,480	11,400	9,930	3,500	3,950	16,900	54,700
19	9,530	8,430	23,000	8,030	3,740	8,130	10,000	9,390	4,070	4,140	13,900	167,000
20	8,800	19,600	19,500	7,790	3,650	7,780	9,430	8,980	3,650	4,320	11,900	84,700
21	9,230	40,700	17,500	7,150	3,790	7,800	8,910	8,040	3,100	4,530	16,800	47,900
22	8,890	32,600	15,700	6,380	3,950	8,520	8,470	7,270	2,740	3,850	19,700	32,700
23	8,400	25,300	14,400	6,020	3,480	8,660	7,940	6,170	3,020	3,570	15,900	23,600
24	7,810	20,900	18,900	5,090	3,550	7,920	8,590	5,390	2,740	4,250	12,500	18,600
25	7,430	18,800	45,100	4,980	3,580	7,720	8,890	5,830	2,690	5,750	10,100	16,400
26	6,430	17,500	49,400	4,790	3,410	8,600	8,870	5,840	2,670	4,980	8,810	13,200
27	8,920	15,500	36,200	4,720	3,420	8,760	13,200	7,440	2,550	4,220	7,880	11,300
28	30,300	14,300	28,200	4,500	3,440	9,480	15,300	8,400	2,580	7,450	7,460	14,300
29	47,000	22,900	23,200	4,620	3,440	11,300	12,800	8,640	2,730	15,900	6,900	30,100
30	67,000	27,800	20,100	4,640	---	11,000	11,400	8,140	2,510	12,900	6,300	29,800
31	53,300	---	18,300	4,430	---	11,000	---	7,180	---	9,560	9,070	---
TOTAL	461,810	542,800	730,900	320,650	119,130	337,030	316,830	312,040	128,670	138,110	356,550	701,910
MEAN	14,900	18,090	23,580	10,340	4,108	10,870	10,560	10,070	4,289	4,455	11,500	23,400
MAX	67,000	40,700	53,600	26,300	5,880	23,500	16,700	14,900	7,520	15,900	44,000	167,000
MIN	6,060	7,970	10,000	4,430	3,290	3,570	6,350	5,390	2,510	2,240	2,980	4,220

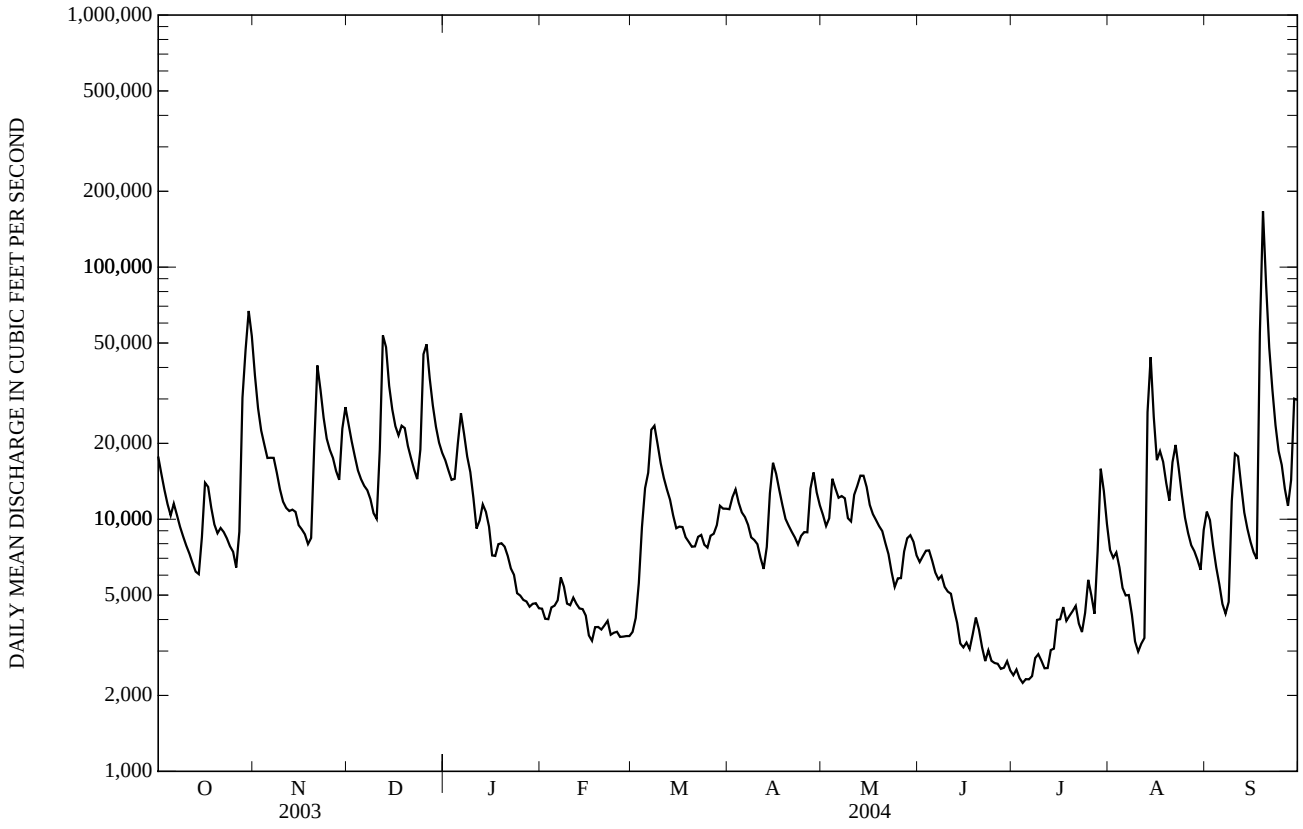
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2004, BY WATER YEAR (WY)

MEAN	4,732	7,203	8,547	7,994	8,218	13,910	15,650	9,877	6,163	4,305	3,760	4,124
MAX	19,570	21,140	27,730	21,020	19,930	42,520	40,720	21,470	22,280	16,840	19,260	23,400
(WY)	(1956)	(1928)	(1997)	(1996)	(1976)	(1936)	(1940)	(1989)	(1972)	(1928)	(1955)	(2004)
MIN	1,055	1,226	1,481	1,683	2,452	5,243	4,512	3,261	1,590	1,017	881	1,199
(WY)	(1942)	(1965)	(1923)	(1981)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1954)	(1941)

01446500 DELAWARE RIVER AT BELVIDERE, NJ--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1923 - 2004	
ANNUAL TOTAL	4,862,440		4,466,430			
ANNUAL MEAN	13,320		12,200		7,866	
HIGHEST ANNUAL MEAN					14,130	1928
LOWEST ANNUAL MEAN					2,990	1965
HIGHEST DAILY MEAN	67,500	Mar 22	167,000	Sep 19	184,000	Aug 19, 1955
LOWEST DAILY MEAN	2,920	Feb 17	2,240	Jul 4	610	Aug 25, 1954
ANNUAL SEVEN-DAY MINIMUM	3,340	Aug 26	2,360	Jul 1	782	Aug 14, 1954
MAXIMUM PEAK FLOW			184,000	Sep 19	273,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			24.80	Sep 19	30.21b	Aug 19, 1955
INSTANTANEOUS LOW FLOW			2,100	Jul 3	609	Sep 28, 1943
10 PERCENT EXCEEDS	27,000		22,900		16,600	
50 PERCENT EXCEEDS	9,530		9,020		5,040	
90 PERCENT EXCEEDS	4,500		3,440		1,960	

a From rating curve extended above 170,000 ft^3/s on basis of flood-routing study.
b From high-water mark in gage house.
e Estimated



LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA
(Pennsylvania Water-Quality Network Station)

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 4.0 mi southwest of Thornhurst.

DRAINAGE AREA.--91.7 mi^2.

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 those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

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^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	2300	1,470	3.78	Dec. 11	2045	2,700	5.33
Oct. 29	1730	1,360	3.63	Sept. 18	1215	*10,200	*11.59

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333	516	460	309	e100	89	191	181	231	51	209	97
2	296	448	388	283	e100	138	182	188	197	54	203	88
3	263	422	326	290	e110	248	173	499	180	49	176	82
4	292	379	293	389	e110	343	168	388	145	44	161	79
5	330	369	272	673	e100	417	157	307	146	42	184	78
6	278	403	279	585	e120	560	141	273	208	40	150	76
7	244	372	260	431	e160	539	134	334	181	40	111	71
8	219	330	242	e350	e130	438	131	305	145	40	93	113
9	199	297	227	e290	e110	358	124	303	122	37	81	625
10	184	264	226	e240	e110	315	117	279	115	35	70	571
11	171	247	1550	e230	e100	281	112	e600	109	34	158	334
12	154	251	1770	e220	e100	266	117	e450	97	50	227	232
13	145	239	875	e210	e100	237	207	e340	88	69	863	179
14	145	209	615	e200	e95	214	283	257	85	51	642	146
15	694	195	524	e190	e95	204	234	218	91	53	383	130
16	524	186	440	e180	e90	203	188	234	93	51	305	122
17	375	181	458	e180	e90	200	159	200	87	70	238	134
18	310	175	486	e170	e90	190	145	175	95	65	196	6050
19	272	242	404	e160	e85	185	133	181	104	163	171	2700
20	248	694	348	e150	e85	178	124	169	86	126	162	1120
21	229	475	307	e140	e80	222	123	147	75	91	531	687
22	224	339	279	e140	e85	205	121	141	90	69	445	489
23	208	290	275	e130	e85	179	143	126	137	106	299	382
24	190	279	686	e130	e85	179	141	113	96	128	228	315
25	176	320	919	e120	e80	227	130	101	82	85	185	269
26	169	286	625	e120	e80	251	266	154	82	66	157	238
27	750	261	481	e130	e80	260	339	673	70	117	139	212
28	1100	370	408	e130	e80	248	276	444	62	199	128	371
29	1090	875	361	e130	83	217	230	321	61	156	117	694
30	964	594	369	e120	---	195	199	238	56	111	106	536
31	657	---	352	e110	---	194	---	206	---	111	107	---
TOTAL	11433	10508	15505	7130	2818	7980	5188	8545	3416	2403	7225	17220
MEAN	369	350	500	230	97.2	257	173	276	114	77.5	233	574
MAX	1100	875	1770	673	160	560	339	673	231	199	863	6050
MIN	145	175	226	110	80	89	112	101	56	34	70	71
CFSM	4.02	3.82	5.45	2.51	1.06	2.81	1.89	3.01	1.24	0.85	2.54	6.26
IN.	4.64	4.26	6.29	2.89	1.14	3.24	2.10	3.47	1.39	0.97	2.93	6.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	122	181	217	195	195	305	350	253	166	106	92.5	98.0
MAX	613	439	561	665	709	577	867	604	655	528	1101	574
(WY)	1956	1973	1974	1996	1981	1977	1993	1989	1972	1947	1955	2004
MIN	14.1	17.1	35.5	18.3	62.2	131	135	92.9	43.0	19.8	14.2	9.18
(WY)	1964	1965	1981	1981	1980	1989	1995	1995	1962	1965	1964	1964

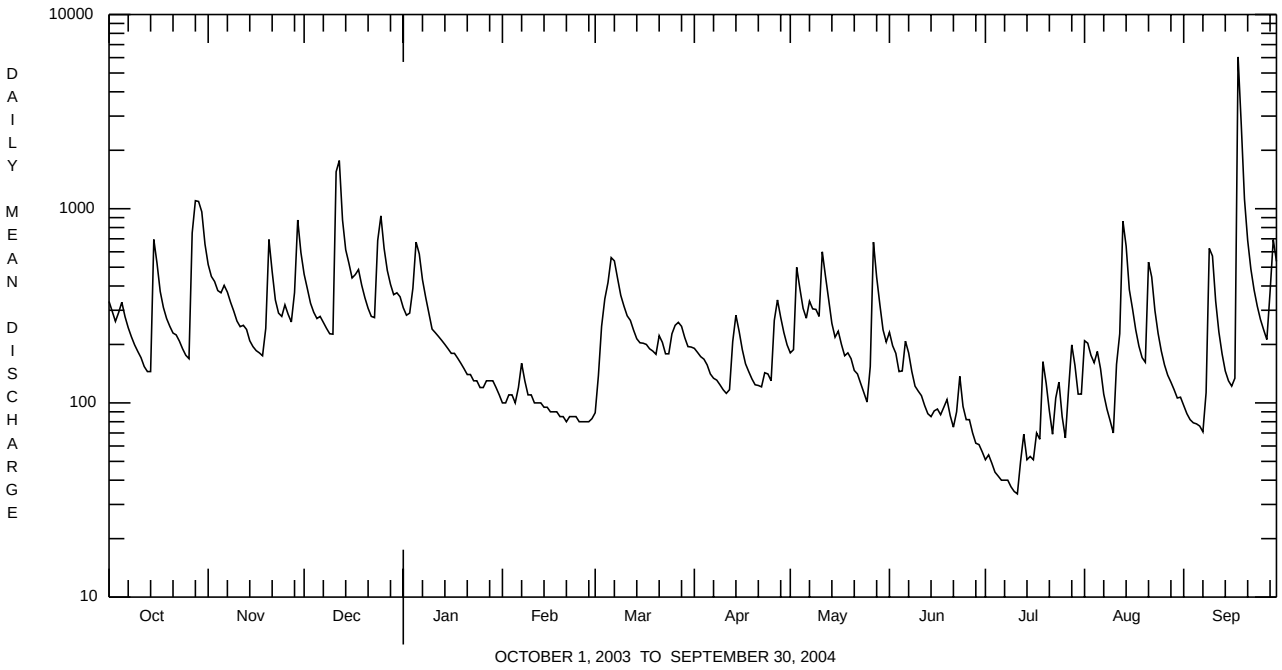
e Estimated.

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	118575		99371			
ANNUAL MEAN	325		272		190	
HIGHEST ANNUAL MEAN					282	2003
LOWEST ANNUAL MEAN					86.2	1965
HIGHEST DAILY MEAN	2640	Jun 22	6050	Sep 18	18900	Aug 19 1955
LOWEST DAILY MEAN	72	Jul 21	34	Jul 11	7.0	Sep 26 1964
ANNUAL SEVEN-DAY MINIMUM	79	Jul 15	38	Jul 5	7.4	Sep 21 1964
MAXIMUM PEAK FLOW			**a**10200	Sep 18	**a**31900	Aug 19 1955
MAXIMUM PEAK STAGE			11.59	Sep 18	**b**16.37	Aug 19 1955
INSTANTANEOUS LOW FLOW					7.0	Sep 26 1964
ANNUAL RUNOFF (CFSM)	3.54		2.96		2.07	
ANNUAL RUNOFF (INCHES)	48.10		40.31		28.16	
10 PERCENT EXCEEDS	634		504		392	
50 PERCENT EXCEEDS	226		190		129	
90 PERCENT EXCEEDS	110		82		33	

a From rating curve extended above 1,700 ft^3/s on basis of slope-area measurement of peak flow.
b From floodmark.



01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1926 to 1982; April 2002 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water year 1981 to September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good. Interruptions in the record were due to malfunctions of the recording instrument. Some values for *"dissolved"* parameters exceed values for the corresponding *"total"* parameter. These results are within the limits of analytical precision and methods. Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 31.5°C, July 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 26.5°C, July 5; minimum, 0.0°C, many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)
OCT 2003													
08...	1210	1028	9813	219	11.2	6.4	6.5	54	52	9.8	13	3.9	3.9
DEC													
16...	0820	1028	9813	447	14.6	6.2	6.4	48	44	.5	12	3.2	3.5
FEB 2004													
23...	1830	1028	9813	E85	15.3	6.3	7.0	77	76	1.2	17	5.1	5.3
APR													
20...	1100	1028	9813	123	12.4	7.2	6.8	69	58	13.2	15	4.7	4.5
JUN													
22...	1030	1028	9813	71	8.9	6.8	6.4	73	69	17.2	17	5.2	5.0
AUG													
18...	1130	1028	9813	204	10.1	5.7	6.5	54	54	16.9	13	3.7	4.0

Date	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
OCT 2003													
08...	.83	.83	6	.00	5.2	56	4	<.020	.09	<.040	<.01	<.010	.35
DEC													
16...	.71	.84	4	17	5.9	36	4	<.020	.16	<.040	.01	.015	.21
FEB 2004													
23...	.98	1.0	8	15	6.6	58	<2	<.020	.26	<.040	<.01	.013	.24
APR													
20...	.99	.94	7	15	5.9	38	<2	<.020	.06	<.040	<.01	.012	.31
JUN													
22...	1.0	1.0	12	16	5.3	22	2	<.020	.13	<.040	<.01	.016	.34
AUG													
18...	.76	.83	9	21	4.9	64	2	<.020	.08	<.040	<.01	.017	.26

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover-able, µg/L (01067)
OCT 2003													
08...	.7	70	90	<4	<4	170	200	<1.0	<1.0	40	40	--	--
DEC													
16...	1.6	80	110	<4	<4	110	170	<1.0	<1.0	50	60	<4.0	<4.0
FEB 2004													
23...	1.8	40	60	<4	<4	70	130	<1.0	<1.0	40	40	<4.0	<4.0
APR													
20...	1.0	70	70	<4	<4	50	80	<1.0	<1.0	20	30	<4.0	<4.0
JUN													
22...	1.7	30	70	<4	<4	100	210	<1.0	<1.0	20	30	<4.0	<4.0
AUG													
18...	1.1	100	120	<4	<4	180	310	<1.0	<1.0	40	60	<4.0	<4.0

Date	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003		
08...	8	8
DEC		
16...	10	10
FEB 2004		
23...	7	8
APR		
20...	5	10
JUN		
22...	<5	<5
AUG		
18...	8	10

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	08/21/03
Benthic macroinvertebrate	Count
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	22
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	5
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	4
Baetis	1
Caenidae	
Caenis	1
Ephemerellidae	
Attenella	4
Heptageniidae	
Stenonema	13
Isonychiidae	
Isonychia	3
Leptophlebiidae	
Paraleptophlebia	4
Tricorythidae	
Tricorythodes	1
Plecoptera (STONEFLIES)	
Perlidae	
Acroneuria	2
Trichoptera (CADDISFLIES)	
Apataniidae	
Apatania	1
Hydropsychidae	
Cheumatopsyche	11
Hydropsyche	6
Lepidostomatidae	
Lepidostoma	2
Philopotamidae	
Chimarra	3
Rhyacophilidae	
Rhyacophila	1

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/21/03
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	2
Oulimnius	3
Stenelmis	12
Psephenidae (WATER PENNIES)	
Psephenus	3
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	39
Total Organisms	144
Total Taxa	23

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	12.0	11.0	11.5	11.0	8.5	10.0	4.5	3.0	4.0	2.5	1.5	2.0
2	11.0	9.5	10.0	11.5	10.5	11.0	3.0	0.5	2.0	3.5	2.5	3.0
3	10.5	8.0	9.0	12.5	10.5	11.5	1.0	0.0	0.5	5.5	3.5	4.5
4	9.5	9.0	9.0	12.5	10.5	12.0	1.0	0.0	0.5	5.5	4.0	5.0
5	10.0	8.0	9.0	12.0	11.5	12.0	1.5	0.5	1.0	4.0	3.0	3.5
6	10.0	7.5	8.5	12.0	11.0	11.5	0.5	0.0	0.0	3.0	1.0	2.0
7	10.0	7.0	8.5	11.0	9.5	10.0	0.5	0.0	0.0	1.0	0.0	0.0
8	12.0	8.5	10.0	9.5	5.5	7.5	1.0	0.0	0.5	1.0	0.0	0.5
9	12.5	9.5	11.0	5.5	4.0	4.5	1.5	0.5	1.0	0.5	0.0	0.0
10	14.0	11.0	12.5	4.5	2.5	3.5	3.5	1.5	2.5	0.0	0.0	0.0
11	14.0	11.0	12.5	5.0	3.5	4.0	4.0	3.0	4.0	0.0	0.0	0.0
12	13.5	10.5	12.0	7.5	5.0	6.5	3.0	1.5	2.0	0.5	0.0	0.0
13	14.0	11.0	12.5	8.0	4.5	6.5	1.5	1.0	1.5	1.0	0.0	0.5
14	12.5	10.0	11.5	4.5	2.5	3.0	1.0	0.0	0.5	0.0	0.0	0.0
15	12.0	10.5	11.5	4.5	3.0	3.5	1.0	0.0	0.5	0.0	0.0	0.0
16	10.5	9.5	10.0	4.5	3.0	4.0	2.0	0.5	1.0	0.5	0.0	0.0
17	10.0	8.5	9.0	6.0	4.5	5.5	2.5	1.5	2.0	0.5	0.0	0.0
18	9.5	8.0	9.0	6.5	5.5	5.5	1.5	1.0	1.0	0.5	0.0	0.0
19	9.0	8.0	8.5	10.0	6.5	8.5	2.0	1.0	1.5	0.5	0.0	0.0
20	9.0	6.5	8.0	9.5	6.5	8.0	2.0	1.0	1.0	0.5	0.0	0.0
21	11.0	8.5	9.5	7.0	5.0	6.0	1.0	0.0	0.5	0.0	0.0	0.0
22	10.5	8.0	9.5	6.5	5.0	6.0	2.0	0.0	1.0	0.0	0.0	0.0
23	8.0	5.5	6.5	7.0	5.0	6.0	3.5	2.0	3.0	0.0	0.0	0.0
24	6.5	4.5	5.5	7.5	5.5	6.5	3.5	3.0	3.5	0.0	0.0	0.0
25	7.0	4.5	5.5	6.5	4.5	5.5	3.0	2.0	2.5	0.0	0.0	0.0
26	10.0	7.0	8.5	4.5	4.0	4.5	2.0	1.5	1.5	0.0	0.0	0.0
27	11.0	9.5	10.5	5.5	3.5	4.5	2.5	1.5	2.0	0.5	0.0	0.0
28	9.5	8.5	9.0	7.5	5.5	6.5	2.0	1.0	1.5	0.5	0.0	0.0
29	9.0	8.5	9.0	7.0	4.0	5.5	2.5	1.0	2.0	0.0	0.0	0.0
30	9.0	7.5	8.5	4.5	3.5	4.0	3.5	2.5	3.0	0.0	0.0	0.0
31	9.5	7.5	8.5	---	---	---	3.0	2.0	2.5	0.0	0.0	0.0
MONTH	14.0	4.5	9.5	12.5	2.5	6.8	4.5	0.0	1.6	5.5	0.0	0.7
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.0	4.0	0.0	2.0	7.0	6.5	7.0	17.5	13.5	15.5
2	0.5	0.0	0.0	5.0	2.0	3.0	7.0	6.0	6.5	16.5	15.5	16.0
3	0.5	0.0	0.0	4.0	1.5	3.0	6.5	6.0	6.0	15.5	11.5	13.0
4	0.5	0.0	0.5	3.0	2.0	2.5	6.0	4.0	5.5	13.5	9.5	11.5
5	0.5	0.0	0.5	3.5	2.5	3.0	6.5	2.0	4.0	11.5	9.5	10.5
6	0.5	0.0	0.0	4.0	3.0	3.5	7.0	1.0	4.0	15.0	9.5	12.0
7	0.5	0.0	0.5	4.5	2.0	3.0	10.0	4.5	6.5	15.5	12.5	14.0
8	0.5	0.0	0.0	3.5	2.5	3.0	7.5	5.5	6.5	14.5	12.0	13.5
9	0.5	0.0	0.0	2.5	2.0	2.5	9.5	5.0	7.0	15.0	11.5	13.5
10	1.0	0.5	0.5	4.0	2.0	2.5	9.0	5.0	7.0	18.0	13.0	15.5
11	0.5	0.0	0.5	4.5	1.0	3.0	7.5	5.5	6.5	---	---	---
12	0.5	0.0	0.5	4.0	2.0	3.0	8.5	5.5	7.0	---	---	---
13	1.0	0.5	0.5	4.0	1.0	2.0	7.0	6.0	6.5	---	---	---
14	0.5	0.0	0.5	2.5	0.5	1.5	7.5	6.5	7.0	21.5	18.0	20.0
15	0.5	0.0	0.0	6.0	2.0	3.5	10.0	5.0	7.5	22.0	18.0	19.5
16	0.5	0.0	0.0	4.0	0.5	2.0	11.0	5.5	8.0	19.5	17.0	18.5
17	0.5	0.0	0.0	2.5	0.5	1.5	13.0	7.5	10.5	19.0	15.5	17.0
18	0.5	0.0	0.0	4.5	1.0	2.5	15.0	10.0	12.5	20.0	17.0	18.0
19	0.5	0.0	0.5	3.5	1.5	2.5	16.5	11.0	13.5	18.5	16.5	17.5
20	1.0	0.0	0.5	4.5	0.0	2.5	16.5	12.5	14.0	18.0	15.0	16.5
21	1.0	0.5	0.5	3.5	2.0	3.0	15.5	11.5	13.0	19.5	16.5	17.5
22	1.0	0.0	0.5	4.0	0.5	2.0	16.5	12.5	14.0	21.0	17.0	19.0
23	1.5	0.0	0.5	4.0	0.0	1.5	14.0	11.5	13.0	22.5	18.0	20.0
24	0.5	0.0	0.5	6.5	1.0	3.5	16.0	10.5	12.5	22.5	18.5	20.5
25	1.0	0.0	0.0	6.0	4.0	5.0	12.5	9.0	10.5	22.5	17.5	20.0
26	1.0	0.0	0.0	7.5	4.5	6.0	9.5	8.5	9.0	19.0	16.5	17.5
27	2.0	0.0	0.5	7.5	6.5	7.0	12.5	9.0	10.5	19.0	15.5	17.0
28	2.5	0.0	1.0	10.0	5.5	7.5	12.0	8.0	10.0	19.5	17.5	18.5
29	3.0	0.0	1.0	9.5	5.5	7.5	15.0	8.5	11.5	18.0	15.0	16.5
30	---	---	---	7.5	5.0	6.5	16.5	11.5	14.0	18.0	12.5	15.0
31	---	---	---	8.0	6.0	7.0	---	---	---	15.5	13.5	14.0
MONTH	3.0	0.0	0.3	10.0	0.0	3.5	16.5	1.0	9.0	22.5	9.5	16.3

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	17.5	13.0	15.0	23.0	16.0	19.5	23.0	20.0	21.5	21.0	16.5	18.5
2	18.0	14.0	16.0	22.5	17.0	20.0	24.0	20.5	22.0	20.0	15.5	17.5
3	18.5	15.0	16.5	25.0	16.5	20.5	24.0	21.0	22.5	20.5	16.0	18.0
4	18.5	14.0	16.0	24.0	17.5	20.5	24.0	21.0	22.5	21.5	16.0	18.5
5	16.0	13.5	14.5	26.5	19.5	22.0	22.0	19.5	21.0	18.5	16.5	17.0
6	14.0	13.0	13.5	24.5	19.0	21.5	19.5	17.0	18.0	20.0	15.0	17.5
7	19.0	13.5	16.0	23.0	17.0	20.5	18.5	16.0	17.0	21.5	17.0	19.0
8	21.0	15.0	18.0	25.0	19.5	21.5	19.0	15.0	17.0	19.0	18.0	18.5
9	23.0	17.0	19.5	22.5	18.5	20.0	21.5	15.0	18.0	20.0	18.0	19.0
10	20.5	17.5	19.0	25.0	16.0	20.5	22.0	16.5	19.0	20.0	18.5	19.0
11	18.0	15.5	17.0	26.0	17.5	21.5	21.0	18.5	20.0	19.0	17.0	18.0
12	20.5	13.0	16.5	22.0	18.0	19.5	20.5	18.5	19.5	19.0	16.5	17.5
13	16.5	14.5	15.5	22.5	17.5	19.5	19.5	17.5	18.5	20.0	16.0	18.0
14	18.5	14.5	16.0	20.0	18.5	19.5	19.5	18.0	18.5	18.5	16.5	17.0
15	23.0	16.5	19.0	20.5	17.5	18.5	19.0	18.0	18.5	19.0	16.0	17.0
16	23.5	18.5	20.5	20.5	17.0	18.5	19.5	17.5	18.5	19.5	17.0	18.0
17	23.0	20.0	21.0	23.0	17.0	20.0	19.5	16.0	17.5	18.0	17.0	17.5
18	23.0	19.5	21.0	20.0	18.0	18.5	19.5	16.5	18.0	17.5	15.0	16.0
19	21.0	17.5	19.5	19.0	17.0	18.0	20.0	18.0	18.5	15.0	13.0	14.0
20	21.0	15.0	17.5	22.5	17.0	19.5	21.0	17.5	19.5	15.0	12.5	13.5
21	21.5	14.0	17.5	24.5	18.5	21.0	19.5	18.0	19.0	15.5	13.0	14.0
22	18.5	17.0	17.5	24.5	19.0	21.5	19.5	16.0	18.0	16.0	13.0	14.5
23	21.5	16.5	18.5	22.0	20.5	21.0	19.5	16.0	18.0	17.0	14.0	15.5
24	23.0	16.5	19.5	24.0	19.0	21.0	20.0	18.0	19.0	17.5	15.0	16.5
25	21.0	17.5	19.5	22.0	19.0	20.5	21.0	18.0	19.5	18.0	16.0	17.0
26	22.0	18.0	19.0	22.0	18.5	20.0	19.0	17.0	18.0	18.0	16.0	17.0
27	21.5	15.0	18.0	20.0	17.5	18.5	20.0	17.5	18.5	16.0	14.0	15.0
28	18.5	15.0	16.5	21.0	17.0	18.5	22.5	18.0	20.0	16.0	15.5	15.5
29	21.0	15.0	18.0	22.0	17.5	19.5	23.0	19.0	20.5	16.0	15.0	15.5
30	23.0	15.5	18.5	22.0	18.5	20.0	21.5	19.5	20.5	16.0	15.0	15.5
31	---	---	---	23.5	20.0	21.0	21.5	18.5	20.0	---	---	---
MONTH	23.5	13.0	17.7	26.5	16.0	20.1	24.0	15.0	19.2	21.5	12.5	16.8
YEAR	26.5	0.0	10.1									

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

CROSS-SECTION ANALYSES, OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)
JUL 2004					
01...	1641	51	22	--	--
01...	1647	--	39	1.40	22.8
01...	1655	--	59	1.27	22.7
01...	1703	--	76	0.93	22.7
01...	1710	--	99	--	--

LEHIGH RIVER BASIN

01447680 TUNKHANNOCK CREEK NEAR LONG POND, PA

LOCATION.--Lat 41°03'55", long 75°31'19", Monroe County, Hydrologic Unit 02040106, on left bank 0.6 mi downstream from unnamed tributary, 0.9 mi downstream from bridge on SR 4002, 3.0 mi west of Long Pond, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--20.0 mi^2. At site used prior to July 7, 1966, 16.8 mi^2.

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

REVISED RECORDS.--WDR PA-90-1: 1990 (monthly runoff); WDR PA-01-1: Drainage area.

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 fair except those for estimated daily discharges, which are poor. Diversion upstream to Wild Creek Basin since October 1969. Several measurements of water temperature were made during the year. Satellite telemetry at station.

COOPERATION.--Records of diversion provided by the city of Bethlehem.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	131	155	79	e32	28	40	31	42	18	43	43
2	84	109	115	76	30	41	39	35	41	16	118	40
3	77	94	84	72	29	62	37	96	39	15	65	36
4	76	85	83	82	e30	76	33	102	36	14	47	32
5	75	83	76	103	e30	82	32	75	33	13	37	31
6	74	87	63	104	31	104	32	53	41	12	29	30
7	70	90	64	e85	33	114	33	57	42	13	24	29
8	65	85	66	e68	e35	97	32	67	36	12	21	39
9	60	81	65	e60	e34	76	30	54	30	12	19	137
10	57	72	69	e50	e34	57	30	50	28	12	17	179
11	54	66	235	e40	e33	49	29	109	31	12	17	174
12	51	65	358	e40	e32	44	29	128	30	16	19	130
13	49	60	311	e39	30	42	52	139	26	29	65	92
14	49	61	167	e38	e30	41	85	111	25	35	101	68
15	102	62	114	e38	e29	36	78	80	25	40	102	54
16	116	59	119	e38	e27	35	60	83	25	40	81	49
17	118	55	123	e38	e25	37	43	82	23	30	54	50
18	104	52	118	e37	24	38	38	67	24	24	38	567
19	85	66	113	e37	24	36	34	60	23	36	31	659
20	73	120	101	e37	24	37	32	60	23	40	28	445
21	63	137	88	e36	25	38	33	53	22	32	98	269
22	55	130	79	e35	26	42	29	50	22	24	141	172
23	52	108	80	e35	e26	e40	34	47	29	20	133	124
24	50	90	189	e35	e24	35	33	43	29	18	114	100
25	49	82	289	e35	e24	42	35	39	23	18	83	86
26	48	78	236	e34	e24	55	49	42	21	16	58	77
27	86	74	168	33	e22	58	70	69	20	20	45	73
28	144	91	156	32	e24	57	54	74	19	39	41	90
29	198	164	119	e32	e26	49	41	58	18	46	42	138
30	199	176	97	e32	---	41	34	45	19	38	41	150
31	162	---	89	e32	---	39	---	39	---	29	42	---
TOTAL	2638	2713	4189	1532	817	1628	1230	2098	845	739	1794	4163
MEAN	85.1	90.4	135	49.4	28.2	52.5	41.0	67.7	28.2	23.8	57.9	139
MAX	199	176	358	104	35	114	85	139	42	46	141	659
MIN	48	52	63	32	22	28	29	31	18	12	17	29
(†)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

† Diversion to Wild Creek Basin, equivalent in cubic feet per second.
e Estimated.

01447680 TUNKHANNOCK CREEK NEAR LONG POND, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.4	44.5	54.9	46.6	44.3	65.6	78.7	58.2	45.6	28.3	22.6	32.1
MAX	93.2	90.4	161	137	89.3	148	209	115	146	89.5	63.6	142
(WY)	1978	2004	1997	1996	1996	1977	1993	1990	2003	1984	1990	1987
MIN	7.13	9.39	7.07	3.85	13.2	21.1	20.5	20.5	10.5	4.19	2.52	4.59
(WY)	2001	1981	1981	1981	1980	1989	1985	1999	1999	1999	1999	1995

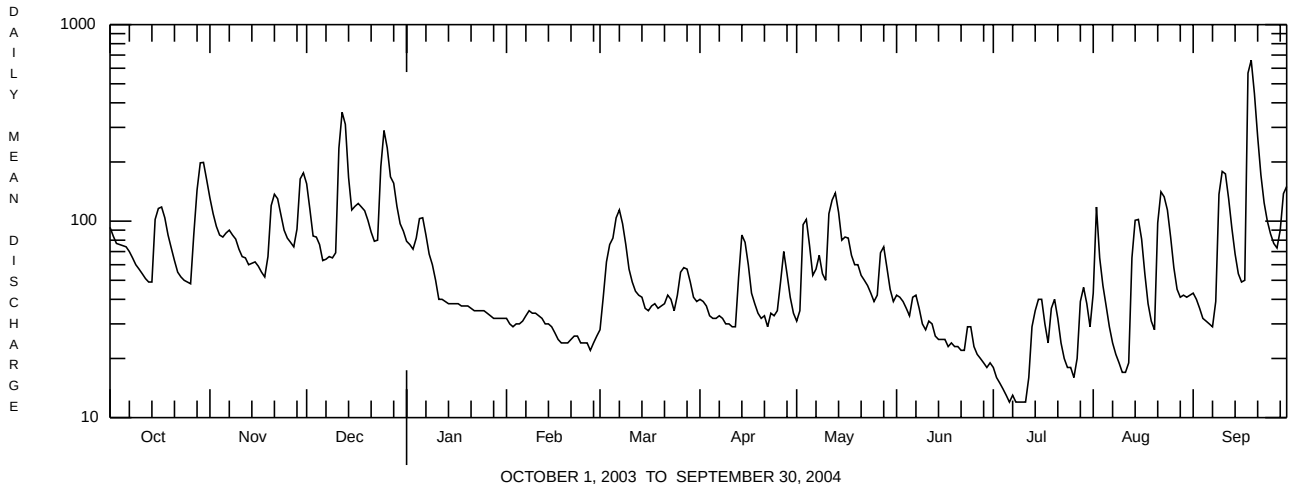
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1970 - 2004	
ANNUAL TOTAL	30134		24386			
ANNUAL MEAN	82.6		66.6		46.4	
HIGHEST ANNUAL MEAN					72.7	2003
LOWEST ANNUAL MEAN					22.2	2001
HIGHEST DAILY MEAN	371	Sep 24	659	Sep 19	659	Sep 19 2004
LOWEST DAILY MEAN	22	Feb 16	12	Jul 6,8-11	1.4	Aug 11,12 1999
ANNUAL SEVEN-DAY MINIMUM	**a**25	Feb 10	12	Jul 5	**a**1.7	Aug 7 1999
MAXIMUM PEAK FLOW			769	Sep 18	769	Sep 18 2004
MAXIMUM PEAK STAGE			4.81	Sep 18	4.81	Sep 18 2004
10 PERCENT EXCEEDS	162		121		94	
50 PERCENT EXCEEDS	61		46		33	
90 PERCENT EXCEEDS	30		24		11	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1969, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.5	29.2	37.5	25.7	23.3	55.7	42.6	38.3	38.8	26.6	27.7	16.0
MAX	36.3	35.8	63.0	33.0	27.8	64.7	53.3	49.0	83.3	77.1	80.8	26.6
(WY)	1966	1969	1969	1969	1968	1966	1967	1968	1969	1969	1969	1969
MIN	12.5	22.9	21.0	17.1	21.1	42.2	29.4	20.8	10.4	7.17	8.46	8.86
(WY)	1969	1966	1966	1966	1967	1969	1966	1965	1965	1965	1966	1966

SUMMARY STATISTICS	WATER YEARS 1965 - 1969	
ANNUAL TOTAL ANNUAL MEAN	33.8	
HIGHEST ANNUAL MEAN	47.0	1969
LOWEST ANNUAL MEAN	24.7	1966
HIGHEST DAILY MEAN	448	Jul 30 1969
LOWEST DAILY MEAN	4.0	Sep 13 1966
ANNUAL SEVEN DAY MINIMUM	4.7	Sep 8 1966
MAXIMUM PEAK FLOW	480	Jul 30 1969
MAXIMUM PEAK STAGE	4.34	Jul 30 1969
INSTANTANEOUS LOW FLOW	3.0	Mar 11 1969
ANNUAL RUNOFF (CFSM)	1.88	
ANNUAL RUNOFF (INCHES)	25.53	
10 PERCENT EXCEEDS	60	
50 PERCENT EXCEEDS	24	
90 PERCENT EXCEEDS	8.6	

a Computed using estimated daily discharges.



LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA
(Pennsylvania Water-Quality Network Station)

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^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,511.23 ft above 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 those for estimated daily discharges, which are poor. Power generation at Pocono Lake about 5.0 mi upstream since 1985 and minor diversion from Tunkhannock Creek Basin into Wild Creek Basin. Satellite and landline telemetry at station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	2330	4,480	8.86	Sept. 9	2000	1,960	6.24
Dec. 24	2330	1,980	6.27	Sept. 18	1245	*10,400	*12.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	613	714	416	e220	134	264	160	210	118	205	183
2	348	507	556	389	e210	173	252	254	250	111	700	166
3	324	446	425	383	205	300	245	691	229	126	455	172
4	333	406	384	488	185	427	240	644	152	69	380	139
5	356	397	363	767	e160	505	229	458	195	48	268	110
6	342	447	357	734	e210	666	199	365	239	46	211	115
7	315	443	344	535	260	687	189	399	236	45	145	117
8	285	400	326	435	e220	559	186	404	186	45	113	228
9	260	354	312	375	e200	443	181	344	174	44	108	1390
10	250	322	327	e340	201	374	176	327	146	44	99	1550
11	236	307	2620	e300	182	331	168	665	179	43	93	887
12	220	308	3230	283	e160	310	174	601	142	104	144	490
13	213	314	1560	289	166	284	312	572	135	149	953	351
14	201	297	914	e270	147	244	429	483	133	114	1150	296
15	955	271	673	e250	153	239	403	388	134	121	611	243
16	836	260	567	e260	e170	249	323	404	130	129	437	219
17	589	248	563	e260	e170	246	273	365	129	119	321	318
18	460	253	618	249	146	242	193	311	133	145	227	7740
19	385	342	550	e240	126	242	192	291	133	274	201	4310
20	336	1070	472	e220	131	226	197	281	127	262	192	1590
21	306	852	413	e220	145	274	156	258	122	141	719	928
22	279	615	375	216	141	285	177	248	139	104	883	661
23	259	478	369	e230	117	236	191	238	116	115	594	510
24	243	408	1250	e230	171	229	189	168	107	128	410	423
25	231	418	1740	e220	e120	292	183	224	105	114	300	369
26	232	387	1140	e220	174	343	294	201	119	92	247	334
27	723	358	762	e210	165	371	450	650	107	167	197	286
28	1220	571	618	e200	152	358	360	595	97	240	169	501
29	1280	1370	511	e190	130	316	286	415	120	223	190	989
30	1170	994	478	e200	---	270	237	307	127	177	194	838
31	800	---	455	e220	---	262	---	266	---	125	182	---
TOTAL	14347	14456	23986	9839	4937	10117	7348	11977	4551	3782	11098	26453
MEAN	463	482	774	317	170	326	245	386	152	122	358	882
MAX	1280	1370	3230	767	260	687	450	691	250	274	1150	7740
MIN	201	248	312	190	117	134	156	160	97	43	93	110
CFSM	3.92	4.08	6.56	2.69	1.44	2.77	2.08	3.27	1.29	1.03	3.03	7.47
IN.	4.52	4.56	7.56	3.10	1.56	3.19	2.32	3.78	1.43	1.19	3.50	8.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	196	265	304	273	268	414	459	323	237	149	126	187
MAX	598	644	827	1019	768	948	1247	784	826	481	372	882
(WY)	1977	1973	1997	1996	1981	1977	1993	1989	2003	1969	1969	2004
MIN	31.2	48.1	58.0	40.6	100	172	162	134	64.1	30.3	34.3	28.0
(WY)	1964	1965	1981	1981	1980	1989	1985	1999	1999	1999	1964	1964

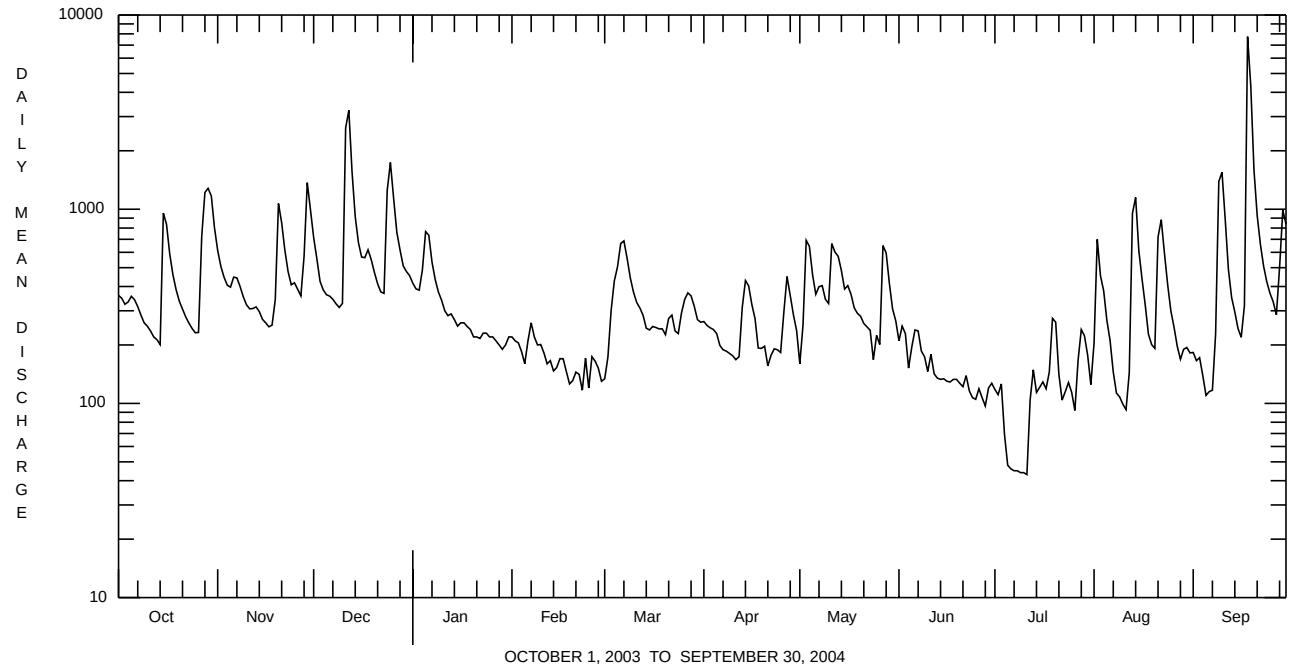
e Estimated.

LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	168302		142891			
ANNUAL MEAN	461		390		266	
HIGHEST ANNUAL MEAN					406	2003
LOWEST ANNUAL MEAN					129	1965
HIGHEST DAILY MEAN	3490	Jun 22	7740	Sep 18	7740	Sep 18 2004
LOWEST DAILY MEAN	103	Aug 29	43	Jul 11	21	Aug 12 1999**a**
ANNUAL SEVEN-DAY MINIMUM	115	Aug 24	45	Jul 5	23	Sep 21 1964
MAXIMUM PEAK FLOW			10400	Sep 18	10400	Sep 18 2004
MAXIMUM PEAK STAGE			12.71	Sep 18	12.71	Sep 18 2004
INSTANTANEOUS LOW FLOW					16	Aug 8 1991
ANNUAL RUNOFF (CFSM)	3.91		3.31		2.26	
ANNUAL RUNOFF (INCHES)	53.06		45.05		30.69	
10 PERCENT EXCEEDS	917		694		533	
50 PERCENT EXCEEDS	307		260		180	
90 PERCENT EXCEEDS	154		126		58	

a Also Sept. 3, 4, 1999.



LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1930 to 1982, 2002 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water year 1980 to September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good. Interruption in record from Mar. 21 to May 22 was due to malfunctioning temperature probe. Other interruptions in the record were due to malfunctions of the recording instrument. Some values for *"dissolved"* parameters exceed values for the corresponding *"total"* parameter. These results are within the limits of analytical precision and methods. Other data for the Water-Quality Network can be found on pages 446-484.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 28.5°C, July 5, 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR--
WATER TEMPERATURE: Maximum, 23.5°C, Aug. 3; minimum, 0.0°C, many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)
OCT 2003													
08...	1250	1028	9813	265	10.7	6.3	6.3	59	57	11.3	12	3.2	3.3
DEC													
16...	1120	1028	9813	564	14.8	5.8	6.1	61	56	.7	10	2.8	2.8
FEB 2004													
24...	1030	1028	9813	109	15.9	6.7	6.9	94	88	1.3	16	4.4	4.6
APR													
20...	1200	1028	9813	185	12.0	6.8	6.7	96	80	12.2	14	4.0	4.0
JUN													
22...	1120	1028	9813	137	8.9	6.8	6.4	84	80	18.6	16	4.8	4.5
AUG													
18...	1300	1028	9813	233	9.1	6.2	6.3	72	72	19.4	13	3.6	3.8

Date	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
OCT 2003													
08...	.83	.85	4	26	3.4	26	2	<.020	.11	<.040	<.01	.012	.45
DEC													
16...	.71	.69	3	20	3.9	42	<2	<.020	.17	<.040	.01	.012	.32
FEB 2004													
24...	1.2	1.2	6	17	4.4	40	<2	.030	.35	<.040	<.01	.016	.54
APR													
20...	.99	.99	5	8.4	4.5	60	<2	<.020	.21	<.040	.01	.017	.57
JUN													
22...	1.2	1.1	11	21	3.9	62	<2	<.020	.12	<.040	<.01	.015	.14
AUG													
18...	.85	.89	7	27	4.1	74	2	.020	.09	<.040	<.01	.015	.40

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)
OCT 2003													
08...	.8	120	170	<4	<4	250	380	<1.0	<1.0	40	50	<4.0	<4.0
DEC													
16...	1.8	150	190	<4	<4	180	200	<1.0	<1.0	70	70	<4.0	<4.0
FEB 2004													
24...	1.6	60	80	<4	<4	90	130	<1.0	<1.0	30	50	<4.0	10
APR													
20...	1.6	60	110	<4	<4	90	160	<1.0	<1.0	20	40	<4.0	<4.0
JUN													
22...	.9	40	90	<4	<4	130	310	<1.0	<1.0	20	70	<4.0	<4.0
AUG													
18...	1.1	140	200	<4	<4	280	450	<1.0	<1.0	40	70	<4.0	<4.0

Date	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
OCT 2003		
08...	10	10
DEC		
16...	20	20
FEB 2004		
24...	10	20
APR		
20...	10	10
JUN		
22...	5	7
AUG		
18...	10	20

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	08/21/03
Benthic macroinvertebrate	Count
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	2
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	1
Baetis	5
Heterocloeon	4
Ephemerellidae	
Dannella	4
Heptageniidae	2
Isonychiidae	
Isonychia	1
Leptophlebiidae	
Paraleptophlebia	4
Odonata	
Gomphidae (DRAGONFLIES)	1
Plecoptera (STONEFLIES)	
Capniidae	1
Perlidae	
Acroneuria	1
Paragnetina	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	51
Hydropsyche	14
Rhyacophilidae	
Rhyacophila	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Oulimnius	7
Stenelmis	10
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	24
Simuliidae (BLACK FLIES)	
Simulium	1
Total Organisms	135
Total Taxa	19

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	13.0	11.5	12.5	11.0	9.0	10.0	4.5	3.5	4.5	3.0	2.5	3.0
2	12.0	10.5	11.5	11.0	10.0	10.5	3.5	2.0	3.0	4.0	3.0	3.5
3	11.5	9.5	10.5	12.0	10.0	11.0	2.5	1.5	2.0	5.5	4.0	4.5
4	10.5	10.0	10.5	12.0	10.5	11.5	3.0	1.0	2.0	5.5	4.0	5.0
5	10.5	9.5	10.0	12.0	11.5	11.5	2.5	1.0	2.0	4.0	3.0	3.5
6	10.5	8.5	9.5	12.0	11.0	11.5	2.0	1.0	1.5	3.0	1.5	2.5
7	11.0	8.0	9.5	11.0	9.5	10.0	2.0	1.0	1.5	1.5	1.0	1.0
8	12.0	9.0	10.5	9.5	7.0	8.5	2.5	1.5	2.0	1.5	1.0	1.0
9	13.0	10.0	11.0	7.0	6.0	6.5	3.0	2.0	2.5	1.5	0.0	0.5
10	13.5	11.0	12.0	7.0	5.0	6.0	5.0	2.5	3.5	0.5	0.0	0.5
11	13.5	10.5	12.0	7.0	5.5	6.5	4.5	2.0	3.5	1.0	0.0	0.5
12	13.5	10.5	12.0	8.5	7.0	8.0	2.0	1.5	2.0	2.0	1.0	1.5
13	13.0	11.0	12.0	8.5	5.5	7.0	1.5	1.5	1.5	2.0	0.5	1.5
14	12.5	10.0	11.5	5.5	4.5	5.0	1.5	0.0	0.5	1.0	0.0	0.5
15	12.5	11.5	12.0	6.0	4.5	5.0	1.5	0.5	1.0	1.0	0.0	0.5
16	11.5	10.5	11.0	6.5	4.5	5.5	2.0	1.0	1.5	0.5	0.0	0.5
17	10.5	10.0	10.0	7.0	6.0	6.5	2.5	1.5	2.0	1.5	0.0	1.0
18	10.0	9.0	9.5	7.0	5.5	6.5	1.5	1.0	1.5	2.0	1.0	1.5
19	10.0	9.0	9.5	10.5	7.0	8.5	2.0	1.5	1.5	1.5	0.5	1.0
20	10.0	8.0	9.0	9.0	6.0	7.0	2.0	1.5	1.5	1.0	0.5	0.5
21	11.0	9.5	10.0	7.0	5.5	6.0	2.0	1.0	1.5	1.0	0.0	0.5
22	10.5	8.0	9.5	7.0	6.0	6.5	3.0	1.5	2.5	2.0	0.5	1.0
23	8.0	6.5	7.5	7.5	6.0	6.5	4.0	3.0	3.0	0.5	0.0	0.0
24	8.0	6.0	7.0	7.5	6.0	7.0	4.5	2.0	3.0	0.5	0.0	0.5
25	8.5	6.0	7.0	6.0	5.0	5.5	2.0	2.0	2.0	0.5	0.0	0.0
26	10.0	8.5	9.5	6.0	5.0	5.5	2.0	1.5	2.0	0.5	0.5	0.5
27	11.5	9.0	10.5	6.5	5.0	5.5	2.5	1.5	2.0	1.0	0.0	0.5
28	9.0	8.5	9.0	8.5	6.0	7.0	3.0	1.5	2.0	1.0	0.5	0.5
29	9.5	8.5	9.0	7.0	5.0	5.5	3.5	2.0	2.5	1.0	0.5	0.5
30	9.0	8.0	8.5	5.0	4.5	4.5	3.5	2.5	3.0	0.5	0.0	0.5
31	9.5	8.0	9.0	---	---	---	3.5	2.5	3.0	0.5	0.0	0.5
MONTH	13.5	6.0	10.1	12.0	4.5	7.4	5.0	0.0	2.2	5.5	0.0	1.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.5	4.5	1.5	3.0	6.0	5.5	5.5	17.0	12.5	14.5
2	1.0	0.0	0.5	5.5	2.5	4.0	6.0	5.0	5.5	15.0	13.5	14.5
3	1.5	0.5	1.0	3.5	2.0	2.5	5.5	5.0	5.0	13.5	12.0	12.5
4	2.0	1.0	1.5	3.0	2.0	2.5	5.5	3.5	5.0	13.5	11.0	12.0
5	1.5	0.5	1.0	3.0	2.0	2.5	5.5	2.0	3.5	12.5	11.0	11.5
6	2.0	0.5	1.0	3.5	2.0	3.0	6.5	1.5	3.5	15.0	10.5	12.5
7	2.0	1.0	2.0	3.5	2.0	2.5	8.5	4.0	5.5	15.0	11.5	13.5
8	1.0	0.0	0.5	3.0	2.5	3.0	6.5	4.5	5.5	14.5	12.0	13.0
9	1.5	0.0	1.0	3.0	2.5	2.5	8.0	4.5	6.0	15.0	11.5	13.0
10	2.5	1.0	2.0	4.0	2.5	3.0	9.0	4.5	6.5	17.0	13.0	15.0
11	2.5	1.0	1.5	5.0	2.0	3.5	7.0	5.0	6.0	17.5	14.0	16.0
12	2.0	0.0	1.0	3.5	2.5	3.0	7.5	5.5	6.5	18.0	16.5	17.0
13	2.5	1.5	2.0	4.0	1.5	2.5	7.0	6.0	6.5	20.0	16.5	18.0
14	2.0	0.5	1.5	3.5	1.5	2.5	7.0	6.5	7.0	20.5	17.0	18.5
15	1.5	0.0	0.5	6.0	3.0	4.0	9.0	5.5	7.0	19.5	16.5	18.0
16	0.5	0.0	0.0	3.5	1.5	2.5	10.0	5.5	7.5	19.0	16.5	17.5
17	0.5	0.0	0.5	3.5	1.5	2.5	12.0	7.0	9.5	19.5	16.0	17.5
18	1.0	0.5	1.0	4.5	2.0	3.0	13.5	9.0	11.0	19.0	17.0	18.0
19	2.5	0.5	1.5	3.5	2.0	3.0	15.0	10.5	12.5	17.5	16.0	17.0
20	3.0	1.0	2.0	5.0	1.0	3.0	14.0	10.5	12.0	18.0	15.0	16.5
21	3.5	2.0	3.0	4.0	2.0	3.5	14.5	10.5	12.0	18.5	16.0	17.0
22	2.5	1.5	2.0	3.5	1.0	2.0	15.5	12.0	13.5	20.0	16.5	18.0
23	3.0	0.5	2.0	4.5	0.5	2.0	13.0	11.5	12.0	21.0	17.5	19.0
24	2.0	1.0	1.5	6.5	2.0	4.0	15.0	11.0	12.5	21.0	18.0	19.5
25	1.5	0.0	0.5	6.0	4.0	4.5	11.5	9.5	10.0	21.0	17.0	19.0
26	2.5	0.5	1.5	7.0	4.0	5.5	10.5	8.5	9.5	18.5	14.5	17.0
27	3.5	0.5	1.5	6.5	5.5	6.0	12.5	10.0	11.0	20.5	14.5	18.5
28	4.0	0.5	2.0	8.0	5.0	6.0	12.5	9.0	10.5	19.5	17.5	19.0
29	4.0	0.5	2.5	8.0	4.5	6.0	15.0	9.5	12.0	18.0	15.5	17.0
30	---	---	---	6.0	4.5	5.0	16.0	11.0	13.0	18.5	14.0	16.0
31	---	---	---	6.5	5.0	5.5	---	---	---	15.5	14.5	15.0
MONTH	4.0	0.0	1.3	8.0	0.5	3.5	16.0	1.5	8.4	21.0	10.5	16.2

LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	17.5	14.0	15.5	21.5	17.0	19.0	22.5	19.0	20.5	20.5	17.0	18.5
2	18.5	14.5	16.0	21.5	17.5	19.5	23.0	19.5	21.5	20.0	16.5	18.0
3	18.5	15.5	16.5	22.5	17.5	20.0	23.5	21.0	22.5	21.0	17.0	19.0
4	18.0	13.5	16.0	21.5	17.5	19.5	23.0	21.5	22.0	20.5	17.0	19.0
5	16.0	14.0	15.0	23.0	18.5	20.5	21.5	19.5	21.0	19.0	17.5	18.0
6	14.5	13.5	14.0	21.0	18.0	19.5	19.5	17.5	18.5	20.0	16.0	18.0
7	18.5	14.0	16.0	21.0	16.5	19.0	18.5	16.5	17.5	21.0	17.5	19.0
8	20.5	15.0	17.5	22.0	18.5	20.0	19.5	15.0	17.5	20.0	17.0	18.5
9	22.0	16.0	18.5	19.5	17.5	18.5	21.0	15.5	18.5	20.5	18.0	19.5
10	18.5	17.0	17.5	21.5	15.5	18.0	21.5	16.5	19.0	20.0	19.0	19.5
11	17.5	16.0	16.5	22.0	16.5	19.0	22.0	18.5	20.0	19.5	18.5	19.0
12	20.0	13.5	16.5	20.0	16.5	18.5	20.5	17.0	19.0	18.5	17.0	18.0
13	17.0	15.0	16.0	21.0	18.0	19.5	20.5	17.5	19.0	19.0	16.5	17.5
14	18.5	15.5	16.5	19.5	18.0	19.0	21.0	20.0	20.5	18.0	16.5	17.5
15	21.5	16.5	18.5	19.5	18.0	18.5	20.5	19.5	20.0	18.5	16.5	17.5
16	22.0	17.0	19.5	19.5	17.5	18.0	20.5	18.5	19.5	18.0	17.5	17.5
17	21.5	18.5	20.0	21.5	17.5	19.5	20.0	17.5	18.5	19.0	17.0	17.5
18	21.5	18.0	19.5	20.0	18.0	18.5	20.0	17.5	18.5	17.5	15.5	16.5
19	19.5	17.0	18.5	19.5	16.5	18.0	20.0	18.5	19.0	15.5	14.5	15.0
20	19.5	15.0	17.0	21.5	18.0	19.5	21.5	18.0	19.0	15.0	13.5	14.5
21	20.5	14.5	17.0	22.0	17.5	19.5	19.0	17.0	18.5	15.5	13.5	14.5
22	18.5	17.0	17.5	23.0	18.0	20.5	20.0	18.0	19.0	16.0	13.5	14.5
23	20.0	16.0	18.0	21.5	19.0	20.0	20.0	17.5	18.5	17.0	14.5	15.5
24	20.5	16.0	18.0	23.0	18.5	20.5	20.0	18.5	19.0	17.5	15.5	16.5
25	20.0	17.0	18.5	22.0	18.5	20.5	20.5	18.0	19.0	17.5	16.0	16.5
26	20.0	17.5	18.5	21.0	18.5	20.0	19.0	17.5	18.0	17.5	15.5	16.5
27	19.5	14.5	17.0	20.0	18.0	18.5	19.5	18.0	18.5	17.0	14.5	16.0
28	18.5	15.0	17.0	21.0	18.0	19.0	21.0	17.5	19.0	16.5	16.0	16.5
29	20.0	16.5	18.0	22.0	18.0	19.5	22.0	19.0	20.0	17.0	16.5	16.5
30	21.0	16.5	18.5	21.5	18.5	20.0	21.0	19.5	20.5	16.5	15.5	16.0
31	---	---	---	23.0	20.0	21.0	20.5	18.5	20.0	---	---	---
MONTH	22.0	13.5	17.3	23.0	15.5	19.4	23.5	15.0	19.4	21.0	13.5	17.2
YEAR	23.5	0.0	10.3									

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

CROSS-SECTION ANALYSES, OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)
JUL 2004					
01...	1455	403	0	--	--
01...	1500	--	11	0.95	21.3
01...	1511	--	65	1.05	21.2
01...	1522	--	76	1.70	21.2
01...	1530	--	88	--	--

LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER RESERVOIR 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 Reservoir, 2.0 mi upstream from Fawn Run, and 4.0 mi northeast of White Haven.

DRAINAGE AREA.--290 mi^2.

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 U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since February 1961 by Francis E. Walter Reservoir (station 01447780) 0.7 mi upstream. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	2850	2250	1240	e300	288	600	655	747	223	382	328
2	1020	1340	2150	1220	e380	298	612	625	743	224	725	314
3	941	859	2000	1190	427	662	618	1520	589	223	916	314
4	787	558	1490	1180	492	1170	611	1650	471	203	722	314
5	971	824	1030	2330	331	1370	394	1140	471	190	551	241
6	1060	840	858	2540	334	1430	444	803	543	160	420	203
7	848	855	856	1850	405	1510	448	872	558	124	316	205
8	607	863	747	1250	e510	1900	412	1140	420	110	246	207
9	483	866	642	856	e530	1530	390	992	285	110	206	994
10	468	936	646	682	460	1270	389	810	350	110	193	2050
11	554	1060	756	682	419	1040	385	1160	513	110	228	1820
12	519	1310	3170	688	e320	818	382	1250	527	161	338	1390
13	499	1490	6000	694	297	755	509	1030	388	319	1290	757
14	454	1110	6590	651	300	749	825	993	227	288	2020	412
15	661	593	3340	e600	e300	660	1100	952	268	178	2080	377
16	858	593	1610	e540	e300	544	778	823	256	139	1700	380
17	865	565	1420	494	e300	559	600	639	218	208	1070	497
18	940	547	1480	466	300	593	508	640	223	307	551	453
19	1140	550	1290	474	295	593	383	610	341	357	449	4330
20	1130	1480	1180	552	293	589	345	570	351	398	515	7060
21	666	2010	1150	532	293	589	350	567	287	418	842	6850
22	226	1930	873	461	293	678	378	544	263	309	1350	5930
23	597	1380	748	e460	278	704	445	519	299	214	1440	4230
24	1050	1030	817	e460	270	558	503	439	305	333	1180	3080
25	1020	1110	1010	e450	e270	471	498	345	328	381	721	2110
26	994	1000	1080	e440	e270	633	556	423	480	255	468	1850
27	994	767	1110	e430	315	898	1060	1420	354	211	471	2750
28	2400	785	1120	428	332	998	1170	1930	231	377	432	1780
29	3610	912	2850	e420	325	894	680	1540	223	602	389	2810
30	3020	1620	2780	e360	---	677	506	988	223	527	385	3260
31	3660	---	1260	e310	---	595	---	592	---	355	364	---
TOTAL	34162	32633	54303	24930	9939	26023	16879	28181	11482	8124	22960	57296
MEAN	1102	1088	1752	804	343	839	563	909	383	262	741	1910
MAX	3660	2850	6590	2540	530	1900	1170	1930	747	602	2080	7060
MIN	226	547	642	310	270	288	345	345	218	110	193	203

e Estimated.

LEHIGH RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	456	645	720	643	635	1013	1101	771	561	342	277	383
MAX	1435	1488	2079	2596	1542	2018	3198	1968	2218	1165	1153	1910
(WY)	1978	1986	1997	1996	1981	1977	1993	1989	2003	1973	1969	2004
MIN	68.5	68.1	142	131	197	326	341	311	135	66.1	55.9	43.2
(WY)	1964	1965	1999	1981	1980	1981	1966	2001	1962	1999	1999	1964

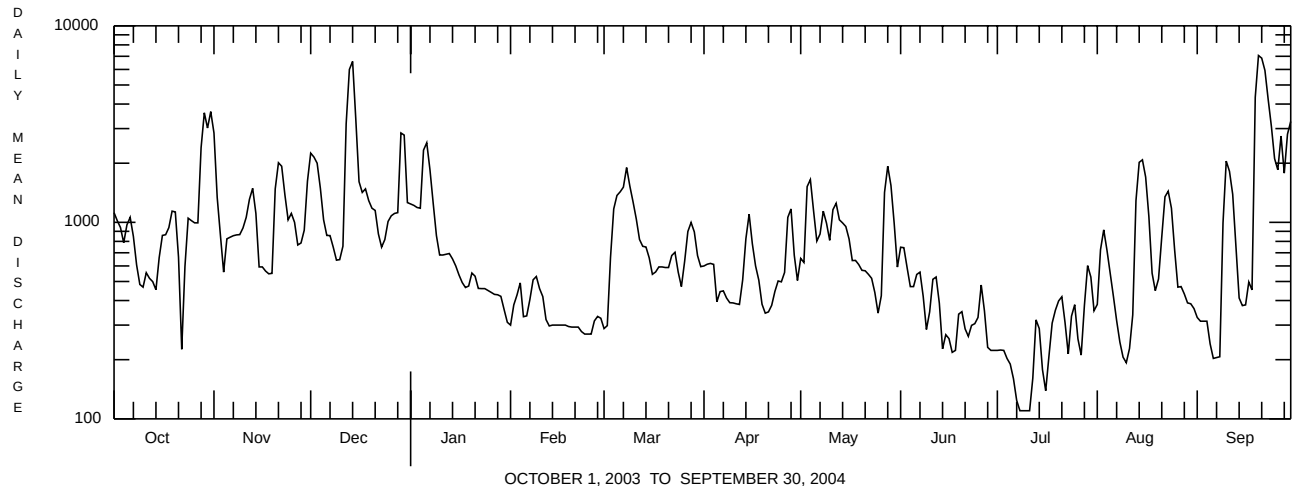
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	388319		326912			
ANNUAL MEAN	1064		893		628	
HIGHEST ANNUAL MEAN					957	2003
LOWEST ANNUAL MEAN					289	1965
HIGHEST DAILY MEAN	6820	Jun 24	7060	Sep 20	11000	Jan 29 1996
LOWEST DAILY MEAN	197	Jun 8	110	Jul 8-11	22	Jul 20 1965**a**
ANNUAL SEVEN-DAY MINIMUM	228	Jul 15	126	Jul 6	33	Jul 19 1965
MAXIMUM PEAK FLOW			7480	Dec 13	11700	Apr 13 1993
MAXIMUM PEAK STAGE			7.58	Dec 13	8.86	Apr 13 1993
INSTANTANEOUS LOW FLOW					**b**1.3	Nov 14 1961
10 PERCENT EXCEEDS	2270		1790		1330	
50 PERCENT EXCEEDS	716		593		417	
90 PERCENT EXCEEDS	322		269		109	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1960, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	378	571	1002	692	678	790	1886	909	425	245	190	371
MAX	502	854	1504	778	1039	926	2536	1134	521	339	270	744
(WY)	1960	1960	1958	1960	1960	1958	1958	1958	1960	1960	1960	1960
MIN	173	347	371	549	467	610	1262	520	310	195	129	135
(WY)	1958	1958	1959	1959	1959	1960	1959	1959	1959	1959	1959	1959

SUMMARY STATISTICS	WATER YEARS 1958 - 1960	
ANNUAL TOTAL ANNUAL MEAN	676	
HIGHEST ANNUAL MEAN	807	1960
LOWEST ANNUAL MEAN	478	1959
HIGHEST DAILY MEAN	10700	Dec 21 1957
LOWEST DAILY MEAN	50	Oct 4 1957
ANNUAL SEVEN DAY MINIMUM	63	Oct 1 1957
MAXIMUM PEAK FLOW	**c**13800	Dec 21 1957
MAXIMUM PEAK STAGE	9.85	Dec 21 1957
ANNUAL RUNOFF (CFSM)	2.33	
ANNUAL RUNOFF (INCHES)	31.69	
10 PERCENT EXCEEDS	1390	
50 PERCENT EXCEEDS	440	
90 PERCENT EXCEEDS	141	

a Also July 22, 23, 1965.
b Result of shutoff at reservoir.
c From rating curve extended above 6,100 ft^3/s.



LEHIGH RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to 1982.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water year 1988 September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 31.5°C, July 21, 1988; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 24.5°C, July 10, 11; minimum, 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.5	13.0	13.5	10.0	9.0	9.5	5.5	5.0	5.0	2.5	2.5	2.5
2	13.0	12.0	12.5	10.5	10.0	10.5	5.0	4.0	4.5	2.5	2.5	2.5
3	12.0	10.5	11.0	11.0	10.5	11.0	4.0	2.0	3.0	3.0	2.5	2.5
4	11.0	10.5	10.5	11.5	10.5	11.0	2.5	1.5	2.0	3.5	3.0	3.0
5	10.5	10.0	10.0	11.5	11.0	11.5	1.5	1.0	1.5	4.5	3.5	4.0
6	10.0	9.5	10.0	12.0	11.5	12.0	1.5	1.0	1.0	3.5	2.5	3.0
7	10.0	8.5	9.5	12.0	11.0	11.5	1.0	0.5	0.5	2.5	1.0	1.5
8	10.5	9.5	10.0	11.5	10.0	11.0	0.5	0.5	0.5	1.0	0.5	0.5
9	10.5	10.0	10.5	10.0	8.0	9.0	0.5	0.5	0.5	0.5	0.5	0.5
10	11.5	10.0	11.0	8.0	7.0	7.5	1.5	0.5	1.0	0.5	0.0	0.5
11	12.0	11.0	12.0	7.0	6.5	7.0	4.0	1.5	3.0	0.5	0.0	0.5
12	13.0	12.0	12.5	7.5	6.5	7.0	4.0	3.0	3.5	0.5	0.0	0.5
13	13.5	12.5	13.0	8.0	7.0	7.5	3.0	2.5	2.5	0.5	0.0	0.0
14	13.0	12.5	13.0	7.5	5.0	6.5	2.5	1.5	2.0	0.0	0.0	0.0
15	12.5	12.0	12.5	5.5	4.5	5.0	1.5	0.5	1.0	0.0	0.0	0.0
16	12.0	11.0	11.5	4.5	4.0	4.5	1.5	0.5	1.0	0.5	0.0	0.0
17	11.0	10.5	11.0	5.0	4.0	4.5	2.0	1.5	1.5	0.5	0.0	0.0
18	10.5	10.0	10.5	5.5	5.0	5.0	2.0	1.5	1.5	0.0	0.0	0.0
19	10.5	10.0	10.5	8.0	5.0	6.0	1.5	1.0	1.5	0.5	0.0	0.0
20	10.0	9.5	10.0	8.5	7.5	8.0	1.5	1.0	1.5	0.5	0.0	0.0
21	10.5	9.5	10.0	7.5	6.5	7.0	1.5	0.5	1.0	0.5	0.0	0.0
22	9.5	9.0	9.5	7.0	6.5	6.5	1.0	0.5	1.0	0.0	0.0	0.0
23	10.0	9.0	9.5	7.0	6.0	6.5	2.5	1.0	2.0	0.0	0.0	0.0
24	9.5	8.0	9.0	7.0	6.5	6.5	3.0	2.5	3.0	0.5	0.0	0.0
25	8.5	8.0	8.0	7.0	6.0	6.5	3.0	3.0	3.0	0.0	0.0	0.0
26	8.5	8.0	8.0	6.0	5.0	5.5	3.0	2.5	2.5	0.0	0.0	0.0
27	9.5	8.5	9.0	5.5	5.0	5.0	2.5	2.0	2.5	0.0	0.0	0.0
28	10.0	9.5	9.5	5.5	5.0	5.5	2.5	2.0	2.5	0.0	0.0	0.0
29	9.5	9.5	9.5	6.5	5.5	6.0	2.0	2.0	2.0	0.5	0.0	0.0
30	9.5	9.0	9.0	6.0	5.5	5.5	2.0	2.0	2.0	0.5	0.0	0.0
31	9.0	8.5	9.0	---	---	---	2.5	2.0	2.5	0.5	0.0	0.0
MONTH	14.5	8.0	10.5	12.0	4.0	7.5	5.5	0.5	2.0	4.5	0.0	0.7

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.0	1.0	0.0	0.5	7.5	7.0	7.5	14.0	12.0	13.0
2	0.5	0.0	0.0	1.0	0.5	0.5	7.0	6.5	7.0	15.5	14.0	15.0
3	0.0	0.0	0.0	1.0	0.5	1.0	7.0	6.5	6.5	15.5	14.0	15.0
4	0.5	0.0	0.0	1.5	1.0	1.5	6.5	6.0	6.5	14.0	12.0	12.5
5	0.5	0.0	0.0	2.0	1.5	1.5	6.0	4.0	5.5	12.5	11.0	12.0
6	0.0	0.0	0.0	2.5	2.0	2.5	5.5	3.5	4.5	12.0	11.0	11.5
7	0.5	0.0	0.0	3.0	2.5	2.5	6.0	4.5	5.0	14.0	12.0	13.0
8	0.5	0.0	0.0	3.5	2.5	3.0	6.5	5.0	5.5	14.0	13.0	13.5
9	0.5	0.0	0.0	3.0	2.5	2.5	7.0	5.5	6.5	14.0	13.5	13.5
10	0.5	0.0	0.0	2.5	2.0	2.5	7.0	6.0	6.5	16.0	14.0	14.5
11	0.5	0.0	0.0	3.0	2.0	2.5	7.5	6.5	7.0	17.0	15.5	16.0
12	0.5	0.0	0.0	3.5	2.5	3.0	7.5	6.5	7.0	18.0	17.0	17.5
13	0.5	0.0	0.0	3.0	2.0	2.5	7.0	6.5	7.0	19.0	18.0	18.0
14	0.5	0.0	0.0	3.0	2.0	2.5	7.5	6.5	7.0	20.0	19.0	19.0
15	0.5	0.0	0.0	3.0	2.0	2.5	7.5	7.0	7.0	20.5	19.5	20.0
16	0.5	0.0	0.0	3.5	2.5	3.0	8.0	7.5	8.0	20.5	19.0	19.5
17	0.5	0.0	0.0	2.5	2.0	2.0	9.5	8.0	8.5	19.5	18.0	18.5
18	0.5	0.0	0.0	2.5	2.0	2.0	10.5	9.0	10.0	19.5	18.5	18.5
19	0.5	0.0	0.0	3.0	2.0	2.5	11.5	10.0	11.0	19.5	18.5	19.0
20	0.5	0.0	0.0	3.5	2.0	2.5	13.0	11.5	12.5	19.0	18.0	18.0
21	0.5	0.0	0.5	3.5	2.5	3.0	13.5	13.0	13.0	18.5	18.0	18.0
22	0.5	0.0	0.5	3.5	2.5	3.0	14.0	13.0	13.5	19.0	18.5	18.5
23	1.0	0.0	0.5	3.0	2.0	2.5	14.0	13.5	14.0	19.5	18.5	19.5
24	0.5	0.0	0.0	3.0	2.0	2.5	14.5	13.5	14.0	20.5	19.5	20.0
25	0.5	0.0	0.0	4.0	2.5	3.5	14.0	12.5	13.0	21.0	20.0	20.5
26	0.5	0.0	0.0	4.5	4.0	4.0	12.5	11.0	11.5	21.0	20.0	20.5
27	0.5	0.0	0.0	6.0	4.5	5.5	12.0	10.5	11.0	20.0	17.5	18.0
28	0.5	0.0	0.5	6.5	6.0	6.5	11.5	10.5	11.0	19.0	18.0	18.5
29	1.0	0.0	0.5	7.5	6.5	7.0	11.5	10.5	11.0	19.0	18.0	18.5
30	---	---	---	7.5	6.5	7.0	12.5	10.5	11.5	18.0	16.0	16.5
31	---	---	---	7.0	6.5	7.0	---	---	---	16.0	15.5	16.0
MONTH	1.0	0.0	0.1	7.5	0.0	3.0	14.5	3.5	9.0	21.0	11.0	16.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	16.0	15.5	15.5	21.0	19.0	20.0	22.0	21.0	22.0	21.5	20.0	21.0
2	16.5	15.5	16.0	21.0	19.5	20.0	23.0	22.0	22.5	21.0	19.5	20.0
3	17.5	16.5	16.5	21.5	20.0	20.5	23.5	23.0	23.0	20.5	19.5	20.0
4	17.5	16.5	17.0	21.5	20.0	21.0	23.5	23.0	23.5	20.5	19.5	20.0
5	17.0	16.5	17.0	22.0	20.5	21.0	23.5	22.5	23.0	20.0	19.5	20.0
6	16.5	15.5	16.0	22.5	21.0	21.5	22.5	20.5	21.5	19.5	18.5	19.0
7	16.0	15.5	15.5	24.0	21.0	22.0	20.5	19.0	19.5	20.0	18.5	19.0
8	17.0	15.5	16.0	24.0	21.0	22.0	19.5	18.0	19.0	19.5	19.0	19.5
9	18.0	15.5	17.0	22.5	21.0	21.5	20.0	18.5	19.0	20.5	19.5	20.0
10	18.5	16.5	17.5	24.5	20.5	22.0	20.0	18.5	19.0	20.5	20.0	20.0
11	19.0	18.5	19.0	24.5	20.0	22.0	20.5	19.0	19.5	20.0	19.5	19.5
12	19.0	18.5	18.5	22.0	20.5	21.5	20.5	20.0	20.5	19.5	19.0	19.0
13	19.0	17.5	18.5	22.0	21.0	21.0	20.5	19.0	19.5	19.0	18.0	18.5
14	18.5	17.5	17.5	21.5	21.0	21.5	19.5	19.5	19.5	18.5	18.0	18.5
15	20.0	17.5	18.5	22.0	19.5	21.0	20.0	19.5	20.0	18.5	18.0	18.0
16	20.0	18.0	19.0	21.0	19.5	20.0	20.0	19.5	20.0	18.5	18.0	18.5
17	20.5	18.5	19.5	21.5	19.0	20.0	20.0	19.0	19.5	19.0	18.5	18.5
18	22.0	19.0	20.0	21.0	20.0	20.5	19.5	18.5	19.0	19.5	16.0	17.0
19	21.5	20.0	20.5	20.5	20.0	20.0	19.5	18.5	19.0	16.5	15.5	16.0
20	21.5	19.5	20.5	20.5	19.5	20.0	20.0	19.0	19.5	15.5	15.0	15.0
21	21.5	19.0	20.0	21.0	20.0	20.5	20.5	19.5	20.0	15.0	15.0	15.0
22	20.5	19.0	19.5	21.5	20.5	21.0	19.5	18.5	19.0	15.0	15.0	15.0
23	21.0	19.5	20.0	21.5	20.5	21.0	19.5	18.5	19.0	15.5	15.0	15.5
24	21.0	19.5	20.0	22.5	21.0	21.5	19.5	19.0	19.5	15.5	15.5	15.5
25	20.5	19.5	20.0	22.5	21.5	22.0	20.0	19.5	19.5	16.0	15.5	16.0
26	21.0	20.5	20.5	23.0	21.5	22.0	22.5	19.0	19.5	16.5	16.0	16.0
27	21.5	19.5	20.5	21.5	20.5	21.5	19.5	19.0	19.5	17.0	16.5	17.0
28	20.5	19.0	19.5	20.5	20.0	20.0	20.0	19.5	20.0	17.5	16.5	17.0
29	20.5	18.5	19.5	21.0	20.5	20.5	20.5	19.5	20.5	17.0	16.5	16.5
30	21.0	18.5	19.5	21.0	21.0	21.0	21.5	20.5	21.0	17.0	16.5	16.5
31	---	---	---	21.5	21.0	21.5	22.0	21.0	21.5	---	---	---
MONTH	22.0	15.5	18.5	24.5	19.0	21.0	23.5	18.0	20.2	21.5	15.0	17.9
YEAR	24.5	0.0	10.6									

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

CROSS-SECTION ANALYSES, OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
JUL 2004					
01...	1156	231	--	--	7
01...	1157	--	1.00	19.8	40
01...	1158	--	1.00	19.5	82
01...	1159	--	1.00	20.0	140
01...	1200	--	--	--	171

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 from highway bridge at Lehighton, and 0.3 mi upstream from Mahoning Creek.

DRAINAGE AREA.--591 mi^2.

PERIOD OF RECORD.--October 1945 to September 1948 (monthly discharge only, published in WSP 1302). October 1982 to current year. Gage height records beginning 1935 are contained in reports of the U.S. Weather Bureau. Miscellaneous measurements, water years 1977-78, 1980-81, and annual maximum, 1982.

REVISED RECORDS.--WDR PA-99-1: 1985(M).

GAGE.--Water-stage recorder. Datum of gage is 444.26 ft above National Geodetic Vertical Datum of 1929. Prior to August 1970, at same site at datum 2.0 ft higher. Prior to December 1982, nonrecording gage at highway bridge 190 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Francis E. Walter Reservoir (station 01447780) since February 1961. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2500	5200	4130	2380	e580	685	1220	1370	1330	505	798	863
2	e2000	3020	3810	2280	e620	728	1240	1510	1390	495	1420	772
3	e1800	2490	3480	2240	e680	1180	1210	3070	1230	504	1560	743
4	e1700	1770	2960	2430	e780	1970	1190	3460	960	470	1330	720
5	e1800	1980	2320	3730	e700	2420	1140	2660	999	443	1120	694
6	e1800	2140	1980	4510	e620	2750	800	2190	1370	423	901	579
7	e1700	2010	1860	3360	e800	2870	1010	2010	1260	371	734	558
8	e1400	1870	1720	2760	e880	3030	952	2280	1080	344	607	580
9	e1200	1770	1510	2100	e950	2920	899	2180	820	327	544	1390
10	1050	1730	1470	e1800	e870	2310	862	1750	743	317	492	2900
11	1140	1910	6250	e1700	855	2130	840	2300	1170	308	493	2600
12	1100	2010	6010	e1600	759	1750	842	2300	1040	638	754	2080
13	1040	2410	7700	e1500	672	1540	1150	2270	985	1090	4220	1540
14	1000	2190	8030	e1400	656	1480	1720	1920	673	777	3940	864
15	2090	1320	6030	e1300	640	1410	2000	1960	681	637	3530	748
16	1880	1250	3400	e1200	593	1290	1800	2040	653	483	3030	760
17	1730	1210	3060	e1100	629	1210	1340	1630	690	475	2310	758
18	1620	1160	3090	e1000	646	1240	1270	1380	864	656	1560	11300
19	1900	1310	2780	e1000	626	1240	1100	1460	738	1050	1160	6940
20	1850	3140	2400	e1100	615	1200	960	1320	785	880	1160	8310
21	1730	3510	2270	e1000	627	1340	964	1250	697	833	2460	7570
22	855	3270	2040	e950	640	1340	953	1220	675	764	2750	6910
23	827	2810	1750	e880	624	1350	1020	1120	821	709	2580	5590
24	1630	2100	3450	e800	610	1290	1110	1050	759	809	2280	4700
25	1580	2290	4040	e770	593	1150	1080	860	619	820	1740	3310
26	1540	2170	3260	e750	586	1250	1460	974	820	712	1270	3060
27	2870	1710	2920	e740	587	1520	1950	2010	810	630	1150	3320
28	4210	2110	2710	e730	639	1700	2240	3050	567	802	1120	3940
29	6940	4160	3420	e720	651	1610	1820	2390	568	1030	1010	4050
30	5720	3370	5000	e680	---	1410	1250	2010	526	1030	958	5410
31	5970	---	2540	e640	---	1210	---	1200	---	855	984	---
TOTAL	66172	69390	107390	49150	19728	50523	37392	58194	26323	20187	49965	93559
MEAN	2135	2313	3464	1585	680	1630	1246	1877	877	651	1612	3119
MAX	6940	5200	8030	4510	950	3030	2240	3460	1390	1090	4220	11300
MIN	827	1160	1470	640	580	685	800	860	526	308	492	558
CFSM	3.61	3.91	5.86	2.68	1.15	2.76	2.11	3.18	1.48	1.10	2.73	5.28
IN.	4.17	4.37	6.76	3.09	1.24	3.18	2.35	3.66	1.66	1.27	3.15	5.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	866	1301	1643	1292	1267	1927	2284	1707	1247	736	615	875
MAX	2135	2366	4120	4151	2470	3164	6010	4038	4404	1955	1686	3767
(WY)	2004	1986	1997	1996	1984	1986	1993	1989	2003	1984	2003	1987
MIN	238	286	267	532	566	926	895	657	325	152	154	181
(WY)	1983	1999	1999	1989	1987	1989	1995	1999	1999	1999	1999	1995

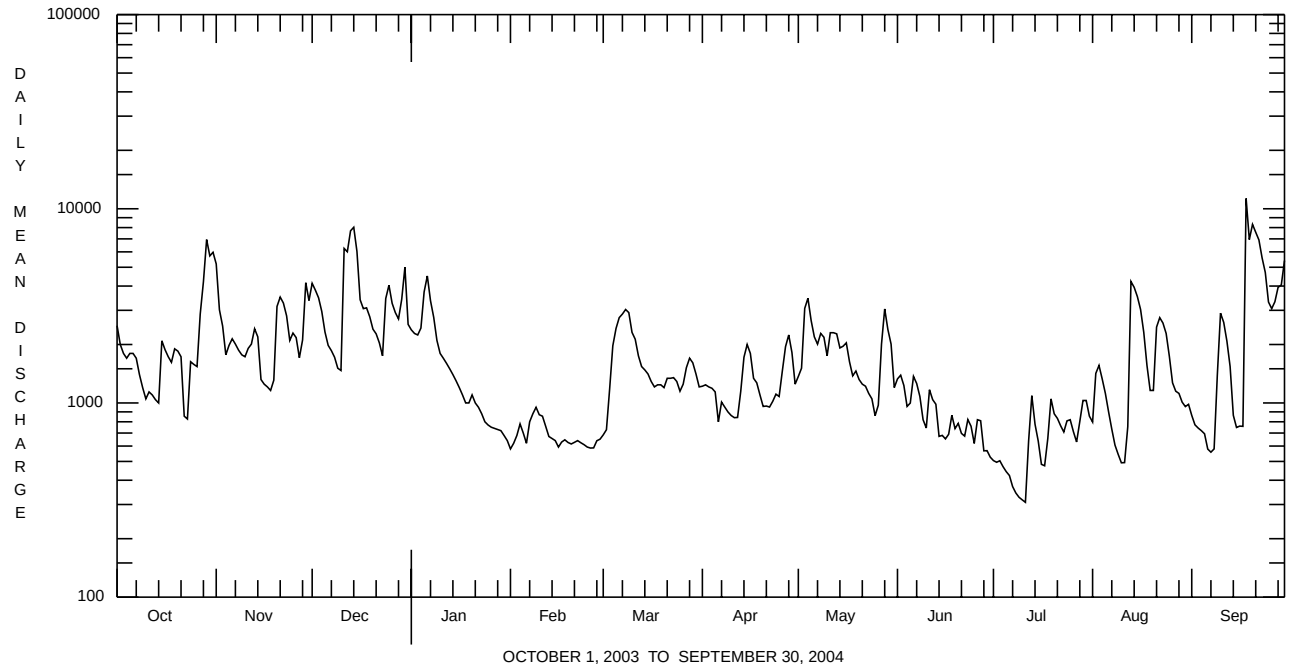
e Estimated.

LEHIGH RIVER BASIN

01449000 LEHIGH RIVER AT LEHIGHTON, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	791362		647973			
ANNUAL MEAN	2168		1770		1312	
HIGHEST ANNUAL MEAN					1954	2003
LOWEST ANNUAL MEAN					758	1985
HIGHEST DAILY MEAN	8260	Jun 24	11300	Sep 18	15100	Apr 16 1983
LOWEST DAILY MEAN	556	Jul 17	308	Jul 11	104	Aug 30 1999
ANNUAL SEVEN-DAY MINIMUM	592	Jul 15	362	Jul 5	120	Aug 6 1999
MAXIMUM PEAK FLOW			**a**21200	Sep 18	**a**22900	Jan 27 1996
MAXIMUM PEAK STAGE			12.01	Sep 18	12.55	Jan 27 1996
ANNUAL RUNOFF (CFSM)	3.67		3.00		2.22	
ANNUAL RUNOFF (INCHES)	49.81		40.79		30.17	
10 PERCENT EXCEEDS	4680		3380		2700	
50 PERCENT EXCEEDS	1610		1290		902	
90 PERCENT EXCEEDS	700		628		290	

a From rating curve extended above 16,000 ft^3/s.



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 upstream from mouth.

DRAINAGE AREA.--49.9 mi^2.

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 those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

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

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	2130	632	5.82	Sept. 18	1430	*1,950	*8.99
Dec. 24	1900	589	5.68	Sept. 28	2245	568	5.61

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	254	255	172	67	91	83	91	88	48	114	84
2	174	221	217	161	65	103	82	93	77	47	91	77
3	159	196	189	155	71	113	78	169	75	46	81	73
4	160	178	172	172	84	121	77	119	67	45	80	70
5	153	176	163	228	70	117	73	113	72	46	84	68
6	134	177	159	193	97	134	69	117	83	44	71	66
7	123	167	146	171	133	128	70	128	71	47	67	64
8	116	146	135	162	101	122	69	113	65	53	64	117
9	109	134	127	154	e85	113	70	111	62	45	61	377
10	104	128	135	e140	83	108	65	106	68	42	58	296
11	99	126	476	e130	80	102	64	111	75	41	59	215
12	95	128	499	e130	75	98	66	101	61	101	74	175
13	91	122	347	129	73	91	119	97	58	103	155	152
14	89	113	288	119	71	87	120	93	58	69	97	136
15	239	109	260	114	67	86	132	94	58	101	83	125
16	154	104	220	e110	63	86	117	123	59	75	77	124
17	127	101	252	117	63	85	115	93	71	67	73	116
18	122	98	260	110	62	83	110	88	87	69	69	1490
19	115	135	217	100	61	85	105	92	62	105	67	1070
20	108	258	197	95	61	86	99	86	57	77	65	563
21	106	197	179	89	69	108	97	81	54	67	238	389
22	102	180	169	89	77	96	92	78	68	63	187	304
23	97	166	167	82	77	90	96	75	76	63	140	252
24	92	157	419	e80	78	89	89	72	58	69	122	217
25	88	162	483	e80	70	94	87	68	56	56	110	192
26	87	143	367	79	66	92	132	79	61	54	102	174
27	231	133	298	76	65	90	121	157	54	113	96	158
28	292	222	255	e73	71	86	101	98	52	145	95	306
29	380	395	226	73	83	84	95	83	58	104	92	454
30	379	301	211	e70	---	83	93	76	50	89	86	302
31	302	---	190	e69	---	86	---	79	---	85	110	---
TOTAL	4817	5127	7678	3722	2188	3037	2786	3084	1961	2179	2968	8206
MEAN	155	171	248	120	75.4	98.0	92.9	99.5	65.4	70.3	95.7	274
MAX	380	395	499	228	133	134	132	169	88	145	238	1490
MIN	87	98	127	69	61	83	64	68	50	41	58	64
CFSM	3.11	3.42	4.96	2.41	1.51	1.96	1.86	1.99	1.31	1.41	1.92	5.48
IN.	3.59	3.82	5.72	2.77	1.63	2.26	2.08	2.30	1.46	1.62	2.21	6.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	66.3	93.1	128	113	113	157	156	124	100	65.1	53.4	63.1
MAX	181	203	354	323	191	330	369	270	359	165	193	274
(WY)	1977	1973	1997	1979	1998	1977	1983	1989	2003	1969	1969	2004
MIN	18.9	24.7	18.1	13.9	45.0	60.2	47.9	56.9	35.9	18.2	14.0	15.5
(WY)	1981	1981	1999	1981	1980	1985	1985	1995	1999	1999	1999	1980

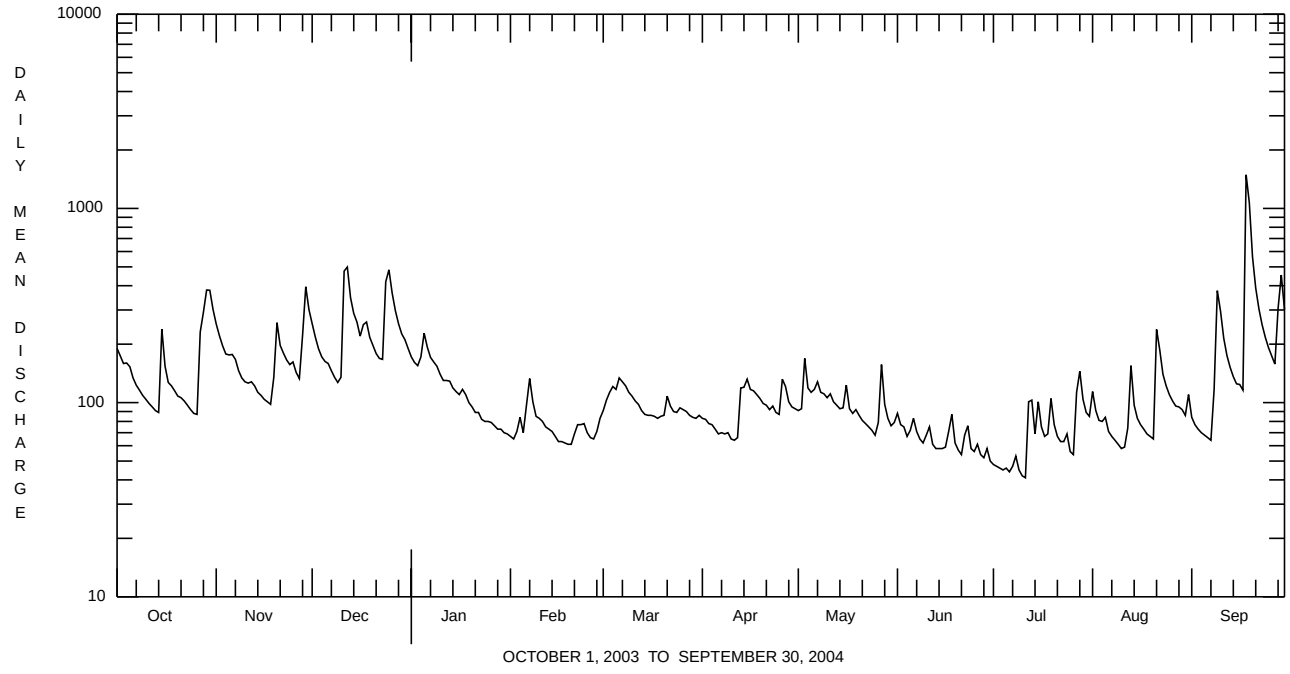
e Estimated.

LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004	
ANNUAL TOTAL	62325		47753			
ANNUAL MEAN	171		130		103	
HIGHEST ANNUAL MEAN					154	2003
LOWEST ANNUAL MEAN					46.5	1985
HIGHEST DAILY MEAN	1190	Jun 13	1490	Sep 18	1550	Apr 16 1983
LOWEST DAILY MEAN	**e**44	Feb 16	41	Jul 11	9.9	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	**a**53	Feb 10	45	Jul 5	11	Aug 2 1999
MAXIMUM PEAK FLOW			**b**1950	Sep 18	**b**2080	Jul 29 1969
MAXIMUM PEAK STAGE			8.99	Sep 18	9.21	Jul 29 1969
ANNUAL RUNOFF (CFSM)	3.42		2.61		2.06	
ANNUAL RUNOFF (INCHES)	46.46		35.60		27.95	
10 PERCENT EXCEEDS	316		227		201	
50 PERCENT EXCEEDS	125		97		75	
90 PERCENT EXCEEDS	66		63		28	

a Computed using estimated daily discharges.
b From rating curve extended above 800 ft^3/s.
e Estimated.



LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water year 1969 to September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform since water year 1986.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 31.5°C, July 25, 1970; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 20.5°C, July 5; minimum, 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	11.5	11.0	11.0	12.5	10.0	11.0	7.0	5.5	6.5	5.0	4.0	4.5
2	11.0	9.5	10.0	12.5	11.5	12.0	5.5	3.0	4.5	6.5	4.5	5.5
3	10.0	8.5	9.5	13.5	11.5	12.5	3.0	2.0	3.0	8.0	6.5	7.0
4	10.0	9.5	9.5	13.0	11.5	12.0	4.0	2.0	3.0	8.0	6.5	8.0
5	10.0	8.5	9.0	12.0	11.5	12.0	4.0	2.5	3.5	6.5	5.5	6.0
6	10.0	8.0	9.0	12.0	11.5	12.0	3.0	1.5	2.5	5.5	2.5	4.5
7	10.0	7.5	9.0	11.5	10.0	11.0	2.5	1.5	2.0	2.5	1.0	1.5
8	12.0	9.0	10.5	10.0	6.5	8.0	3.5	2.0	2.5	2.5	1.0	1.5
9	12.5	11.0	12.0	6.5	4.5	5.5	4.0	3.0	3.5	2.5	0.0	1.5
10	13.0	12.0	12.5	5.5	4.0	5.0	5.5	4.0	4.5	0.0	0.0	0.0
11	13.5	11.5	12.5	7.0	5.0	5.5	7.0	5.5	6.5	0.0	0.0	0.0
12	13.0	11.5	12.5	9.5	7.0	8.0	6.0	4.5	5.5	3.0	0.0	1.0
13	13.5	12.0	13.0	10.0	6.5	8.5	4.5	3.5	4.0	4.0	2.0	3.0
14	12.5	11.0	12.0	6.5	5.0	5.5	4.0	1.0	2.0	2.0	0.0	0.5
15	12.5	11.0	12.0	7.0	5.5	6.0	3.5	2.0	3.0	0.0	0.0	0.0
16	11.0	9.5	10.5	7.0	5.5	6.5	4.5	3.0	4.0	0.0	0.0	0.0
17	11.0	10.0	10.5	8.5	7.0	8.0	5.0	4.0	4.5	0.5	0.0	0.0
18	10.5	9.0	10.0	9.0	7.5	8.0	4.0	3.0	3.5	1.5	0.5	0.5
19	10.5	9.5	10.0	11.5	9.0	10.5	4.5	3.5	4.0	1.5	0.5	1.0
20	10.0	8.0	9.0	11.0	8.0	9.5	4.0	3.0	3.5	1.0	0.0	0.5
21	11.5	9.0	10.0	9.0	7.0	8.0	3.5	2.5	3.0	0.5	0.0	0.0
22	11.5	9.5	11.0	9.0	7.5	8.5	5.0	2.5	3.5	1.5	0.0	0.5
23	9.5	7.5	8.0	8.5	7.0	8.0	6.0	5.0	5.5	0.5	0.0	0.0
24	7.5	6.0	7.0	9.5	7.5	8.5	5.5	5.0	5.5	0.5	0.0	0.0
25	8.5	6.0	7.0	8.5	6.0	7.0	5.5	4.5	5.0	0.0	0.0	0.0
26	11.0	8.5	10.0	6.5	5.0	6.0	4.5	4.0	4.5	0.0	0.0	0.0
27	12.5	11.0	12.0	7.5	5.5	6.5	5.5	4.0	4.5	0.5	0.0	0.0
28	11.0	9.0	10.0	9.5	7.5	8.5	5.0	3.5	4.5	0.5	0.0	0.0
29	10.5	9.5	10.0	9.0	6.0	7.5	5.5	3.5	4.5	0.5	0.0	0.0
30	10.0	8.5	9.5	7.0	6.0	6.5	5.5	4.5	5.0	0.0	0.0	0.0
31	11.0	8.5	9.5	---	---	---	5.5	4.5	5.0	0.0	0.0	0.0
MONTH	13.5	6.0	10.3	13.5	4.0	8.4	7.0	1.0	4.1	8.0	0.0	1.5

LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.5	5.5	3.0	4.5	8.5	7.5	8.0	16.5	12.5	14.5
2	1.0	0.0	0.5	6.5	4.5	5.5	8.0	7.5	7.5	16.0	14.5	15.0
3	0.5	0.5	0.5	6.5	4.0	5.5	8.0	7.0	7.5	15.0	10.5	13.0
4	2.0	0.5	1.0	6.0	5.0	5.5	7.5	6.0	7.0	12.5	9.0	11.0
5	2.0	0.5	1.5	6.0	5.0	5.5	7.0	3.5	5.0	11.5	8.5	10.0
6	2.0	0.5	1.0	8.0	6.0	6.5	7.5	3.0	5.5	14.0	9.0	11.5
7	3.0	1.0	2.0	7.5	5.5	6.5	10.0	6.0	8.0	15.5	11.5	13.5
8	2.0	0.5	1.0	7.0	5.0	6.0	9.0	6.0	7.5	14.5	11.5	12.5
9	2.0	0.0	1.0	5.5	4.0	5.0	10.0	6.5	8.5	14.5	11.0	12.5
10	4.0	2.0	3.0	6.0	4.0	5.0	10.0	6.0	8.5	16.5	12.5	14.5
11	3.5	2.5	3.0	7.0	3.0	5.0	9.0	7.0	8.0	17.5	14.5	16.0
12	3.0	1.0	2.0	6.5	4.0	5.0	8.5	7.0	7.5	17.0	15.0	16.5
13	4.0	2.5	3.0	5.5	3.0	4.0	7.5	6.5	7.0	18.0	15.0	16.5
14	3.0	2.0	2.5	4.5	2.5	3.5	8.5	7.5	8.0	17.5	15.0	16.0
15	2.5	1.0	1.5	7.5	4.0	5.5	11.0	6.5	8.5	18.0	15.0	16.0
16	1.0	0.0	0.5	6.5	1.5	3.5	11.0	6.0	9.0	17.0	15.5	16.5
17	1.0	0.0	0.5	4.0	1.5	3.0	13.0	8.0	10.5	16.0	14.0	15.5
18	2.0	0.5	1.0	5.0	2.0	4.0	15.0	10.5	12.5	17.0	15.0	16.0
19	3.5	2.0	2.5	5.0	3.0	4.0	15.0	10.5	13.0	16.5	15.0	15.5
20	4.0	2.0	3.0	5.5	2.0	4.0	15.0	12.5	14.0	15.0	13.5	14.5
21	5.0	3.5	4.0	6.5	4.5	5.5	13.5	11.0	12.5	16.0	14.5	15.0
22	4.5	2.5	3.5	4.5	2.0	3.5	15.0	11.0	13.0	17.5	15.0	16.0
23	4.5	2.0	3.0	4.5	1.0	3.0	14.0	11.0	12.5	18.0	16.0	17.0
24	4.0	2.5	3.0	7.0	2.5	5.0	14.5	10.0	12.0	18.5	16.5	17.5
25	3.0	0.5	2.0	7.5	6.0	6.5	13.0	9.0	10.0	18.0	16.0	17.5
26	3.5	0.5	2.5	10.0	6.5	8.0	10.0	8.5	9.0	17.5	15.0	16.0
27	4.5	1.5	3.0	10.5	8.5	9.5	12.5	9.0	11.0	16.5	15.0	16.0
28	5.0	2.0	3.5	12.0	8.5	10.0	12.0	8.0	10.0	16.5	15.5	16.0
29	5.5	2.5	4.0	10.5	7.5	9.0	14.0	8.0	11.5	15.5	13.0	14.0
30	---	---	---	8.5	6.5	7.0	15.5	11.0	13.5	14.5	11.0	13.0
31	---	---	---	8.0	6.5	7.5	---	---	---	14.0	12.5	13.0
MONTH	5.5	0.0	2.1	12.0	1.0	5.5	15.5	3.0	9.5	18.5	8.5	14.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	14.0	12.5	13.5	18.0	16.0	17.0	19.0	18.0	18.5	17.5	15.5	16.5
2	15.5	13.0	14.0	19.0	16.5	18.0	19.5	17.5	18.5	17.0	15.5	16.0
3	15.5	13.5	14.5	19.0	16.5	18.0	20.0	18.0	19.0	17.0	15.0	16.0
4	15.0	13.0	14.5	19.0	17.0	18.0	19.5	18.0	19.0	17.0	15.5	16.5
5	14.5	12.5	13.5	20.5	18.0	19.0	19.0	17.5	18.0	17.0	15.5	16.0
6	12.5	12.0	12.5	20.0	18.5	19.0	17.5	15.5	16.0	16.5	14.5	15.5
7	16.0	12.5	14.0	19.5	17.0	18.5	15.5	14.5	15.0	17.5	16.0	16.5
8	17.5	14.5	16.0	20.0	18.0	19.0	16.0	14.0	15.0	17.5	17.0	17.0
9	19.0	16.0	17.5	19.0	17.5	18.0	17.5	15.0	16.0	19.0	17.5	18.5
10	18.5	16.5	17.5	19.0	16.0	17.5	18.0	16.0	17.0	18.0	16.5	17.5
11	16.5	14.5	15.5	20.0	17.0	18.5	18.5	17.5	18.0	17.0	15.0	16.0
12	15.5	13.0	14.5	19.0	17.0	18.0	18.0	17.5	17.5	16.0	14.0	15.0
13	15.0	13.5	14.5	18.5	17.0	17.5	18.5	17.5	18.0	16.5	15.0	16.0
14	15.5	14.0	15.0	17.5	16.5	17.0	18.0	16.5	17.0	16.5	15.0	15.5
15	18.5	15.5	17.0	17.0	16.5	17.0	17.0	16.5	17.0	15.5	14.5	15.5
16	19.0	17.0	18.0	17.0	16.0	16.5	17.0	16.0	16.5	16.0	15.5	16.0
17	18.5	17.5	18.0	18.5	16.0	17.0	17.0	15.0	16.0	16.0	15.0	15.5
18	19.5	17.5	18.5	18.0	16.5	17.0	17.5	16.0	16.5	17.5	15.0	16.0
19	18.5	17.0	18.0	17.0	16.0	16.5	18.0	16.5	17.5	15.0	13.0	13.5
20	17.0	15.0	16.0	18.0	16.0	17.0	19.0	17.0	18.0	13.5	12.0	13.0
21	16.5	14.0	15.5	18.5	16.0	17.5	19.0	17.0	18.0	14.5	12.5	13.5
22	16.0	15.0	16.0	19.0	17.0	18.0	17.0	14.5	16.0	15.0	12.5	14.0
23	18.0	15.5	16.5	18.5	18.0	18.5	16.5	14.0	15.5	15.5	13.5	14.5
24	18.0	15.5	17.0	19.5	17.5	18.5	17.0	15.5	16.5	15.5	14.0	15.0
25	18.0	16.5	17.0	18.5	17.5	18.0	17.5	16.0	16.5	15.5	14.0	15.0
26	18.0	16.5	17.0	18.0	17.0	17.5	17.0	15.5	16.0	15.5	14.5	15.0
27	16.5	14.5	16.0	17.5	16.5	17.0	17.0	16.0	16.5	15.0	13.0	14.0
28	16.0	14.5	15.0	18.0	16.5	17.0	18.0	16.0	17.0	16.0	14.5	15.0
29	17.0	14.5	16.0	18.0	16.0	17.5	18.5	17.0	17.5	16.0	15.0	15.5
30	17.5	15.0	16.5	18.0	16.5	17.0	18.0	17.5	17.5	15.0	14.0	14.5
31	---	---	---	19.0	17.5	18.0	18.5	17.5	18.0	---	---	---
MONTH	19.5	12.0	15.8	20.5	16.0	17.7	20.0	14.0	17.1	19.0	12.0	15.5
YEAR	20.5	0.0	10.2									

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

CROSS-SECTION ANALYSES, OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)
JUN 2004					
29...	1754	54	0	--	--
29...	1755	--	15	0.90	16.9
29...	1756	--	30	1.15	17.2
29...	1757	--	45	1.20	17.3

LEHIGH RIVER BASIN

01449800 POHOPOCO CREEK BELOW BELTZVILLE LAKE 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, 0.4 mi downstream from Beltzville Dam, 1.3 mi upstream from Bull Run, and 2.3 mi northeast of Parryville.

DRAINAGE AREA.--96.4 mi^2.

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.--No estimated daily discharges. Records good. Flow regulated entire period of record 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), reservoir for city of Bethlehem. Diversion upstream from Tunkhannock Creek to Wild Creek Basin since October 1969. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	589	423	654	387	104	119	127	137	150	68	100	170
2	307	422	899	287	104	148	142	140	127	50	130	117
3	236	419	667	223	104	153	150	280	108	39	146	71
4	236	420	419	226	159	186	150	299	95	39	144	59
5	236	419	311	329	159	168	129	259	89	39	161	59
6	257	346	282	388	138	150	116	215	89	39	112	59
7	239	269	282	389	136	153	116	210	113	39	81	59
8	195	245	243	267	136	294	116	219	126	39	81	125
9	179	245	219	227	194	254	111	219	126	51	81	308
10	179	187	220	245	190	187	100	219	95	57	82	449
11	179	153	241	244	135	187	100	192	78	57	83	406
12	177	209	757	245	116	166	100	175	78	183	86	400
13	176	245	1200	245	110	154	184	158	78	207	367	235
14	137	187	1180	242	107	154	232	147	107	125	520	128
15	296	107	665	214	107	153	231	147	113	95	311	118
16	309	107	388	150	107	153	177	146	80	95	183	118
17	212	195	354	120	90	153	144	175	68	95	148	166
18	206	241	290	120	67	157	143	189	127	95	130	160
19	205	244	326	120	59	157	143	187	166	120	131	922
20	169	285	346	197	71	157	161	186	166	119	116	1510
21	149	374	345	236	78	157	171	133	85	95	107	1460
22	149	412	293	181	78	158	135	98	41	86	109	1440
23	147	407	263	146	118	157	133	98	41	88	293	1410
24	132	277	359	146	143	157	143	120	41	87	379	1040
25	123	226	412	146	117	157	143	123	41	88	379	816
26	123	242	409	119	93	157	181	114	41	58	340	808
27	216	241	408	103	89	158	203	281	41	52	192	466
28	449	247	407	103	89	157	161	221	65	217	138	161
29	618	252	902	104	89	160	136	116	107	199	138	671
30	819	254	1110	104	---	138	135	116	103	113	136	730
31	701	---	650	104	---	126	---	118	---	97	159	---
TOTAL	8345	8300	15501	6357	3287	5085	4413	5437	2785	2831	5563	14641
MEAN	269	277	500	205	113	164	147	175	92.8	91.3	179	488
MAX	819	423	1200	389	194	294	232	299	166	217	520	1510
MIN	123	107	219	103	59	119	100	98	41	39	81	59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

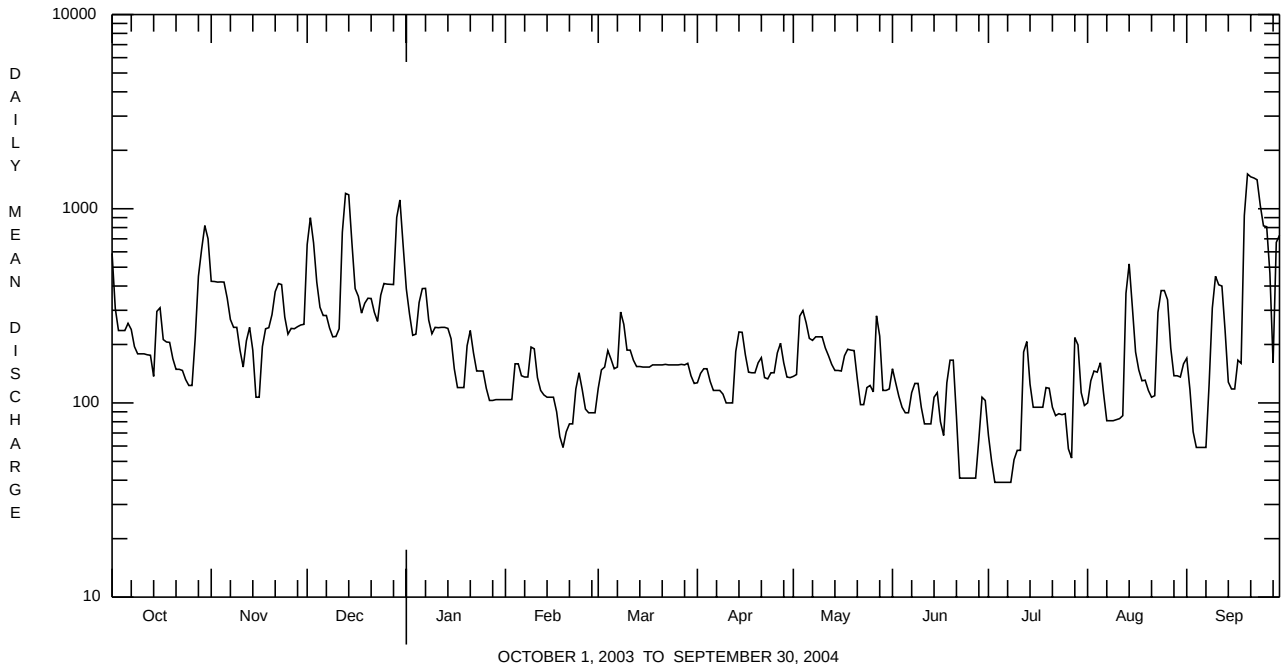
MEAN	111	133	205	176	185	258	264	210	163	109	89.2	109
MAX	405	302	675	527	459	576	754	538	827	321	491	529
(WY)	1983	1971	1997	1979	1976	1977	1993	1990	2003	1975	1969	1987
MIN	12.7	19.2	14.4	33.3	17.0	16.2	32.5	25.2	46.7	32.4	18.0	29.2
(WY)	1996	1992	1992	1981	1981	1981	1981	1971	1999	1985	1985	1970

LEHIGH RIVER BASIN

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	113778		82545			
ANNUAL MEAN	312		226		168	
HIGHEST ANNUAL MEAN					276	2003
LOWEST ANNUAL MEAN					60.2	1985
HIGHEST DAILY MEAN	1380	Jun 23	1510	Sep 20	1510	Sep 20 2004
LOWEST DAILY MEAN	55	Aug 2-4**a**	39	Jul 3-8	9.5	Oct 12 1993
ANNUAL SEVEN-DAY MINIMUM	64	Jul 29	41	Jul 2	11	Oct 7 1993
MAXIMUM PEAK FLOW			1570	Sep 19	1740	May 8 1973**b**
MAXIMUM PEAK STAGE			5.72	Sep 19	5.99	Jun 22 2003
10 PERCENT EXCEEDS	822		410		373	
50 PERCENT EXCEEDS	195		157		105	
90 PERCENT EXCEEDS	95		81		36	

a Also Sept. 11-14.
b Also June 22, 2003.



LEHIGH RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water year 1969 to September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform since water year 1986.

REMARKS.--Water temperature records rated good. Interruptions in the record were due to equipment failure.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 26.5°C, several days during July and August 1970; minimum, 0.0°C, Dec. 9, 1969, Jan. 15, 1999.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 19.0°C, Sept. 18, 28, 29; minimum, 2.0°C, Jan. 25-27.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	18.0	17.5	17.5	13.0	13.0	13.0	9.0	9.0	9.0	4.0	3.5	4.0
2	18.0	17.5	17.5	13.0	13.0	13.0	9.0	8.5	8.5	4.0	3.5	4.0
3	17.5	17.0	17.5	13.0	13.0	13.0	8.5	8.0	8.5	4.0	4.0	4.0
4	17.0	17.0	17.0	13.5	13.0	13.0	8.0	7.5	8.0	4.0	4.0	4.0
5	17.0	16.5	16.5	13.0	13.0	13.0	7.5	7.5	7.5	4.0	4.0	4.0
6	16.5	16.5	16.5	13.0	13.0	13.0	7.5	7.0	7.0	4.0	3.5	4.0
7	16.5	16.0	16.0	13.0	12.5	13.0	7.0	6.5	7.0	3.5	3.5	3.5
8	16.5	16.0	16.0	13.0	12.5	12.5	6.5	6.5	6.5	3.5	3.0	3.5
9	16.0	16.0	16.0	12.5	12.5	12.5	6.5	6.0	6.5	3.0	2.5	3.0
10	16.5	16.0	16.0	12.5	12.0	12.0	6.5	6.0	6.5	2.5	2.5	2.5
11	16.5	16.0	16.0	12.0	12.0	12.0	6.5	6.0	6.5	2.5	2.5	2.5
12	16.0	16.0	16.0	12.0	12.0	12.0	6.0	5.5	6.0	3.0	2.5	3.0
13	16.0	15.5	16.0	12.0	11.0	11.0	6.0	6.0	6.0	3.0	3.0	3.0
14	16.5	15.5	16.0	11.0	11.0	11.0	6.0	5.5	5.5	3.0	2.5	3.0
15	16.0	15.0	15.5	11.0	10.5	10.5	5.5	5.0	5.5	2.5	2.5	2.5
16	15.5	15.5	15.5	10.5	10.5	10.5	5.5	5.0	5.0	3.0	2.5	2.5
17	15.5	15.5	15.5	10.5	10.5	10.5	5.0	5.0	5.0	3.0	2.5	2.5
18	15.5	15.0	15.0	10.5	10.5	10.5	5.0	5.0	5.0	3.0	2.5	2.5
19	15.0	15.0	15.0	10.5	10.0	10.5	5.0	4.5	4.5	3.0	2.5	2.5
20	15.0	14.5	15.0	10.5	10.0	10.0	4.5	4.5	4.5	3.0	2.5	2.5
21	15.0	14.5	14.5	10.0	10.0	10.0	4.5	4.5	4.5	2.5	2.5	2.5
22	15.0	14.5	14.5	10.0	10.0	10.0	4.5	4.5	4.5	2.5	2.5	2.5
23	14.5	14.0	14.0	10.0	10.0	10.0	4.5	4.5	4.5	2.5	2.5	2.5
24	14.5	14.0	14.0	10.0	10.0	10.0	4.5	4.5	4.5	2.5	2.5	2.5
25	14.0	13.5	14.0	10.0	9.5	9.5	4.5	4.0	4.5	2.5	2.0	2.5
26	14.0	13.5	13.5	9.5	9.5	9.5	4.0	4.0	4.0	2.5	2.0	2.5
27	13.5	13.5	13.5	9.5	9.5	9.5	4.0	4.0	4.0	2.5	2.0	2.5
28	13.5	13.5	13.5	9.5	9.5	9.5	4.0	4.0	4.0	2.5	2.5	2.5
29	13.5	13.0	13.0	9.5	9.0	9.0	4.0	4.0	4.0	2.5	2.5	2.5
30	13.0	13.0	13.0	9.0	9.0	9.0	4.0	4.0	4.0	2.5	2.5	2.5
31	13.0	13.0	13.0	---	---	---	4.0	3.5	4.0	2.5	2.5	2.5
MONTH	18.0	13.0	15.2	13.5	9.0	11.1	9.0	3.5	5.6	4.0	2.0	2.9

LEHIGH RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	3.0	2.5	2.5	3.5	3.0	3.0	6.0	6.0	6.0	9.0	8.0	8.5
2	3.0	2.5	2.5	3.5	3.0	3.5	6.0	6.0	6.0	9.0	8.0	8.5
3	2.5	2.5	2.5	3.5	3.0	3.5	6.0	5.5	5.5	9.5	8.0	8.5
4	3.0	2.5	2.5	3.5	3.5	3.5	5.5	5.5	5.5	9.0	8.0	8.5
5	3.0	2.5	2.5	3.5	3.5	3.5	6.0	5.0	5.5	9.0	8.5	9.0
6	2.5	2.5	2.5	3.5	3.5	3.5	6.0	5.0	5.5	9.5	8.5	9.0
7	3.0	2.5	2.5	4.0	3.5	3.5	6.0	5.5	5.5	9.5	9.0	9.0
8	3.0	2.5	2.5	3.5	3.5	3.5	6.0	5.5	5.5	9.5	8.5	9.0
9	3.0	2.5	2.5	3.5	3.5	3.5	6.5	5.5	6.0	9.5	8.5	9.0
10	3.0	2.5	2.5	3.5	3.5	3.5	7.0	5.5	6.0	9.5	9.0	9.0
11	3.0	2.5	2.5	4.0	3.5	3.5	6.5	5.5	6.0	10.0	9.0	9.5
12	3.0	2.5	2.5	3.5	3.5	3.5	7.0	6.0	6.5	10.0	9.0	9.5
13	3.0	2.5	2.5	4.0	3.5	3.5	7.0	6.5	6.5	10.0	9.0	9.5
14	3.0	2.5	2.5	4.0	3.5	3.5	7.0	6.5	6.5	10.0	9.5	9.5
15	3.0	2.5	2.5	4.5	3.5	4.0	7.5	6.5	7.0	10.0	9.5	9.5
16	3.0	2.5	2.5	4.0	3.5	3.5	7.5	6.5	7.0	10.5	9.5	10.0
17	3.0	2.5	2.5	3.5	3.5	3.5	7.5	6.5	7.0	10.0	9.5	10.0
18	3.5	2.5	3.0	4.0	3.5	3.5	7.5	6.5	7.0	10.5	9.5	10.0
19	3.5	2.5	3.0	4.0	3.5	3.5	7.5	6.5	7.0	10.5	9.5	10.0
20	3.5	2.5	3.0	4.0	3.5	3.5	8.5	6.5	7.5	10.0	10.0	10.0
21	3.5	3.0	3.0	4.0	3.5	3.5	8.5	7.5	8.0	10.5	10.0	10.0
22	3.5	3.0	3.0	4.0	3.5	3.5	8.5	7.5	8.0	11.0	10.0	10.5
23	3.5	3.0	3.0	4.0	3.5	3.5	9.0	7.5	8.5	11.0	10.0	10.5
24	3.0	3.0	3.0	4.5	3.5	4.0	8.5	7.5	8.0	11.0	10.0	10.5
25	3.5	3.0	3.0	4.0	4.0	4.0	8.5	7.5	8.0	11.0	10.0	10.5
26	3.5	3.0	3.0	4.5	4.0	4.0	8.5	7.5	8.0	10.5	10.0	10.5
27	3.5	3.0	3.0	5.0	4.0	4.5	8.0	7.5	7.5	11.0	10.5	10.5
28	3.5	3.0	3.0	5.5	4.5	5.0	8.5	7.5	8.0	11.0	10.5	11.0
29	4.0	3.0	3.0	6.0	5.0	5.5	9.0	8.0	8.5	11.5	10.5	11.0
30	---	---	---	5.5	5.0	5.0	9.0	8.0	8.5	11.5	10.5	11.0
31	---	---	---	6.0	5.0	5.5	---	---	---	11.5	10.5	11.0
MONTH	4.0	2.5	2.7	6.0	3.0	3.8	9.0	5.0	6.9	11.5	8.0	9.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	11.5	10.5	11.0	14.0	12.5	13.0	15.5	14.5	15.0	17.0	16.5	16.5
2	11.5	11.0	11.5	14.5	12.5	13.5	15.5	14.5	15.0	17.0	16.5	16.5
3	12.0	11.0	11.5	15.0	12.5	13.5	15.5	14.5	15.0	17.5	16.0	16.5
4	12.0	11.0	11.5	14.5	12.5	13.0	15.5	14.5	15.0	17.5	16.0	16.5
5	11.5	11.0	11.5	14.5	13.0	13.5	15.0	14.5	15.0	16.5	16.0	16.5
6	11.5	11.0	11.5	15.0	12.5	13.5	15.5	14.5	15.0	17.5	16.0	16.5
7	12.0	11.0	11.5	15.0	12.5	13.5	15.0	14.5	15.0	18.0	16.5	17.0
8	12.0	11.5	11.5	15.0	13.0	13.5	16.0	14.5	15.0	17.5	16.5	17.0
9	12.0	11.5	12.0	14.0	12.5	13.5	16.0	14.5	15.0	17.5	16.5	17.0
10	13.5	11.5	12.0	14.5	12.5	13.5	16.0	14.5	15.0	17.0	15.0	16.5
11	12.5	11.5	11.5	14.5	13.0	13.5	16.0	15.0	15.0	17.5	17.0	17.0
12	13.0	11.5	12.0	14.0	13.0	13.5	16.5	15.0	15.0	17.5	17.0	17.5
13	12.5	11.5	12.0	14.0	13.0	13.5	16.0	13.5	14.0	18.0	17.5	17.5
14	12.0	12.0	12.0	14.0	13.5	13.5	14.0	13.5	13.5	18.0	17.5	17.5
15	14.0	11.5	12.0	14.0	13.5	13.5	16.0	14.0	15.0	18.0	17.5	17.5
16	13.0	12.0	12.5	14.0	13.5	14.0	16.0	15.5	15.5	18.0	17.5	17.5
17	13.0	12.0	12.5	14.5	13.5	14.0	16.0	15.5	15.5	18.0	17.5	17.5
18	12.5	12.0	12.0	14.0	13.5	14.0	16.0	15.5	15.5	19.0	17.0	18.0
19	12.5	12.0	12.5	14.5	13.5	14.0	16.0	15.5	16.0	17.5	9.5	13.0
20	13.0	12.0	12.5	14.5	14.0	14.0	16.5	15.5	16.0	14.0	10.5	12.0
21	14.5	12.5	13.0	15.0	14.0	14.5	16.0	15.5	16.0	16.0	14.0	15.5
22	13.0	12.0	12.5	15.0	14.0	14.0	16.5	15.5	16.0	16.5	16.0	16.5
23	14.5	12.0	13.0	14.5	14.0	14.0	16.0	15.5	16.0	17.0	16.5	17.0
24	14.0	12.0	13.0	15.0	14.0	14.5	16.0	16.0	16.0	17.5	17.0	17.0
25	14.0	12.0	13.0	15.0	14.0	14.5	17.0	16.0	16.0	17.5	17.0	17.5
26	14.5	12.0	13.0	15.5	14.0	14.5	16.5	16.0	16.0	17.5	17.5	17.5
27	14.0	12.0	13.0	14.5	14.0	14.0	16.5	16.0	16.5	18.5	17.5	18.0
28	14.5	12.0	12.5	14.5	14.0	14.0	17.0	16.0	16.5	19.0	18.5	18.5
29	13.5	12.5	13.0	15.0	14.5	14.5	16.5	16.0	16.5	19.0	17.5	18.0
30	13.5	13.0	13.0	15.0	14.5	14.5	16.5	16.5	16.5	18.0	17.5	17.5
31	---	---	---	15.0	14.5	14.5	17.0	16.5	16.5	---	---	---
MONTH	14.5	10.5	12.2	15.5	12.5	13.8	17.0	13.5	15.5	19.0	9.5	16.8
YEAR	19.0	2.0	9.7									

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

CROSS-SECTION ANALYSES, OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)
JUN 2004					
28...	1530	78	0	--	--
28...	1531	--	20	1.10	13.4
28...	1532	--	35	1.60	13.1
28...	1533	--	50	2.10	13.2
28...	1534	--	70	--	--

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 bridge on Sixth Street in Palmerton, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--76.7 mi^2.

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

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

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Occasional diversion from Pohopoco Creek into Aquashicola Creek upstream of station. Several measurements of water temperature were made during the year. Satellite telemetry at station.

COOPERATION.--Records of diversion provided by Palmer Water Company.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 12	0200	1,330	3.65	Sept. 9	0845	1,050	3.26
Dec. 24	2230	1,200	3.51	Sept. 18	1400	*8,940	*12.17
Aug. 21	1630	1,200	3.51	Sept. 29	0630	1,380	3.82

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	491	491	230	79	116	125	130	107	44	182	183
2	310	410	393	209	72	132	126	134	91	41	160	152
3	275	351	322	198	85	156	117	195	84	40	138	141
4	265	306	283	210	124	165	114	171	74	38	125	131
5	242	288	261	287	94	168	107	162	78	37	129	123
6	210	277	243	286	177	189	101	157	101	36	109	116
7	189	255	215	263	306	191	98	165	83	35	100	110
8	170	218	194	237	206	184	100	145	74	39	92	180
9	157	197	179	216	e160	170	102	135	69	35	86	921
10	143	186	190	180	148	158	93	129	80	34	82	667
11	133	181	829	178	140	146	90	124	118	33	79	453
12	123	185	996	176	126	140	91	121	90	185	97	353
13	114	173	603	168	120	129	162	141	81	228	316	289
14	110	155	468	147	114	119	192	128	77	130	239	248
15	320	142	395	138	102	120	281	134	76	122	163	220
16	230	133	313	127	90	119	279	139	68	105	148	204
17	197	126	387	136	e90	118	244	118	81	105	130	188
18	188	118	440	129	92	115	214	111	93	103	117	4150
19	173	175	359	120	93	119	192	116	73	160	107	2090
20	155	475	300	115	96	115	175	108	65	143	108	962
21	147	436	259	104	111	145	160	100	60	120	873	664
22	139	352	237	103	128	147	148	95	67	105	771	509
23	128	297	232	93	122	142	147	89	69	102	477	407
24	117	268	696	e90	120	140	134	83	57	96	354	331
25	108	273	972	e86	105	144	124	76	53	81	279	281
26	104	228	626	e86	96	139	169	95	57	73	235	248
27	345	206	476	e86	93	139	168	134	51	163	206	222
28	685	350	382	90	97	135	144	107	48	269	189	553
29	779	900	324	84	108	127	135	93	59	242	192	1180
30	819	645	295	79	---	122	134	85	48	194	167	709
31	607	---	256	e78	---	124	---	91	---	166	261	---
TOTAL	8029	8797	12616	4729	3494	4373	4466	3811	2232	3304	6711	16985
MEAN	259	293	407	153	120	141	149	123	74.4	107	216	566
MAX	819	900	996	287	306	191	281	195	118	269	873	4150
MIN	104	118	179	78	72	115	90	76	48	33	79	110
(†)	-2.5	-2.0	-3.5	-1.7	-1.2	-0.7	-1.8	-1.3	-1.0	-1.9	-3.0	-3.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	99.3	145	185	166	170	244	233	176	120	98.7	87.7	98.3
MAX	331	379	583	558	325	534	625	480	536	638	468	566
(WY)	1956	1973	1997	1996	1971	1977	1983	1989	2003	1945	1942	2004
MIN	17.2	21.6	30.2	19.4	38.4	86.5	74.7	55.9	38.8	19.8	13.7	15.2
(WY)	1964	1965	1999	1981	1940	1985	1985	1941	1955	1955	1964	1964

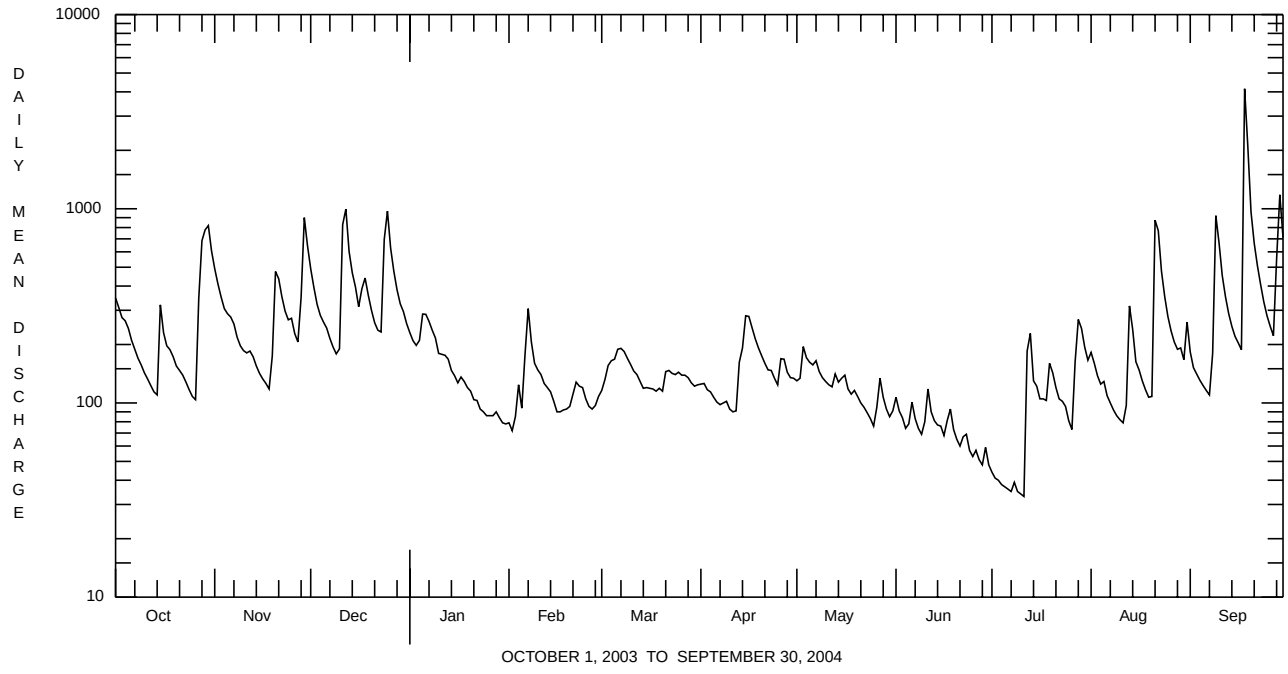
† Figures of net diversion, equivalent in cubic feet per second. Includes water diverted from Pohopoco Creek to Aquashicola Creek.
e Estimated.

LEHIGH RIVER BASIN

01450500 AQUASHICOLA CREEK AT PALMERTON, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	95548		79547			
ANNUAL MEAN	262		217		152	
HIGHEST ANNUAL MEAN					242	1952
LOWEST ANNUAL MEAN					69.2	1965
HIGHEST DAILY MEAN	2620	Sep 23	4150	Sep 18	4680	Jul 10 1945
LOWEST DAILY MEAN	**e**36	Feb 17	33	Jul 11	9.1	Sep 15 1964
ANNUAL SEVEN-DAY MINIMUM	**a**48	Feb 12	36	Jul 5	10	Sep 10 1964
MAXIMUM PEAK FLOW			**b**8940	Sep 18	**b**11700	Jul 10 1945
MAXIMUM PEAK STAGE			12.17	Sep 18	13.63	Jul 10 1945
INSTANTANEOUS LOW FLOW					2.6	Sep 12 1957
10 PERCENT EXCEEDS	491		394		304	
50 PERCENT EXCEEDS	192		142		100	
90 PERCENT EXCEEDS	77		79		35	

a Computed using estimated daily discharges.
b From rating curve extended above 2,300 ft^3/s on basis of contracted-opening measurement of peak flow.
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 bridge on SR 4022 at Walnutport, and 0.4 mi upstream from Trout Creek.

DRAINAGE AREA.--889 mi^2.

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 those for estimated daily discharges, 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 Reservoir (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 20.6 ft, May 23, 1942, from floodmarks, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4010	7250	6200	3380	e900	1220	1710	1850	1810	740	1500	1530
2	3330	4820	5930	3150	e950	1320	1770	2000	1840	713	1950	1310
3	3030	4050	5240	2970	e1100	1830	1710	4260	1630	695	2090	1180
4	2840	3210	4400	3190	e1300	2530	1670	4600	1320	660	1850	1110
5	2810	3260	3560	4780	e1200	2980	1600	3550	1330	635	1710	1060
6	2860	3460	3110	5960	e1200	3300	1140	3000	1960	620	1380	934
7	2670	3160	2940	4530	e1500	3440	1470	2690	1790	571	1110	883
8	2260	2910	2740	3760	e1500	3640	1360	2900	1590	546	958	1010
9	1960	2770	2450	e2800	e1600	3640	1320	2790	1280	527	871	2680
10	1770	2650	2400	e2500	e1400	2870	1210	2440	1140	523	806	4050
11	1830	2720	9440	e2400	e1300	2680	1180	2670	1610	512	787	3570
12	1790	2860	10100	e2300	e1200	2320	1180	2720	1420	1770	1160	3010
13	1680	3360	10800	e2100	e1100	2080	1790	2740	1340	2490	6880	2390
14	1600	3070	10900	e2000	e1000	1990	2460	2360	1040	1550	5930	1480
15	3350	2110	8380	e1900	e960	1940	2830	2860	1040	1230	4620	1270
16	3070	1930	4680	e1700	e900	1820	2650	2730	1110	975	3750	1290
17	2680	1950	4370	e1600	e950	1750	2070	2290	1060	915	2980	1310
18	2570	1980	4400	e1500	e980	1770	1970	2000	1590	1140	2190	20900
19	2750	2240	3940	e1500	972	1790	1770	2070	1310	1830	1720	13000
20	2670	4640	3490	e1600	991	1740	1580	1910	1290	1540	1680	12700
21	2560	5090	3280	e1600	1090	1960	1560	1770	1100	1370	4860	11100
22	1580	4770	3020	e1500	1230	1960	1480	1650	990	1250	4520	10100
23	1450	4270	2670	e1300	1180	1950	1520	1540	1140	1120	3850	8360
24	2220	3300	5920	e1200	1210	1900	1590	1470	1020	1320	3480	6940
25	2240	3440	7520	e1200	1080	1760	1540	1260	876	1200	2860	4770
26	2190	3250	5430	e1100	1000	1810	2060	1390	1060	1050	2320	4450
27	4160	2780	4580	e1100	982	2020	2560	2550	1040	1160	1930	4250
28	6570	3460	4070	e1100	1050	2200	2750	3590	833	1650	1800	5740
29	9930	7330	4830	e1100	1120	2110	2370	2770	870	1840	1670	7680
30	9000	5460	7350	e1000	---	1920	1790	2440	826	1660	1570	8510
31	8590	---	3940	e960	---	1700	---	1640	---	1380	1870	---
TOTAL	102020	107550	162080	68780	32945	67940	53660	76500	38255	35182	76652	148567
MEAN	3291	3585	5228	2219	1136	2192	1789	2468	1275	1135	2473	4952
MAX	9930	7330	10900	5960	1600	3640	2830	4600	1960	2490	6880	20900
MIN	1450	1930	2400	960	900	1220	1140	1260	826	512	787	883
CFSM	3.70	4.03	5.88	2.50	1.28	2.47	2.01	2.78	1.43	1.28	2.78	5.57
IN.	4.27	4.50	6.78	2.88	1.38	2.84	2.25	3.20	1.60	1.47	3.21	6.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2004, BY WATER YEAR (WY)

MEAN	1195	1819	2322	2022	2071	2974	3150	2339	1577	1076	917	1040
MAX	4857	3990	6352	6136	4464	6302	8455	6389	6889	4465	5264	5812
(WY)	1956	1973	1997	1979	1951	1977	1993	1989	2003	1947	1955	1987
MIN	194	251	370	223	790	1335	1156	908	477	241	226	179
(WY)	1964	1965	1981	1981	1980	1981	1985	1995	1999	1965	1964	1964

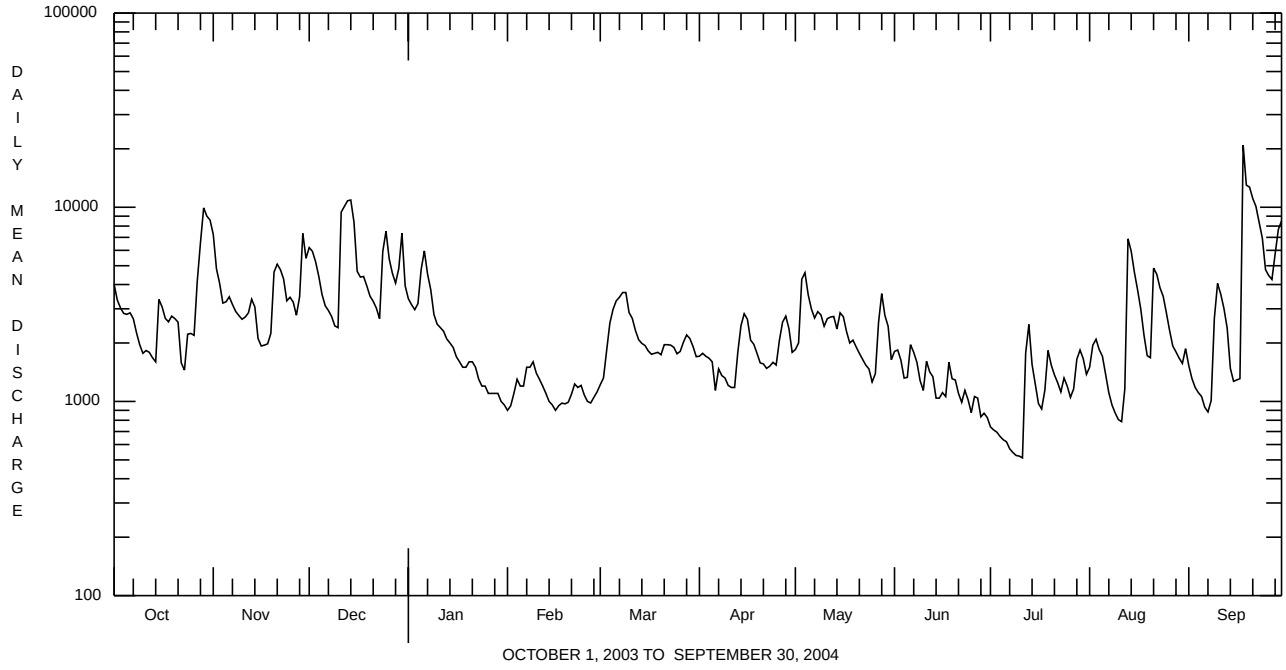
e Estimated.

LEHIGH RIVER BASIN

01451000 LEHIGH RIVER AT WALNUTPORT, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1947 - 2004	
ANNUAL TOTAL	1230980		970131			
ANNUAL MEAN	3373		2651		1873	
HIGHEST ANNUAL MEAN					3049	2003
LOWEST ANNUAL MEAN					859	1965
HIGHEST DAILY MEAN	13700	Jun 21	20900	Sep 18	62400	Aug 19 1955
LOWEST DAILY MEAN	819	Sep 12	512	Jul 11	134	Sep 18 1964
ANNUAL SEVEN-DAY MINIMUM	928	Sep 8	562	Jul 5	143	Sep 16 1964
MAXIMUM PEAK FLOW			40000	Sep 18	77800	Aug 19 1955
MAXIMUM PEAK STAGE			12.30	Sep 18	17.68	Aug 19 1955
INSTANTANEOUS LOW FLOW					**a**57	Jul 27 1965
ANNUAL RUNOFF (CFSM)	3.79		2.98		2.11	
ANNUAL RUNOFF (INCHES)	51.51		40.59		28.63	
10 PERCENT EXCEEDS	7320		4790		3890	
50 PERCENT EXCEEDS	2570		1920		1300	
90 PERCENT EXCEEDS	1170		1000		415	

a Result of upstream shutoff.



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^2.

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, crest-stage gage, and masonry control. Datum of gage is 253.41 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Occasional regulation at low flow by fish hatchery upstream. Several measurements of water temperature were made during the year. Satellite telemetry at station.

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

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	2145	1,080	3.95	July 27	2145	1,140	4.04
Feb. 7	0600	939	3.76	Sept. 18	1545	*9,670	*a10.63
July 12	1945	2,520	5.61	Sept. 29	0045	1,570	4.58

a From floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	189	191	201	123	146	138	119	114	76	187	130
2	168	173	172	198	120	154	144	117	96	74	158	100
3	159	165	161	195	144	157	143	146	88	72	132	94
4	159	158	156	210	185	151	138	147	85	69	127	89
5	158	152	157	319	150	147	131	121	109	69	138	87
6	143	159	161	268	360	176	123	115	168	67	118	85
7	137	155	155	207	716	171	119	131	112	70	112	83
8	132	145	154	188	364	156	122	115	97	77	108	155
9	129	137	151	182	232	152	134	110	89	69	105	146
10	127	132	165	162	211	144	121	105	108	66	102	110
11	125	132	685	162	211	139	117	104	112	64	105	93
12	122	157	579	168	188	135	125	102	93	919	109	87
13	120	147	313	168	181	130	243	99	85	598	262	84
14	122	128	271	161	176	124	219	98	85	245	130	83
15	272	126	297	159	164	125	185	119	93	289	112	83
16	170	126	264	149	151	129	151	186	92	151	105	83
17	132	126	442	154	147	133	139	111	92	120	103	82
18	129	122	459	158	147	131	130	101	96	138	100	e4700
19	122	194	317	157	152	146	125	102	83	158	99	e1100
20	121	338	276	149	156	147	122	101	80	120	97	339
21	120	198	249	144	167	195	119	98	78	105	126	227
22	120	161	236	143	172	178	117	94	85	98	124	187
23	118	145	233	139	159	148	117	87	89	99	100	164
24	110	146	371	138	158	142	115	89	78	138	95	154
25	108	172	355	132	151	143	114	93	100	97	92	144
26	108	148	272	134	143	141	215	91	120	93	88	139
27	379	143	246	134	141	139	197	129	84	387	88	133
28	375	239	232	136	140	136	141	169	78	555	86	374
29	390	365	220	132	143	133	125	99	91	239	84	853
30	317	228	216	127	---	132	121	90	79	161	158	385
31	217	---	208	124	---	136	---	100	---	139	286	---
TOTAL	5289	5106	8364	5198	5652	4516	4250	3488	2859	5622	3836	10573
MEAN	171	170	270	168	195	146	142	113	95.3	181	124	352
MAX	390	365	685	319	716	195	243	186	168	919	286	4700
MIN	108	122	151	124	120	124	114	87	78	64	84	82
CFSM	2.11	2.11	3.34	2.08	2.41	1.80	1.75	1.39	1.18	2.24	1.53	4.36
IN.	2.44	2.35	3.85	2.39	2.60	2.08	1.96	1.61	1.32	2.59	1.77	4.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	69.6	77.3	100	108	119	136	142	119	103	88.2	77.7	78.1
MAX	195	177	371	385	325	355	331	315	381	366	192	352
(WY)	1997	1976	1997	1979	1979	1994	1983	1984	1972	1984	1971	2004
MIN	27.3	28.1	25.7	26.6	37.7	43.1	37.1	35.8	29.2	26.5	26.5	28.9
(WY)	1964	1966	1966	1966	2002	1965	1966	1965	1965	1965	1965	1965

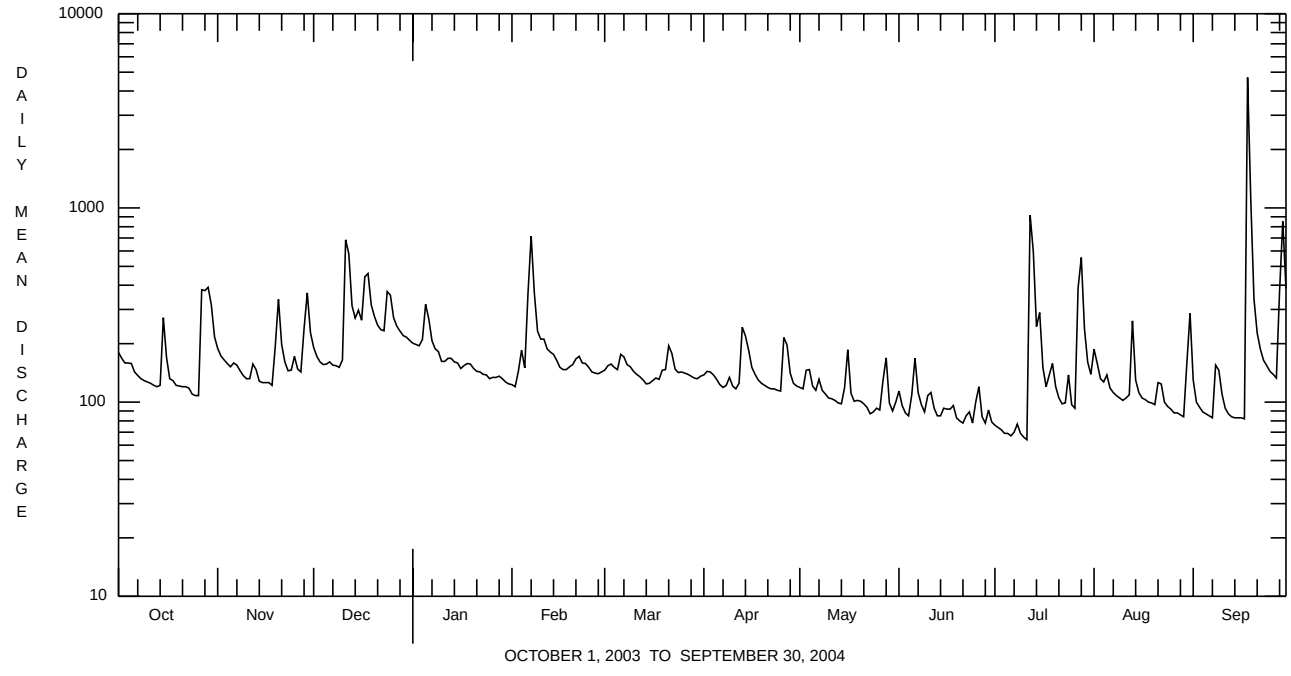
e Estimated.

LEHIGH RIVER BASIN

01451500 LITTLE LEHIGH CREEK NEAR ALLENTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	60549		64753			
ANNUAL MEAN	166		177		101	
HIGHEST ANNUAL MEAN					203	1984
LOWEST ANNUAL MEAN					33.8	1966
HIGHEST DAILY MEAN	1790	Jun 21	**e**4700	Sep 18	**e**4700	Sep 18 2004
LOWEST DAILY MEAN	75	Feb 16	64	Jul 11	23	Dec 20 1965
ANNUAL SEVEN-DAY MINIMUM	78	Feb 13	69	Jul 5	23	Dec 18 1965
MAXIMUM PEAK FLOW			**b**9670	Sep 18	**b**11800	Jun 22 1972
MAXIMUM PEAK STAGE			**a**10.63	Sep 18	11.80	Jun 22 1972
INSTANTANEOUS LOW FLOW			62	Jul 11	17	Feb 4 1965
ANNUAL RUNOFF (CFSM)	2.05		2.19		1.26	
ANNUAL RUNOFF (INCHES)	27.88		29.81		17.05	
10 PERCENT EXCEEDS	267		265		172	
50 PERCENT EXCEEDS	132		138		79	
90 PERCENT EXCEEDS	91		88		40	

a From floodmark.
b From rating curve extended above 820 ft^3/s on basis of slope-area measurements at 8.34 ft and at peak flow.
e Estimated.



LEHIGH RIVER BASIN

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

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

DRAINAGE AREA.--98.2 mi^2.

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

REVISED RECORDS.--WRD PA-98-1: 1997(M).

GAGE.--Water-stage recorder. Crest-stage gage and concrete control. Datum of gage is 245.63 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Diversion upstream for municipal water supply by city of Allentown. Several measurements of water temperature were made during the year. Satellite telemetry at station.

COOPERATION.--Records of diversion provided by city of Allentown.

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

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1915	951	4.16
Dec. 11	0930	1,020	4.26
Feb. 6	2045	943	4.15
July 12	2015	2,080	5.48
July 27	2200	1,110	4.37
Sept. 18	1630	*9,680	*a10.65
Sept. 29	0200	1,400	4.74

a From floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	228	225	225	147	165	155	151	143	90	228	164
2	218	225	207	221	144	170	167	141	128	107	191	123
3	211	216	202	217	185	172	168	170	120	97	163	122
4	214	206	195	247	219	174	159	173	107	84	152	119
5	213	198	191	357	172	175	146	153	137	78	168	108
6	199	211	203	289	514	205	138	145	201	77	154	107
7	192	208	196	231	780	192	138	157	133	90	147	105
8	182	200	187	216	378	174	144	144	124	107	138	214
9	171	192	177	213	249	168	162	137	112	93	126	197
10	163	179	202	194	221	160	143	130	134	79	125	148
11	162	181	843	190	222	162	134	122	144	76	131	124
12	161	212	617	200	213	162	150	119	108	885	133	112
13	159	198	329	201	206	159	293	123	102	638	300	116
14	169	179	286	188	198	153	253	119	106	264	152	114
15	356	177	326	186	183	144	218	125	115	301	140	106
16	222	173	285	179	172	147	182	212	108	171	132	106
17	187	162	518	179	172	153	159	133	119	139	123	106
18	193	162	489	188	177	158	153	113	129	167	108	e4600
19	171	269	335	182	178	172	149	118	106	183	109	1140
20	161	397	288	174	175	182	148	123	92	148	111	362
21	168	244	271	172	185	224	150	121	92	133	184	248
22	169	203	261	173	198	207	141	110	105	115	152	210
23	166	185	248	164	189	173	151	105	116	125	122	195
24	156	186	408	163	184	165	148	106	93	183	108	192
25	149	226	372	158	172	165	144	115	115	127	109	183
26	139	198	293	158	164	170	267	116	149	113	108	171
27	521	192	260	158	168	169	224	146	115	448	112	162
28	456	318	253	159	169	162	174	197	101	613	112	395
29	517	418	248	156	169	152	155	127	105	265	111	913
30	380	271	241	153	---	149	155	108	92	185	208	423
31	261	---	224	150	---	154	---	124	---	163	378	---
TOTAL	7014	6614	9380	6041	6503	5237	5068	4183	3551	6344	4735	11385
MEAN	226	220	303	195	224	169	169	135	118	205	153	380
MAX	521	418	843	357	780	224	293	212	201	885	378	4600
MIN	139	162	177	150	144	144	134	105	92	76	108	105
(†)	7.1	3.2	4.5	6.2	4.9	6.0	6.1	7.4	7.9	8.3	6.0	5.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	93.6	104	134	132	130	174	169	145	128	113	93.5	126
MAX	226	220	435	292	224	415	355	236	315	206	164	380
(WY)	2004	2004	1997	1996	2004	1994	1994	1989	2003	2003	2003	2004
MIN	48.5	57.0	52.0	49.5	45.6	62.9	64.4	66.7	64.8	41.0	41.5	46.7
(WY)	1993	2002	1999	2002	2002	2002	1992	1992	1999	1999	1999	1995

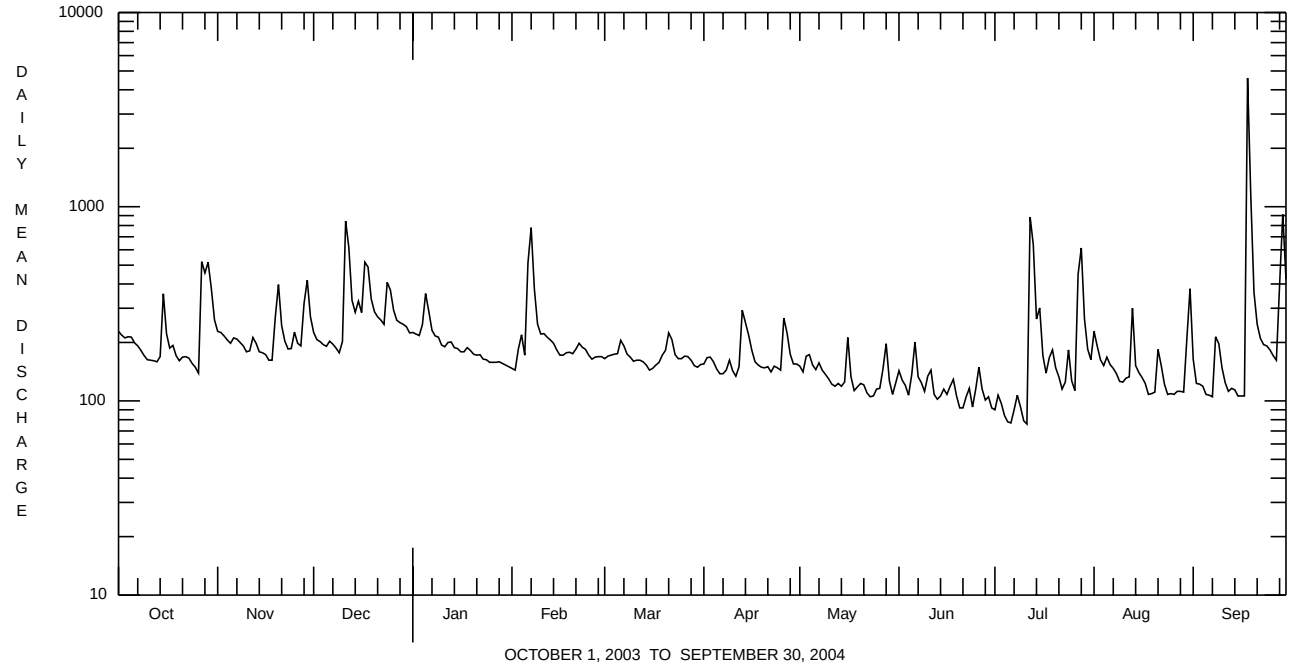
† Diversion for municipal supply of city of Allentown, equivalent in cubic feet per second.
e Estimated.

LEHIGH RIVER BASIN

01451650 LITTLE LEHIGH CREEK AT TENTH STREET BRIDGE AT ALLENTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	77887		76055			
ANNUAL MEAN	213		208		129	
HIGHEST ANNUAL MEAN					208	2004
LOWEST ANNUAL MEAN					64.6	1992
HIGHEST DAILY MEAN	**e**2170	Jun 21	**e**4600	Sep 18	5200	Sep 9 1987
LOWEST DAILY MEAN	93	Feb 17	76	Jul 11	23	Aug 1 1999
ANNUAL SEVEN-DAY MINIMUM	101	Feb 11	86	Jul 5	30	Aug 1 1999
MAXIMUM PEAK FLOW			**b**9680	Sep 18	**b**9680	Sep 18 2004
MAXIMUM PEAK STAGE			**a**10.65	Sep 18	**a**10.65	Sep 18 2004
10 PERCENT EXCEEDS	325		290		214	
50 PERCENT EXCEEDS	176		169		100	
90 PERCENT EXCEEDS	115		109		53	

a From floodmark.
b From rating curve extended above 1,870 ft^3/s on the basis of slope-area measurement at gage height 8.06 ft.
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^2.

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

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 381.16 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 2, 1973, nonrecording gage at bridge 54 ft upstream at same datum.

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

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

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1615	1,130	5.45	Aug. 21	1315	1,540	6.13
Feb. 6	----	Unknown	Ice jam	Sept. 18	1230	*4,160	*9.46
July 12	1715	1,210	5.60	Sept. 29	0215	1,830	6.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	238	253	101	e25	76	65	78	51	17	217	76
2	103	183	189	92	e25	86	64	74	42	16	154	63
3	90	149	147	87	e30	98	56	151	36	15	131	55
4	94	125	124	98	e60	98	53	93	30	13	109	50
5	83	132	115	192	e90	92	48	82	37	13	103	50
6	67	132	112	162	e300	111	42	74	63	14	80	44
7	58	113	e95	e140	e600	104	41	85	43	12	65	39
8	53	95	e85	e110	276	95	43	67	36	15	55	40
9	50	86	75	e80	179	89	51	58	32	12	48	91
10	46	82	83	e70	128	76	40	54	35	10	44	63
11	44	81	795	e75	132	66	37	52	49	9.2	43	47
12	41	96	667	e80	106	61	40	47	34	478	63	40
13	38	86	373	e70	92	54	144	42	29	402	256	36
14	37	72	278	e60	88	49	142	40	28	231	113	33
15	198	65	249	e55	e75	49	139	46	30	178	90	32
16	97	61	185	e50	e60	50	124	59	67	121	76	37
17	90	58	327	e60	e55	53	115	40	42	97	65	34
18	93	54	392	e55	e50	51	104	36	64	149	55	2280
19	78	94	311	e50	e50	63	94	37	38	166	49	1020
20	67	250	234	e45	e60	72	83	36	31	118	46	435
21	64	204	180	e40	101	140	74	32	27	98	1090	275
22	61	176	153	e45	116	151	68	30	44	84	678	191
23	55	147	143	e40	96	140	67	27	43	136	341	144
24	50	131	407	e35	89	125	61	26	29	144	220	116
25	46	146	438	e30	e70	115	54	26	25	101	158	98
26	44	109	328	e30	e60	104	149	29	31	89	124	87
27	280	96	246	e35	56	97	131	41	23	243	102	74
28	388	218	190	e30	58	85	104	56	20	369	89	570
29	543	445	157	e30	67	73	94	31	25	284	80	1240
30	486	338	142	e25	---	67	87	25	20	200	88	531
31	325	---	117	e20	---	69	---	31	---	152	131	---
TOTAL	3887	4262	7590	2092	3194	2659	2414	1605	1104	3986.2	4963	7891
MEAN	125	142	245	67.5	110	85.8	80.5	51.8	36.8	129	160	263
MAX	543	445	795	192	600	151	149	151	67	478	1090	2280
MIN	37	54	75	20	25	49	37	25	20	9.2	43	32
CFSM	2.37	2.68	4.62	1.27	2.08	1.62	1.52	0.98	0.69	2.43	3.02	4.96
IN.	2.73	2.99	5.33	1.47	2.24	1.87	1.69	1.13	0.77	2.80	3.48	5.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	63.3	94.1	129	118	124	161	127	94.0	72.4	43.2	37.6	57.2
MAX	220	270	397	404	295	479	391	353	346	129	160	343
(WY)	1997	1971	1997	1979	1971	1994	1983	1989	1972	2004	2004	1987
MIN	8.37	12.4	12.0	6.85	35.2	41.3	31.0	31.5	9.18	1.68	3.36	3.69
(WY)	1973	2002	1999	1981	1980	1985	1985	1995	1966	1966	2002	1980

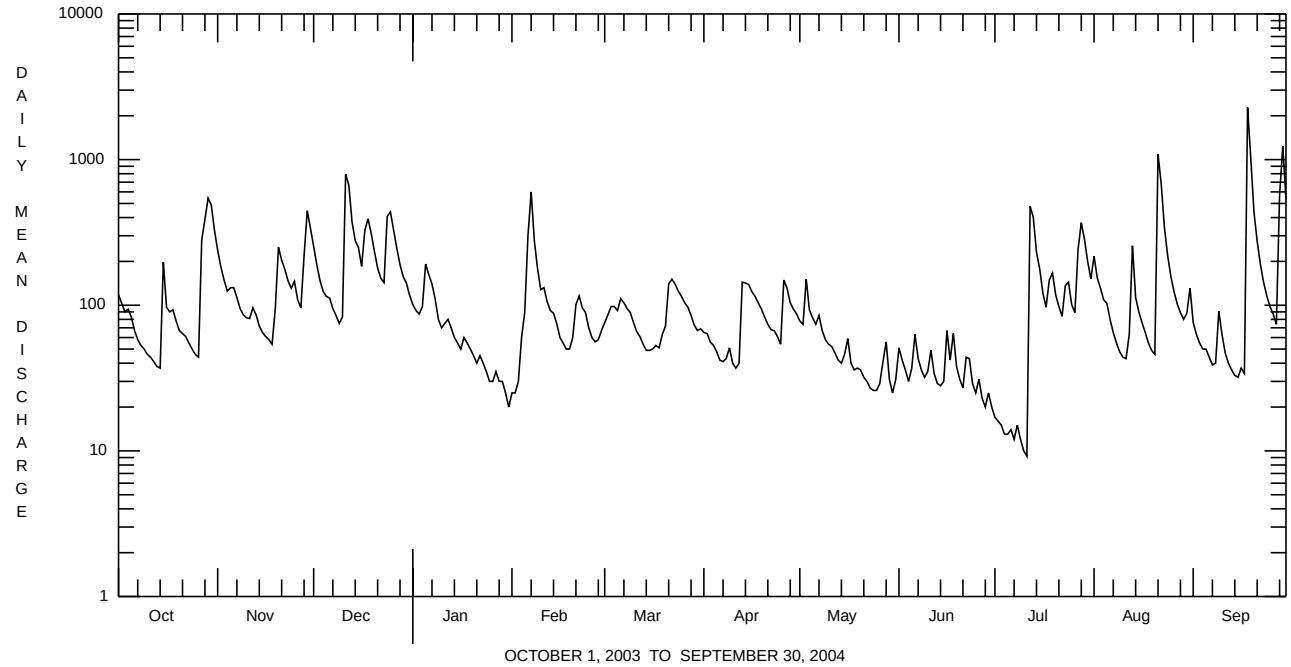
e Estimated.

LEHIGH RIVER BASIN

01451800 JORDAN CREEK NEAR SCHNECKSVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	59926		45647.2			
ANNUAL MEAN	164		125		93.9	
HIGHEST ANNUAL MEAN					159	2003
LOWEST ANNUAL MEAN					43.9	1985
HIGHEST DAILY MEAN	2160	Sep 23	2280	Sep 18	2800	Sep 9 1987
LOWEST DAILY MEAN	**e**14	Feb 18	9.2	Jul 11	0.54	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	**a**19	Feb 13	12	Jul 5	0.63	Aug 2 1999
MAXIMUM PEAK FLOW			**b**4160	Sep 18	**b**7100	Jun 22 1972
MAXIMUM PEAK STAGE			9.46	Sep 18	**c**12.32	Jun 22 1972
INSTANTANEOUS LOW FLOW			8.8	Jul 11,12	0.48	Aug 6 1999
ANNUAL RUNOFF (CFSM)	3.10		2.35		1.77	
ANNUAL RUNOFF (INCHES)	42.06		32.04		24.07	
10 PERCENT EXCEEDS	349		251		209	
50 PERCENT EXCEEDS	103		76		48	
90 PERCENT EXCEEDS	33		30		11	

a Computed using estimated daily discharges.
b From rating curve extended above 2,010 ft^3/s on basis of contracted-opening measurement of peak flow.
c From floodmark.
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^2.

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

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

GAGE.--Water-stage recorder, crest-stage gage and rubble masonry control. Crest of control raised 1 ft in August 1958 and further modified 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 National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation datum).

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1945	1,520	5.16	Sept. 18	2130	*7,440	*7.90
Feb. 7	0415	1,410	5.07	Sept. 29	0845	3,020	6.01
Aug. 21	1830	1,600	5.22				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	332	343	136	e39	103	100	108	65	21	256	113
2	152	248	253	124	39	111	98	103	61	19	208	92
3	132	202	197	119	47	135	88	177	50	16	178	80
4	125	173	167	123	101	134	82	136	40	14	153	72
5	125	160	154	217	104	133	75	111	40	13	147	71
6	101	184	152	e200	192	148	66	105	82	12	115	63
7	91	153	130	e150	913	157	62	110	60	14	97	58
8	83	128	113	e120	443	145	63	99	49	14	84	77
9	77	114	104	e100	e200	134	74	82	41	14	73	127
10	71	109	103	e80	e180	118	61	76	41	13	65	97
11	65	106	913	e85	e160	105	54	73	65	12	68	68
12	61	122	977	e90	e140	99	57	67	49	375	68	59
13	58	119	501	e80	e120	88	174	60	37	559	269	55
14	59	103	346	e75	e110	78	197	56	34	268	155	50
15	223	93	312	e70	e100	77	202	58	35	231	116	48
16	132	89	235	e65	e75	78	180	71	67	158	97	53
17	117	86	373	e62	e75	87	169	59	62	126	85	53
18	118	82	533	e60	e80	80	153	50	80	141	73	3440
19	103	105	409	e57	e80	96	136	52	54	208	66	2390
20	94	329	302	e55	e90	100	122	52	40	150	62	646
21	88	268	231	e52	e110	170	109	43	33	124	920	393
22	86	229	196	e50	164	212	101	38	44	106	852	284
23	79	193	181	e48	136	200	99	34	66	108	416	222
24	71	170	387	e47	126	181	93	37	40	219	274	182
25	64	185	526	e45	108	167	81	35	34	127	204	157
26	60	144	403	e43	94	153	156	33	35	113	164	136
27	278	125	299	e42	90	140	203	60	31	242	138	120
28	567	198	234	e40	86	123	150	76	25	478	121	591
29	729	636	197	e39	92	108	134	49	25	368	104	2140
30	740	485	179	e38	---	101	121	33	26	264	110	820
31	475	---	156	e38	---	104	---	36	---	206	211	---
TOTAL	5394	5670	9606	2550	4294	3865	3460	2179	1411	4733	5949	12757
MEAN	174	189	310	82.3	148	125	115	70.3	47.0	153	192	425
MAX	740	636	977	217	913	212	203	177	82	559	920	3440
MIN	58	82	103	38	39	77	54	33	25	12	62	48
CFSM	2.30	2.49	4.09	1.09	1.95	1.64	1.52	0.93	0.62	2.01	2.53	5.61
IN.	2.65	2.78	4.71	1.25	2.11	1.90	1.70	1.07	0.69	2.32	2.92	6.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

MEAN	69.1	110	151	147	160	210	168	118	83.5	55.6	54.5	72.0
MAX	309	321	520	570	354	791	551	438	517	255	326	449
(WY)	1997	1971	1997	1996	1951	1994	1983	1989	1972	1945	1955	1987
MIN	3.93	8.62	14.0	8.45	34.3	55.0	38.0	22.3	5.89	1.21	1.81	2.83
(WY)	1964	1965	1999	1981	1980	1985	1985	1965	1965	1966	1966	1964

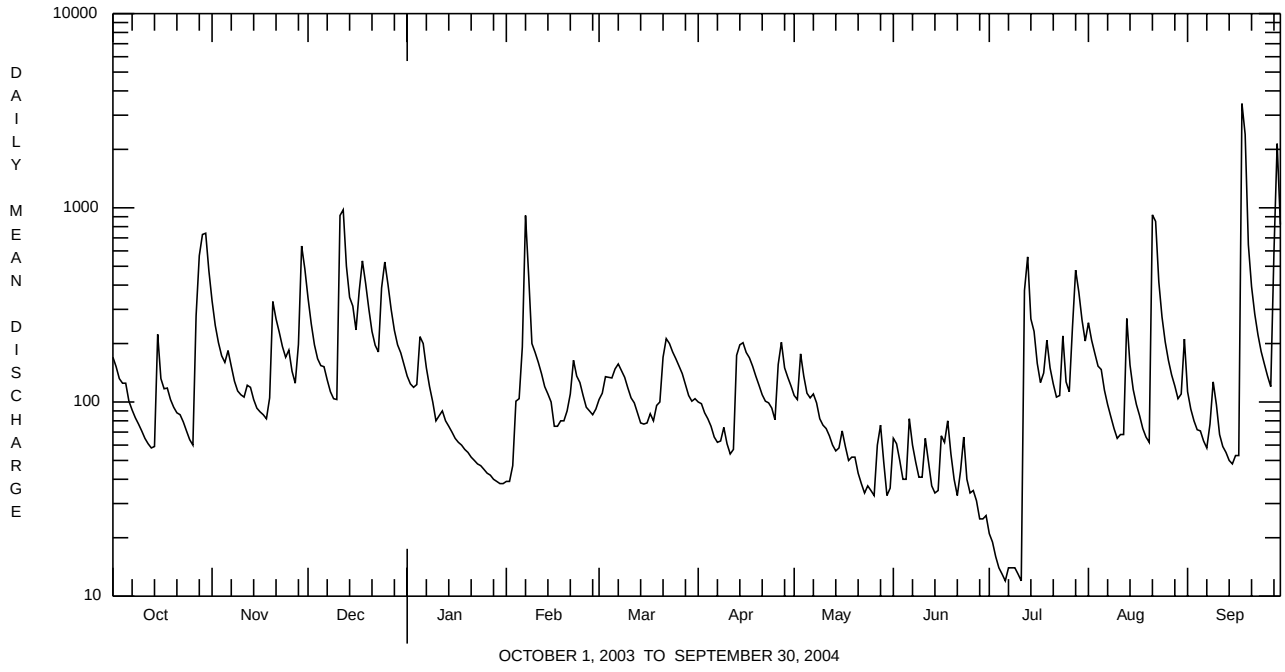
e Estimated.

LEHIGH RIVER BASIN

01452000 JORDAN CREEK AT ALLENTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	77379		61868			
ANNUAL MEAN	212		169		116	
HIGHEST ANNUAL MEAN					203	1984
LOWEST ANNUAL MEAN					44.9	1965
HIGHEST DAILY MEAN	2750	Jun 21	3440	Sep 18	6650	Sep 9 1987
LOWEST DAILY MEAN	19	Feb 17,18	12	Jul 6,11	0.00	Jul 7 1966
ANNUAL SEVEN-DAY MINIMUM	27	Feb 13	13	Jul 5	0.06	Jul 9 1966
MAXIMUM PEAK FLOW			**a**7440	Sep 18	**a**16200	Jun 23 1972
MAXIMUM PEAK STAGE			7.90	Sep 18	**b**11.61	Jun 23 1972
ANNUAL RUNOFF (CFSM)	2.80		2.23		1.54	
ANNUAL RUNOFF (INCHES)	37.97		30.36		20.86	
10 PERCENT EXCEEDS	467		305		251	
50 PERCENT EXCEEDS	134		104		62	
90 PERCENT EXCEEDS	41		40		12	

a From rating curve extended above 6,100 ft^3/s on basis of slope-area measurement of peak flow.
b From floodmark.



LEHIGH RIVER BASIN

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^2.

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

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

REMARKS.--No estimated daily discharges. Records fair. Some regulation at low flow since April 1954 by mill upstream. Several measurements of water temperature were made during the year. Satellite telemetry at station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1845	404	3.66	Aug. 13	0615	433	3.73
Oct. 29	1015	437	3.74	Aug. 21	1530	353	3.52
Dec. 11	1930	433	3.73	Sept. 8	2030	626	4.17
Feb. 7	0000	372	3.57	Sept. 18	1400	*5,470	*9.85
July 12	1630	463	3.80	Sept. 28	2200	735	4.32

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	156	143	115	69	75	71	65	53	34	75	74
2	127	134	125	111	68	76	88	61	48	33	60	67
3	112	120	113	110	73	76	78	78	45	34	57	63
4	110	109	104	115	79	76	77	76	42	33	52	59
5	99	103	100	142	74	76	73	70	47	33	51	57
6	93	108	101	123	182	80	71	75	46	32	47	53
7	91	98	94	117	259	79	69	73	43	33	45	51
8	88	91	89	114	162	78	69	64	43	33	42	164
9	85	88	86	111	122	76	69	61	43	32	40	338
10	82	87	90	100	109	74	63	62	46	31	41	192
11	81	86	299	100	106	72	60	61	58	30	41	138
12	77	91	248	104	98	72	62	56	45	158	42	113
13	75	85	187	100	92	69	101	60	42	81	167	97
14	80	81	159	95	90	67	92	57	42	47	65	84
15	158	79	149	94	85	67	102	55	42	43	57	82
16	91	77	130	88	80	68	98	57	39	38	53	78
17	86	76	203	89	79	69	93	52	43	37	49	70
18	83	74	186	90	78	68	87	51	50	43	46	2290
19	79	114	166	87	79	73	81	53	36	66	45	736
20	76	188	151	84	79	73	76	52	35	46	44	339
21	75	144	138	81	82	82	73	50	35	42	173	235
22	75	128	129	82	85	83	72	48	44	38	150	199
23	72	116	125	79	82	83	69	46	37	41	117	178
24	70	109	205	79	81	82	65	47	37	45	94	161
25	68	112	230	75	77	82	60	44	36	37	81	140
26	68	99	200	76	76	79	98	45	42	36	73	120
27	219	92	170	76	75	77	86	51	36	77	65	111
28	281	135	149	76	74	74	75	50	35	121	75	339
29	349	178	138	74	74	71	70	44	38	87	62	430
30	265	159	131	72	---	68	70	42	35	72	63	285
31	196	---	121	70	---	72	---	47	---	64	112	---
TOTAL	3657	3317	4659	2929	2769	2317	2318	1753	1263	1577	2184	7343
MEAN	118	111	150	94.5	95.5	74.7	77.3	56.5	42.1	50.9	70.5	245
MAX	349	188	299	142	259	83	102	78	58	158	173	2290
MIN	68	74	86	70	68	67	60	42	35	30	40	51
CFSM	2.65	2.48	3.38	2.12	2.15	1.68	1.74	1.27	0.95	1.14	1.58	5.50
IN.	3.06	2.77	3.89	2.45	2.31	1.94	1.94	1.47	1.06	1.32	1.83	6.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)

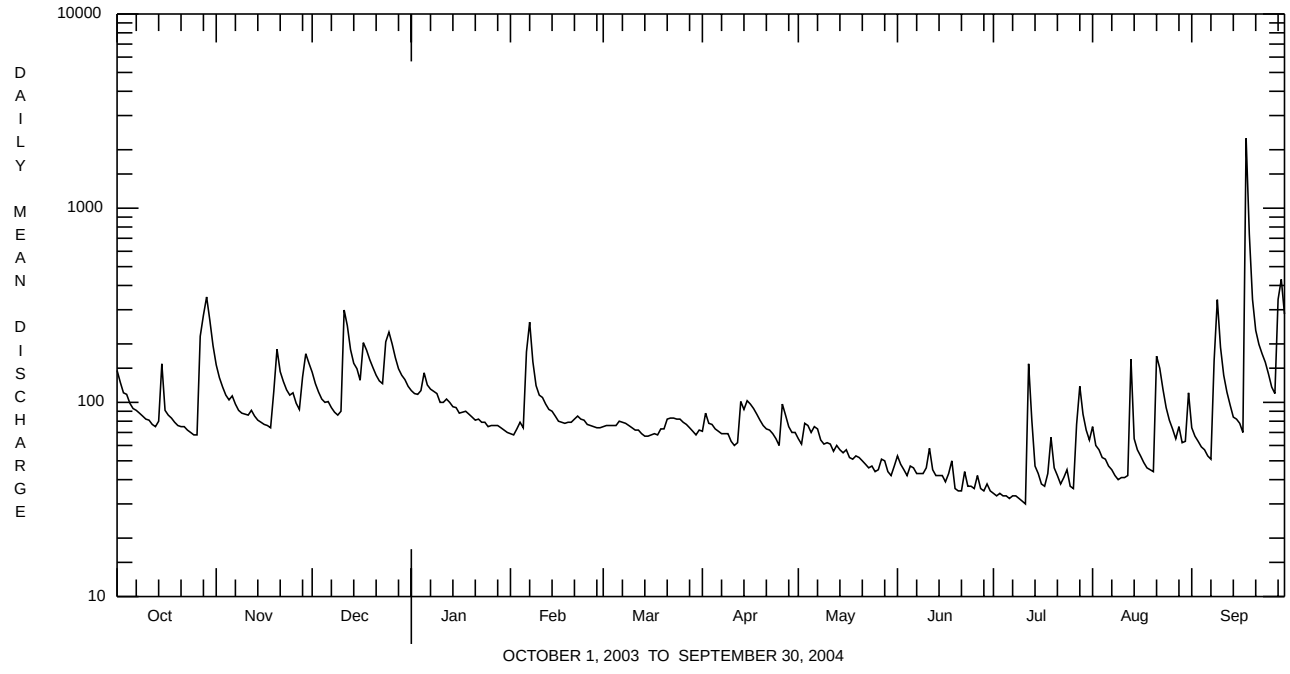
MEAN	39.8	45.7	55.8	58.0	64.1	74.5	73.4	58.2	52.0	44.1	40.9	43.5
MAX	118	111	191	201	163	216	181	129	142	141	88.2	245
(WY)	2004	2004	1997	1979	1979	1994	1994	1984	1972	1984	1984	2004
MIN	8.90	10.0	6.88	7.14	13.6	19.8	18.6	16.2	15.0	11.6	10.6	9.51
(WY)	1966	1966	1966	1966	2002	2002	1966	1965	1965	1966	1965	1965

LEHIGH RIVER BASIN

01452500 MONOCACY CREEK AT BETHLEHEM, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1949 - 2004	
ANNUAL TOTAL	32653		36086			
ANNUAL MEAN	89.5		98.6		54.1	
HIGHEST ANNUAL MEAN					98.6	2004
LOWEST ANNUAL MEAN					15.5	1966
HIGHEST DAILY MEAN	354	Jun 21	2290	Sep 18	2290	Sep 18 2004
LOWEST DAILY MEAN	27	Feb 17	30	Jul 11	5.2	Jan 1 1966
ANNUAL SEVEN-DAY MINIMUM	28	Feb 15	32	Jul 5	5.9	Dec 27 1965
MAXIMUM PEAK FLOW			**a**5470	Sep 18	**a**5470	Sep 18 2004
MAXIMUM PEAK STAGE			9.85	Sep 18	9.85	Sep 18 2004
INSTANTANEOUS LOW FLOW			29	Jul 11,12	3.0	Jan 9 1966
ANNUAL RUNOFF (CFSM)	2.01		2.22		1.22	
ANNUAL RUNOFF (INCHES)	27.30		30.17		16.52	
10 PERCENT EXCEEDS	160		159		98	
50 PERCENT EXCEEDS	78		77		42	
90 PERCENT EXCEEDS	37		42		21	

a From rating curve extended above 440 ft^3/s on basis of slope-area measurement at gage heights 5.47 and 9.74.



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 bridge on New Street at Bethlehem, and 1,800 ft upstream from Monocacy Creek. Records include flow of Monocacy Creek.

DRAINAGE AREA.--1,279 mi^2 (includes that of Monocacy Creek). At site used prior to Oct. 1, 1928, 1,229 mi^2.

PERIOD OF RECORD.--October 1902 to January 1905, May 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 and crest-stage gage. 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 fair except those for estimated daily discharges, 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 Reservoir (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Satellite and landline telemetry at station.

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^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4500	7970	6600	3860	1390	1680	2110	2260	2180	1110	2330	2080
2	3690	5700	6330	3630	1410	1760	2240	2350	2220	1100	2480	1810
3	3310	4530	5550	3400	1580	2170	2150	4150	2010	1040	2600	1630
4	3140	3660	4730	3610	2030	2720	2090	5160	1740	994	2390	1550
5	3060	3430	3850	5140	1960	3290	2020	3950	1670	966	2250	1490
6	3040	3840	3480	6710	2590	3600	1730	3420	2290	946	1930	1400
7	2900	3510	3230	5250	4950	3880	1740	3040	2150	933	1630	1310
8	2530	3210	3050	4450	3270	3840	1780	3180	1960	907	1470	1630
9	2240	3030	2780	3480	2490	4200	1810	3110	1700	842	1340	3040
10	2080	2920	2720	e2850	2450	3250	1670	2840	1580	813	1260	4210
11	2030	2910	10000	e2820	2270	3090	1590	2790	1960	794	1250	3850
12	2020	3080	13200	2910	1980	2750	1640	2940	1810	3640	1290	3280
13	1930	3440	12400	2800	1850	2490	2540	3040	1670	4770	6620	2800
14	1880	3270	12000	2590	1750	2360	3140	2590	1500	2480	6720	1940
15	3700	2610	10400	e2370	1670	2300	3450	3090	1420	2120	4980	1660
16	3360	2270	5720	e2100	1460	2210	3300	3110	1520	1650	4070	1640
17	2840	2230	6070	2100	1510	2160	2690	2680	1470	1480	3350	1620
18	2760	2260	6340	2230	1550	2140	2530	2320	1990	1570	2560	e33500
19	2770	2630	5300	2080	1490	2240	2310	2370	1700	2410	2090	21400
20	2740	5120	4460	1990	1520	2200	2110	2270	1610	2110	1970	15000
21	2640	5510	4040	2030	1590	2560	2050	2110	1510	1840	7530	12400
22	2100	5030	3760	2050	1880	2610	1980	1960	1410	1680	7020	10900
23	1790	4580	3310	1720	1750	2520	1980	1870	1560	1580	4850	8990
24	2140	3650	6500	1660	1770	2450	2030	1810	1420	2080	4180	7450
25	2330	3740	9880	1600	1650	2300	1970	1690	1340	1630	3460	5190
26	2280	3510	6930	1640	1530	2300	2700	1630	1430	1540	2860	4730
27	4650	3120	5630	1570	1500	2430	3250	2460	1450	2320	2440	4180
28	8030	3690	4900	1580	1520	2600	3240	3910	1270	3510	2230	7820
29	11400	8900	4700	1560	1590	2520	2910	3180	1250	2850	2110	12600
30	11500	6520	8010	1530	---	2360	2340	2750	1220	2430	2120	11200
31	9350	---	4930	1460	---	2160	---	2120	---	2080	2860	---
TOTAL	114730	119870	190800	84770	55950	81140	69090	86150	50010	56215	96240	192300
MEAN	3701	3996	6155	2735	1929	2617	2303	2779	1667	1813	3105	6410
MAX	11500	8900	13200	6710	4950	4200	3450	5160	2290	4770	7530	33500
MIN	1790	2230	2720	1460	1390	1680	1590	1630	1220	794	1250	1310
CFSM	2.89	3.12	4.81	2.14	1.51	2.05	1.80	2.17	1.30	1.42	2.43	5.01
IN.	3.34	3.49	5.55	2.47	1.63	2.36	2.01	2.51	1.45	1.64	2.80	5.59

e Estimated.

LEHIGH RIVER BASIN

01453000 LEHIGH RIVER AT BETHLEHEM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1616	2324	2932	2663	2736	3841	3862	3039	2166	1611	1366	1492
MAX	5778	5294	9067	7898	5820	7708	10180	7041	8199	6362	6192	6907
(WY)	1956	1952	1997	1979	1951	1977	1993	1989	2003	1945	1955	1987
MIN	406	474	514	286	1132	1632	1428	1053	681	366	405	334
(WY)	1964	1965	1981	1981	1980	1981	1985	1941	1965	1965	1964	1964

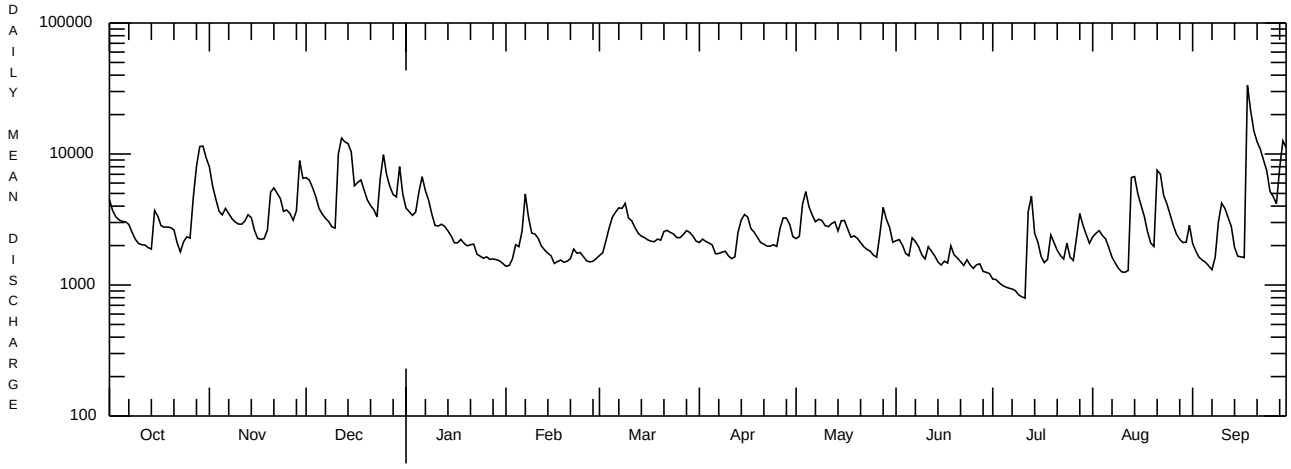
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	1433330		1197265			
ANNUAL MEAN	3927		3271		2469	
HIGHEST ANNUAL MEAN					3973	1952
LOWEST ANNUAL MEAN					1165	1965
HIGHEST DAILY MEAN	22900	Jun 21	**e**33500	Sep 18	70400	Aug 19 1955
LOWEST DAILY MEAN	**e**900	Feb 17	794	Jul 11	210	Jan 31 1981
ANNUAL SEVEN-DAY MINIMUM	**a**1090	Feb 11	886	Jul 5	216	Jan 26 1981
MAXIMUM PEAK FLOW			56700	Sep 18	**b**92000	May 23 1942
MAXIMUM PEAK STAGE			19.70	Sep 18	**c**25.90	May 23 1942
ANNUAL RUNOFF (CFSM)	3.07		2.56		1.93	
ANNUAL RUNOFF (INCHES)	41.69		34.82		26.23	
10 PERCENT EXCEEDS	8190		5710		4860	
50 PERCENT EXCEEDS	2880		2420		1790	
90 PERCENT EXCEEDS	1440		1500		692	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903-1904, 1909-1940, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1532	1827	2184	2346	2430	4134	3815	2280	1753	1530	1239	1214
MAX	4808	5660	5287	5287	5913	11920	7547	3681	4255	5182	4599	6407
(WY)	1903	1927	1939	1915	1915	1936	1940	1924	1928	1935	1933	1933
MIN	308	370	470	677	668	1887	1499	1020	832	572	428	374
(WY)	1911	1910	1931	1925	1934	1911	1915	1926	1921	1912	1910	1932

SUMMARY STATISTICS	WATER YEARS 1903 - 1904 1909 - 1940	
ANNUAL MEAN	2189	
HIGHEST ANNUAL MEAN	3600	1928
LOWEST ANNUAL MEAN	1262	1931
HIGHEST DAILY MEAN	47900	Aug 24 1933
LOWEST DAILY MEAN	160	Oct 15 1910
ANNUAL SEVEN-DAY MINIMUM	260	Oct 13 1910
MAXIMUM PEAK FLOW	64800	Aug 24 1933
MAXIMUM PEAK STAGE	18.70	Aug 24 1933
INSTANTANEOUS LOW FLOW	160	Oct 15 1910
ANNUAL RUNOFF (CFSM)	1.71	
ANNUAL RUNOFF (INCHES)	23.25	
10 PERCENT EXCEEDS	4420	
50 PERCENT EXCEEDS	1500	
90 PERCENT EXCEEDS	548	

a Computed using estimated daily discharges.
b From rating curve extended above 58,000 ft^3/s on basis of slope-area measurement at gage height, 20.02 ft at present site and datum.
c From floodmark, present site and datum.
e Estimated.



LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA
(Pennsylvania Water-Quality Network Station)

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, 2.3 mi upstream from mouth, and 2.0 mi southwest of Easton.

DRAINAGE AREA.--1,359 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Francis E. Walter Reservoir (station 01447780), Penn Forest Reservoir (station 01449400), Wild Creek Reservoir (station 01449700), and since February 1971, by Beltzville Lake (station 01449790) about 60 mi upstream. Flows above 10,000 ft^3/s may be affected by backwater from the Delaware River. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5330	8420	6960	4700	1630	1930	2440	2550	2480	1170	2700	2450
2	4440	6420	6830	4440	1650	2030	2590	2620	2480	1140	2840	2070
3	3950	5210	6140	4140	1850	2480	2490	4500	2240	1080	2970	1840
4	3730	4270	5370	4330	2420	3060	2420	5780	1940	1030	2730	1730
5	3650	3910	4470	5900	2350	3810	2330	4610	1830	971	2610	1650
6	3580	4440	4040	7400	3540	4190	2030	3980	2570	959	2200	1560
7	3430	4050	3700	6120	6240	4550	1930	3510	2450	946	1820	1440
8	3030	3680	3480	5320	4240	4420	2000	3630	2170	949	1630	2160
9	2670	3450	3160	4300	3080	4910	2040	3540	1900	860	1470	3830
10	2460	3330	3070	e3500	3020	3850	1860	3260	1730	812	1370	4890
11	2360	3290	10600	e3400	2810	3610	1770	3120	2160	795	1360	4570
12	2350	3510	14000	e3500	2430	3240	1790	3350	2010	4300	1420	3850
13	2240	3870	12600	e3300	2240	2900	3040	3460	1820	5920	7120	3300
14	2220	3720	12100	3140	2120	2710	3740	2960	1660	2950	7440	2290
15	4450	3010	11100	e2900	2000	2640	4080	3460	1530	2560	5680	1890
16	4040	2530	6700	e2800	1750	2560	3880	3670	1610	1890	4750	1850
17	3350	2460	7280	2780	1780	2510	3190	3070	1590	1630	3940	1790
18	3260	2510	7370	2740	1850	2450	2940	2640	2180	1700	3010	e32000
19	3220	3110	6260	2530	1770	2610	2670	2660	1860	2770	2420	e25000
20	3200	5990	5420	2380	1800	2580	2420	2580	1730	2400	2200	e15000
21	3070	6110	4950	2400	1870	3010	2310	2370	1640	2050	7040	e13200
22	2530	5680	4620	2470	2230	3090	2240	2180	1530	1840	7770	11100
23	2060	5230	4100	2070	2070	2930	2200	2070	1680	1700	5530	10300
24	2360	4280	6930	1960	2080	2850	2310	2010	1550	2630	4870	8970
25	2650	4330	10500	1870	1950	2700	2250	1890	1440	1810	4070	6580
26	2580	4040	7810	1930	1790	2680	3220	1760	1600	1700	3340	5820
27	5360	3600	6530	1860	1750	2800	3920	2620	1590	2550	2820	5070
28	8850	4130	5800	1870	1750	3000	3730	4450	1370	4640	2580	8810
29	12000	9190	5480	1840	1830	2920	3370	3680	1300	3410	2450	14800
30	11900	7140	8410	1800	---	2730	2730	3110	1280	2840	2370	12300
31	9600	---	6010	1720	---	2540	---	2470	---	2400	3550	---
TOTAL	129920	134910	211790	101410	67890	94290	79930	97560	54920	64402	108070	212110
MEAN	4191	4497	6832	3271	2341	3042	2664	3147	1831	2077	3486	7070
MAX	12000	9190	14000	7400	6240	4910	4080	5780	2570	5920	7770	32000
MIN	2060	2460	3070	1720	1630	1930	1770	1760	1280	795	1360	1440
CFSM	3.08	3.31	5.03	2.41	1.72	2.24	1.96	2.32	1.35	1.53	2.57	5.20
IN.	3.56	3.69	5.80	2.78	1.86	2.58	2.19	2.67	1.50	1.76	2.96	5.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	2005	2675	3463	3042	3149	4267	4346	3374	2671	1833	1559	1876
MAX	5272	5438	9593	8414	5385	8344	10810	8542	8502	4641	4179	7920
(WY)	1977	1971	1997	1996	1976	1977	1993	1989	2003	1984	1969	1987
MIN	771	704	633	405	1278	1805	1639	1502	906	630	607	660
(WY)	1981	2002	1981	1981	1980	1981	1985	1995	1999	1999	1999	1983

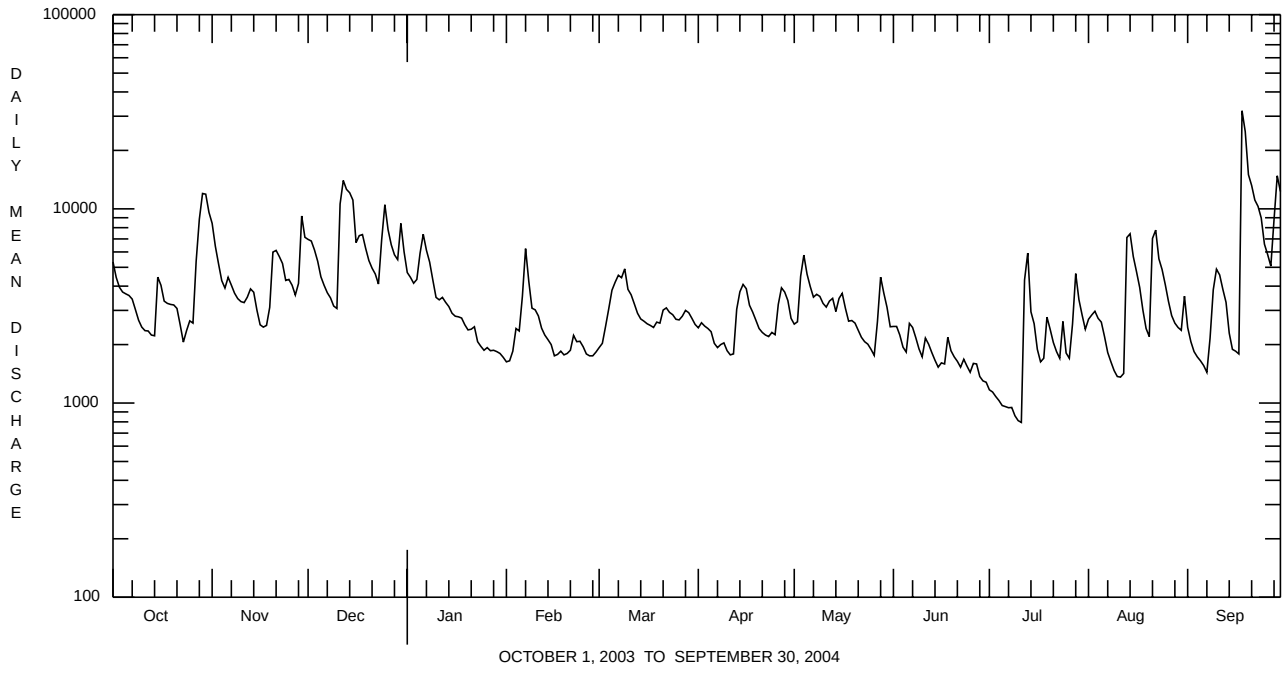
e Estimated.

LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004	
ANNUAL TOTAL	1583780		1357202			
ANNUAL MEAN	4339		3708		2852	
HIGHEST ANNUAL MEAN					3997	1984
LOWEST ANNUAL MEAN					1594	1985
HIGHEST DAILY MEAN	23000	Jun 21	**e**32000	Sep 18	44300	Jun 23 1972
LOWEST DAILY MEAN	**e**1100	Feb 17	795	Jul 11	330	Jan 31 1981**a**
ANNUAL SEVEN-DAY MINIMUM	1320	Feb 11	899	Jul 5	349	Jan 26 1981
MAXIMUM PEAK FLOW			**e**60000	Sep 18	**b**60600	Jun 23 1972**c**
MAXIMUM PEAK STAGE			**d**26.60	Sep 19	**d**26.60	Sep 19 2004
ANNUAL RUNOFF (CFSM)	3.19		2.73		2.10	
ANNUAL RUNOFF (INCHES)	43.35		37.15		28.52	
10 PERCENT EXCEEDS	8590		6620		5630	
50 PERCENT EXCEEDS	3370		2800		2090	
90 PERCENT EXCEEDS	1620		1690		863	

a Also Feb. 1, 1981.
b From rating curve extended above 36,000 ft^3/s.
c Gage height 24.86 ft.
d From floodmarks; backwater from Delaware River.
e Estimated.



01454700 LEHIGH RIVER AT GLENDON, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)
OCT 2003													
29...	1350	1028	9813	13100	14.3	7.5	6.9	139	136	11.1	47	12.4	3.9
DEC													
16...	1150	1028	9813	6540	13.8	7.5	7.4	184	190	3.2	57	14.6	4.9
FEB 2004													
23...	1150	1028	9813	2120	14.0	7.9	7.9	288	288	5.0	100	25.5	9.6
APR													
27...	1130	1028	9813	4000	11.0	7.6	7.6	214	213	11.5	73	19.5	5.9
JUN													
23...	1150	1028	9813	1700	9.3	7.8	7.7	278	274	20.0	98	23.5	9.4
AUG													
18...	1020	1028	9813	2950	9.3	7.6	7.2	179	183	19.6	61	14.9	5.7

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Fluoride, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, µg/L (01105)
OCT 2003													
29...	30	<.2	12.8	110	40	.020	1.28	<.040	.06	.085	1.8	4.4	860
DEC													
16...	30	<.2	16.1	136	8	.030	1.47	<.040	.03	.040	1.7	2.5	260
FEB 2004													
23...	65	<.2	27.8	192	2	.100	2.49	<.040	.08	.104	2.9	2.1	<200
APR													
27...	43	<.2	19.3	90	6	.130	1.55	<.040	.05	.088	2.1	2.5	210
JUN													
23...	63	<.2	25.4	204	4	.070	2.08	<.040	.15	.168	2.4	2.7	<200
AUG													
18...	36	<.2	16.6	124	8	.040	1.21	<.040	.07	.084	1.5	3.8	250

Date	Copper, water, unfltrd recoverable, µg/L (01042)	Cyanide amenable to chlorination wat unf mg/L (00722)	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, unfltrd recoverable, µg/L (01092)	Phenolic compounds, water, unfltrd µg/L (32730)
OCT 2003								
29...	<10	<1.00	1360	4.0	<10	<50	80	<5
DEC								
16...	<10	<1.00	260	<1.0	60	<50	50	<5
FEB 2004								
23...	<10	<1.00	150	<1.0	40	<50	160	<5
APR								
27...	<10	<1.00	280	1.0	50	<50	50	<5
JUN								
23...	<10	<1.00	280	1.0	60	<50	50	<5
AUG								
18...	<10	<1.00	330	1.0	70	<50	40	<5

01454700 LEHIGH RIVER AT GLENDON, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	11/03/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	1
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	2
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	5
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	15
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
Caecidotea	1
Insecta	
Ephemeroptera (MAYFLIES)	
Ephemerellidae	
Serratella	1
Heptageniidae	
Stenacron	6
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
Argia	1
Plecoptera (STONEFLIES)	
Taeniopterygidae	
Taeniopteryx	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	
Glossosoma	2
Protoptila	1
Hydropsychidae	
Cheumatopsyche	11
Hydropsyche	33
Philopotamidae	
Chimarra	1

01454700 LEHIGH RIVER AT GLENDON, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	11/03/03
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	4
Stenelmis	2
Psephenidae (WATER PENNIES)	
Psephenus	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	12
Empididae (DANCE FLIES)	
Hemerodromia	1
Simuliidae (BLACK FLIES)	
Simulium	1
Total Organisms	106
Total Taxa	22

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA

LOCATION.--Lat 40°41'12", long 75°12'32", Northampton County, Hydrologic Unit 02040106, on left bank, near bridge on U.S. Highway 611 in Easton.

DRAINAGE AREA.--1,364 mi^2.

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: November 1972 to current year.
WATER TEMPERATURE: October 1961 to current year.
DISSOLVED OXYGEN: June 1966 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1961. Probes interfaced with a data collection platform since the 1986 water year.

REMARKS.--Specific conductance record rated good except for period July 12-14, which is fair. pH record rated good. Water temperature record rated good. Dissolved oxygen record rated fair except for period Oct. 1-7, which is poor. Beginning with the 1978 water year, no data were recorded during the months of October through March. Other interruptions in the record were due to malfunctions of the pump or recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 581 microsiemens, Aug. 19, 1963; minimum, 70 microsiemens, Nov. 14, 1970.
pH: Maximum, 8.7, July 18, 19, 1991; minimum, 6.0, Mar. 16, 1978.
WATER TEMPERATURE: Maximum, 30.5°C, July 29, 1970, July 21, 1980; minimum, 0.0°C, many days during winters.
DISSOLVED OXYGEN: Maximum, 15.7 mg/L, Apr. 14, 1986; minimum, 0.0 mg/L, Aug. 4, 1966.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	187	175	181	---	---	---	---	---	---	---	---	---
2	204	187	197	---	---	---	---	---	---	---	---	---
3	209	204	207	---	---	---	---	---	---	---	---	---
4	213	209	210	---	---	---	---	---	---	---	---	---
5	216	209	213	---	---	---	---	---	---	---	---	---
6	215	206	211	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	216	175	203	---	---	---	---	---	---	---	---	---

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	249	225	244	245	232	241
2	---	---	---	---	---	---	---	---	---	242	224	236
3	---	---	---	---	---	---	---	---	---	227	173	207
4	---	---	---	---	---	---	---	---	---	173	154	162
5	---	---	---	---	---	---	---	---	---	173	155	163
6	---	---	---	---	---	---	251	241	247	181	172	177
7	---	---	---	---	---	---	290	250	269	---	---	---
8	---	---	---	---	---	---	279	262	266	---	---	---
9	---	---	---	---	---	---	273	262	267	---	---	---
10	---	---	---	---	---	---	270	260	265	---	---	---
11	---	---	---	---	---	---	271	261	267	---	---	---
12	---	---	---	---	---	---	270	252	266	---	---	---
13	---	---	---	---	---	---	265	251	259	---	---	---
14	---	---	---	---	---	---	251	222	241	---	---	---
15	---	---	---	---	---	---	228	217	223	---	---	---
16	---	---	---	---	---	---	221	209	215	---	---	---
17	---	---	---	---	---	---	236	213	223	---	---	---
18	---	---	---	---	---	---	240	228	233	208	198	204
19	---	---	---	---	---	---	236	230	233	217	208	214
20	---	---	---	---	---	---	247	236	243	215	207	211
21	---	---	---	---	---	---	264	244	257	219	209	216
22	---	---	---	---	---	---	262	255	259	225	217	222
23	---	---	---	---	---	---	262	254	258	233	223	227
24	---	---	---	---	---	---	259	250	256	244	228	237
25	---	---	---	---	---	---	250	240	247	259	235	244
26	---	---	---	261	249	256	243	228	235	273	239	252
27	---	---	---	256	240	250	228	205	215	272	226	250
28	---	---	---	242	222	235	222	205	211	227	167	191
29	---	---	---	225	217	221	212	205	208	174	165	168
30	---	---	---	227	219	224	232	212	219	196	174	186
31	---	---	---	239	221	232	---	---	---	---	---	---
MONTH	---	---	---	261	217	236	290	205	243	273	154	211

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	---	---	---	301	293	296	270	258	265	230	216	222
2	---	---	---	308	301	305	261	249	257	253	230	245
3	225	216	222	312	306	309	249	221	235	270	250	260
4	236	223	231	319	310	315	228	220	224	281	266	273
5	254	235	244	321	308	315	238	228	235	285	276	280
6	257	224	249	320	311	315	249	235	243	285	275	281
7	224	211	216	322	311	318	270	248	261	299	283	288
8	227	211	219	329	295	315	287	270	280	298	271	287
9	245	226	236	345	322	338	299	285	290	271	225	237
10	261	244	253	352	338	345	312	296	302	225	167	194
11	273	259	264	359	335	351	323	307	314	172	166	168
12	259	235	242	337	164	286	325	308	318	178	172	174
13	250	235	244	209	168	201	317	133	221	190	178	185
14	249	242	246	240	206	224	141	124	131	222	190	204
15	281	247	260	260	240	254	148	141	143	256	222	244
16	287	278	282	276	252	267	159	148	154	275	255	267
17	279	270	273	295	275	286	172	158	166	275	267	270
18	280	248	270	297	288	294	194	172	181	---	---	---
19	248	241	244	294	245	274	219	194	207	---	---	---
20	250	242	247	245	236	238	237	219	230	---	---	---
21	250	244	246	258	236	250	232	149	199	---	---	---
22	264	241	251	267	253	262	179	152	162	---	---	---
23	276	263	271	274	264	269	179	172	175	---	---	---
24	273	263	268	283	248	262	179	173	176	---	---	---
25	279	261	271	265	249	257	187	176	181	---	---	---
26	293	277	283	271	261	265	200	187	193	---	---	---
27	293	272	280	278	254	272	214	200	207	---	---	---
28	275	267	271	254	213	224	225	214	220	176	139	155
29	293	270	279	249	237	245	223	218	221	175	149	157
30	300	290	295	254	244	249	232	219	227	176	142	154
31	---	---	---	262	252	259	232	216	222	---	---	---
MONTH	300	211	256	359	164	279	325	124	221	299	139	227

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	7.0	6.9	6.9	---	---	---	---	---	---	---	---	---
2	7.0	6.9	7.0	---	---	---	---	---	---	---	---	---
3	7.1	7.0	7.1	---	---	---	---	---	---	---	---	---
4	7.2	7.1	7.1	---	---	---	---	---	---	---	---	---
5	7.2	7.1	7.2	---	---	---	---	---	---	---	---	---
6	7.2	7.1	7.2	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	7.2	7.1	7.2	---	---	---	---	---	---	---	---	---
MIN	7.0	6.9	6.9	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	8.0	7.7	7.8	7.8	7.6	7.7
2	---	---	---	---	---	---	---	---	---	7.8	7.5	7.6
3	---	---	---	---	---	---	---	---	---	7.6	7.3	7.4
4	---	---	---	---	---	---	---	---	---	7.3	7.2	7.2
5	---	---	---	---	---	---	---	---	---	7.2	7.2	7.2
6	---	---	---	---	---	---	8.5	8.1	8.4	7.2	7.2	7.2
7	---	---	---	---	---	---	8.4	8.2	8.4	---	---	---
8	---	---	---	---	---	---	8.5	8.1	8.3	---	---	---
9	---	---	---	---	---	---	8.3	7.8	8.2	---	---	---
10	---	---	---	---	---	---	8.6	8.1	8.4	---	---	---
11	---	---	---	---	---	---	8.6	8.1	8.3	---	---	---
12	---	---	---	---	---	---	8.2	8.0	8.1	---	---	---
13	---	---	---	---	---	---	8.2	7.8	7.8	---	---	---
14	---	---	---	---	---	---	7.8	7.7	7.7	---	---	---
15	---	---	---	---	---	---	8.0	7.6	7.8	---	---	---
16	---	---	---	---	---	---	8.0	7.7	7.8	---	---	---
17	---	---	---	---	---	---	7.8	7.6	7.7	---	---	---
18	---	---	---	---	---	---	8.0	7.6	7.7	7.5	7.4	7.5
19	---	---	---	---	---	---	8.0	7.8	7.9	7.5	7.4	7.5
20	---	---	---	---	---	---	8.0	7.8	7.9	7.5	7.4	7.4
21	---	---	---	---	---	---	8.2	7.9	8.1	7.5	7.4	7.4
22	---	---	---	---	---	---	8.2	7.8	8.0	7.4	7.4	7.4
23	---	---	---	---	---	---	8.1	7.8	7.9	7.4	7.4	7.4
24	---	---	---	---	---	---	8.0	7.8	8.0	7.4	7.4	7.4
25	---	---	---	---	---	---	8.1	7.7	7.9	7.4	7.3	7.3
26	---	---	---	8.3	7.7	7.9	7.8	7.5	7.6	7.4	7.3	7.3
27	---	---	---	8.4	7.8	8.0	7.6	7.4	7.4	7.4	7.3	7.4
28	---	---	---	8.5	7.8	8.1	7.8	7.5	7.6	7.4	7.2	7.3
29	---	---	---	8.5	7.8	8.3	7.8	7.6	7.7	7.3	7.2	7.2
30	---	---	---	8.5	7.8	8.0	7.8	7.6	7.7	7.3	7.3	7.3
31	---	---	---	8.0	7.8	7.8	---	---	---	---	---	---
MAX	---	---	---	8.5	7.8	8.3	8.6	8.2	8.4	7.8	7.6	7.7
MIN	---	---	---	8.0	7.7	7.8	7.6	7.4	7.4	7.2	7.2	7.2

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.0	14.5	15.0	---	---	---	---	---	---	---	---	---
2	14.5	13.5	14.0	---	---	---	---	---	---	---	---	---
3	13.5	12.5	13.0	---	---	---	---	---	---	---	---	---
4	12.5	12.0	12.0	---	---	---	---	---	---	---	---	---
5	12.0	11.5	11.5	---	---	---	---	---	---	---	---	---
6	12.0	11.5	12.0	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	15.0	11.5	12.9	---	---	---	---	---	---	---	---	---

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	9.5	8.5	9.0	18.0	16.0	17.0
2	---	---	---	---	---	---	---	---	---	18.5	17.5	18.0
3	---	---	---	---	---	---	---	---	---	18.5	15.0	17.0
4	---	---	---	---	---	---	---	---	---	15.0	13.0	13.5
5	---	---	---	---	---	---	---	---	---	14.0	13.0	13.5
6	---	---	---	---	---	---	8.0	7.0	8.0	14.5	13.0	13.5
7	---	---	---	---	---	---	10.0	8.0	9.0	---	---	---
8	---	---	---	---	---	---	10.5	10.0	10.5	---	---	---
9	---	---	---	---	---	---	11.5	10.0	10.5	---	---	---
10	---	---	---	---	---	---	11.5	10.5	11.0	---	---	---
11	---	---	---	---	---	---	11.5	10.5	11.0	---	---	---
12	---	---	---	---	---	---	10.5	9.5	10.0	---	---	---
13	---	---	---	---	---	---	9.5	9.0	9.0	---	---	---
14	---	---	---	---	---	---	9.5	9.0	9.5	---	---	---
15	---	---	---	---	---	---	10.5	9.0	10.0	---	---	---
16	---	---	---	---	---	---	11.5	9.5	10.5	---	---	---
17	---	---	---	---	---	---	13.0	11.0	11.5	---	---	---
18	---	---	---	---	---	---	15.0	12.5	13.5	20.5	19.0	19.5
19	---	---	---	---	---	---	16.0	14.5	15.5	20.0	19.5	19.5
20	---	---	---	---	---	---	17.0	15.5	16.5	19.5	18.5	19.0
21	---	---	---	---	---	---	16.5	16.0	16.5	19.0	18.5	19.0
22	---	---	---	---	---	---	16.5	15.5	16.0	21.0	19.0	19.5
23	---	---	---	---	---	---	16.0	15.5	16.0	22.5	21.0	21.5
24	---	---	---	---	---	---	16.0	15.0	15.5	23.0	22.0	22.5
25	---	---	---	---	---	---	15.5	14.0	15.0	23.0	22.0	23.0
26	---	---	---	9.5	8.0	9.0	14.0	12.0	13.0	23.0	20.5	22.0
27	---	---	---	11.5	9.5	10.5	13.0	11.5	12.5	20.5	20.0	20.5
28	---	---	---	12.0	11.0	11.5	13.5	12.0	13.0	20.5	19.5	20.0
29	---	---	---	12.0	11.0	11.5	14.5	12.5	13.5	19.5	18.5	19.0
30	---	---	---	11.5	9.5	10.5	16.0	14.0	15.0	19.0	17.5	18.5
31	---	---	---	9.5	9.0	9.0	---	---	---	---	---	---
MONTH	---	---	---	12.0	8.0	10.3	17.0	7.0	12.3	23.0	13.0	18.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	---	---	---	23.0	21.5	22.0	23.5	22.5	23.0	22.0	21.0	21.5
2	---	---	---	24.5	22.0	23.0	24.0	23.0	23.5	21.5	20.5	21.0
3	19.5	18.0	19.0	25.0	23.0	23.5	24.5	23.0	23.5	21.5	20.5	21.0
4	20.0	19.0	19.5	25.5	23.5	24.0	24.5	23.5	24.0	21.5	21.0	21.0
5	20.0	18.0	19.0	26.0	23.5	24.5	24.5	23.0	23.5	21.0	20.0	20.5
6	18.0	16.0	17.0	25.5	24.0	24.5	23.0	21.0	22.0	20.0	19.5	19.5
7	17.5	15.5	16.5	25.5	23.5	24.5	21.0	19.5	20.0	20.5	19.5	20.0
8	20.5	17.5	18.5	25.5	24.0	24.5	20.0	19.0	19.5	20.5	20.0	20.5
9	22.5	20.5	21.0	25.0	23.5	24.0	21.0	19.5	20.5	21.5	20.5	21.0
10	22.5	22.0	22.5	24.5	23.0	23.5	22.0	20.5	21.5	21.0	20.5	20.5
11	22.0	20.0	21.0	25.0	23.0	24.0	22.5	21.5	22.0	20.5	20.0	20.0
12	20.0	19.0	19.5	25.0	21.0	23.0	22.5	22.0	22.0	20.0	19.0	19.5
13	19.5	19.0	19.0	21.0	20.0	20.5	22.5	20.5	21.5	20.5	19.5	20.0
14	19.0	18.5	19.0	20.5	20.0	20.0	20.5	19.5	19.5	20.5	19.5	20.0
15	21.0	19.0	20.0	20.5	20.0	20.0	20.0	19.5	19.5	20.0	19.0	19.5
16	22.5	20.5	22.0	20.0	19.5	19.5	20.5	19.5	20.0	19.5	19.0	19.5
17	23.5	22.5	23.0	21.5	20.0	20.5	21.0	19.5	20.0	19.5	19.0	19.5
18	24.0	23.0	23.5	21.5	20.5	21.5	20.5	20.0	20.5	---	---	---
19	24.0	23.0	23.5	20.5	20.0	20.5	21.0	20.5	20.5	---	---	---
20	23.0	21.5	22.0	21.5	20.0	20.5	22.0	21.0	21.5	---	---	---
21	21.5	20.5	21.0	22.5	21.0	22.0	22.0	20.0	21.5	---	---	---
22	21.0	20.0	20.5	23.5	22.0	22.5	20.0	18.5	19.0	---	---	---
23	21.5	20.0	20.5	23.5	23.0	23.5	19.5	18.5	19.0	---	---	---
24	22.5	21.0	21.5	23.0	22.0	22.5	20.5	19.0	19.5	---	---	---
25	23.0	22.0	22.5	22.5	21.5	22.0	20.5	19.5	20.0	---	---	---
26	22.5	22.0	22.5	22.5	21.5	22.0	20.5	19.5	20.0	---	---	---
27	22.5	21.5	22.0	22.0	20.5	21.5	20.5	19.5	20.0	---	---	---
28	21.5	21.0	21.5	20.5	20.0	20.5	21.5	20.0	21.0	18.0	17.5	17.5
29	22.0	21.0	21.5	21.5	20.0	21.0	23.0	21.5	22.0	18.0	17.0	17.5
30	22.5	21.0	21.5	22.0	20.5	21.0	23.0	22.5	22.5	17.0	16.5	17.0
31	---	---	---	23.0	21.5	22.0	23.0	22.0	22.0	---	---	---
MONTH	24.0	15.5	20.7	26.0	19.5	22.2	24.5	18.5	21.1	22.0	16.5	19.8

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	9.4	8.9	9.1	---	---	---	---	---	---	---	---	---
2	9.7	9.0	9.4	---	---	---	---	---	---	---	---	---
3	10.4	9.6	9.9	---	---	---	---	---	---	---	---	---
4	10.5	9.9	10.3	---	---	---	---	---	---	---	---	---
5	11.1	10.3	10.8	---	---	---	---	---	---	---	---	---
6	11.1	10.3	10.7	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.1	8.9	10.0	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	11.8	10.8	11.1	9.8	9.0	9.4
2	---	---	---	---	---	---	---	---	---	9.1	8.5	8.8
3	---	---	---	---	---	---	---	---	---	9.0	8.3	8.6
4	---	---	---	---	---	---	---	---	---	9.6	8.9	9.3
5	---	---	---	---	---	---	---	---	---	9.5	9.2	9.3
6	---	---	---	---	---	---	13.0	11.6	12.2	9.3	8.3	8.9
7	---	---	---	---	---	---	12.7	11.2	12.0	---	---	---
8	---	---	---	---	---	---	12.1	10.7	11.2	---	---	---
9	---	---	---	---	---	---	12.0	10.2	11.0	---	---	---
10	---	---	---	---	---	---	12.8	10.5	11.5	---	---	---
11	---	---	---	---	---	---	11.7	10.5	11.0	---	---	---
12	---	---	---	---	---	---	12.7	10.5	11.3	---	---	---
13	---	---	---	---	---	---	11.4	10.6	10.8	---	---	---
14	---	---	---	---	---	---	10.8	10.4	10.6	---	---	---
15	---	---	---	---	---	---	11.7	10.6	11.1	---	---	---
16	---	---	---	---	---	---	11.4	10.3	10.9	---	---	---
17	---	---	---	---	---	---	10.8	8.7	9.8	---	---	---
18	---	---	---	---	---	---	11.1	8.8	10.0	8.8	8.5	8.7
19	---	---	---	---	---	---	11.1	9.4	10.2	8.7	8.4	8.6
20	---	---	---	---	---	---	11.0	9.1	10	9.0	8.6	8.8
21	---	---	---	---	---	---	10.5	9.3	9.8	8.9	8.7	8.8
22	---	---	---	---	---	---	10.7	9.1	9.7	8.8	8.3	8.6
23	---	---	---	---	---	---	10.2	9.1	9.7	8.3	7.9	8.2
24	---	---	---	---	---	---	11.2	9.9	10.4	8.1	7.6	7.8
25	---	---	---	---	---	---	---	---	---	7.9	7.3	7.6
26	---	---	---	12.4	10.7	11.4	---	---	---	7.7	7.1	7.4
27	---	---	---	11.7	10.5	11.1	---	---	---	8.1	7.5	7.9
28	---	---	---	11.9	10.2	11.1	---	---	---	8.2	7.6	7.9
29	---	---	---	11.9	10.4	11.2	10.6	10.0	10.3	8.5	7.9	8.3
30	---	---	---	11.4	10.4	11.0	10.3	9.4	9.9	9.1	8.3	8.8
31	---	---	---	11.5	10.8	11.2	---	---	---	---	---	---
MONTH	---	---	---	12.4	10.2	11.2	13.0	8.7	10.7	9.8	7.1	8.5

01454720 LEHIGH RIVER AT EASTON, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	---	---	---	9.3	8.6	8.9	7.9	7.6	7.8	8.5	8.3	8.4
2	---	---	---	9.3	8.5	8.8	7.9	7.6	7.8	9.0	7.3	8.7
3	9.3	8.9	9.1	9.3	8.3	8.7	7.8	7.5	7.7	9.0	8.4	8.8
4	9.3	8.8	9.1	9.6	8.2	8.8	7.8	7.5	7.6	9.0	8.5	8.8
5	9.3	8.7	9.0	9.5	8.1	8.7	7.8	7.6	7.7	9.0	8.0	8.7
6	10.2	9.3	9.8	9.5	8.0	8.7	8.3	7.7	8.0	9.5	8.7	9.1
7	10.5	10.0	10.3	9.7	8.1	8.8	8.7	8.2	8.5	9.4	8.9	9.1
8	10.2	9.5	10	9.3	8.2	8.6	9.0	8.6	8.8	8.9	8.2	8.7
9	10.2	9.2	9.4	9.1	7.6	8.4	9.0	8.5	8.7	8.8	8.1	8.3
10	9.4	8.8	9.1	---	---	---	8.6	8.1	8.4	8.9	8.3	8.6
11	9.7	8.9	9.2	---	---	---	8.3	7.9	8.1	9.0	7.9	8.8
12	10.1	9.5	9.8	---	---	---	8.1	7.3	7.9	9.1	8.9	9.0
13	10.3	9.6	10.0	---	---	---	8.3	7.8	8.0	9.0	8.2	8.7
14	10.5	10.0	10.2	---	---	---	8.8	8.2	8.6	8.6	8.3	8.5
15	10.4	9.8	10.1	8.2	7.9	8.1	9.5	8.6	8.7	8.8	8.4	8.6
16	9.8	9.1	9.5	8.3	7.9	8.1	8.7	8.5	8.6	8.7	8.4	8.6
17	9.5	8.7	9.0	8.1	7.4	7.8	8.7	8.4	8.5	8.7	8.4	8.6
18	9.1	8.5	8.8	7.7	7.1	7.5	8.6	8.4	8.5	---	---	---
19	9.0	8.5	8.7	7.9	5.8	6.9	8.5	7.8	8.4	---	---	---
20	9.5	8.4	8.9	8.1	7.5	7.8	8.5	8.1	8.3	---	---	---
21	9.6	8.9	9.2	7.9	6.7	7.3	8.3	7.9	8.1	---	---	---
22	9.1	8.7	8.9	7.6	6.7	7.2	9.0	7.8	8.7	---	---	---
23	9.1	8.7	8.9	7.6	6.4	7.2	9.0	8.8	9.0	---	---	---
24	8.9	8.3	8.6	8.0	7.2	7.6	9.0	8.7	8.9	---	---	---
25	8.5	7.8	8.2	8.2	7.6	7.9	8.9	8.7	8.8	---	---	---
26	8.3	7.9	8.1	8.4	7.8	8.1	8.9	8.6	8.8	---	---	---
27	8.8	7.9	8.4	8.1	7.9	8.0	8.9	8.6	8.8	---	---	---
28	9.0	8.3	8.6	8.2	7.9	8.0	8.7	8.4	8.6	9.3	8.7	9.1
29	9.2	8.4	8.8	8.3	8.0	8.2	8.6	8.1	8.4	9.0	8.4	8.7
30	9.3	8.6	8.9	8.3	7.6	8.2	8.5	8.1	8.3	9.1	9.0	9.0
31	---	---	---	8.2	7.8	8.0	8.3	7.9	8.2	---	---	---
MONTH	10.5	7.8	9.2	9.7	5.8	8.1	9.5	7.3	8.4	9.5	7.3	8.7

01454720 LEHIGH RIVER AT EASTON, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-tance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUL									
28...	1322	1028	1028	30	10.0	9.1	7.9	213	19.9
28...	1325	1028	1028	30	5.00	9.0	7.8	213	19.9
28...	1326	1028	1028	30	1.00	9.0	7.8	213	19.9
28...	1333	1028	1028	60	9.00	8.9	7.8	213	19.9
28...	1334	1028	1028	60	5.00	8.9	7.8	213	19.9
28...	1335	1028	1028	60	1.00	8.9	7.7	213	19.8
28...	1347	1028	1028	95	15.0	9.0	7.8	213	19.9
28...	1348	1028	1028	95	10.0	9.0	7.7	213	19.9
28...	1349	1028	1028	95	5.00	9.0	7.7	213	19.9
28...	1350	1028	1028	95	1.00	8.9	7.6	213	19.9
28...	1357	1028	1028	130	10.0	9.1	7.7	215	19.9
28...	1358	1028	1028	130	5.00	9.0	7.6	215	19.9
28...	1359	1028	1028	130	1.00	9.0	7.6	214	19.9
28...	1403	1028	1028	150	15.0	8.9	7.6	215	19.9
28...	1404	1028	1028	150	10.0	8.9	7.6	215	19.9
28...	1405	1028	1028	150	5.00	8.9	7.6	215	19.9
28...	1406	1028	1028	150	1.00	8.9	7.6	215	19.9
28...	1414	1028	1028	190	15.0	8.9	7.6	215	19.9
28...	1415	1028	1028	190	10.0	8.9	7.5	216	19.9
28...	1416	1028	1028	190	5.00	8.9	7.5	215	19.9
28...	1417	1028	1028	190	1.00	8.9	7.5	216	19.9
28...	1422	1028	1028	215	9.00	8.9	7.6	216	19.9
28...	1423	1028	1028	215	5.00	8.9	7.6	216	19.9
28...	1424	1028	1028	215	1.00	8.9	7.6	216	19.9
28...	1428	1028	1028	240	10.0	8.9	7.5	216	19.9
28...	1429	1028	1028	240	5.00	8.9	7.5	216	19.9
28...	1430	1028	1028	240	1.00	8.9	7.5	216	19.9
28...	1431	1028	1028	270	5.00	8.9	7.6	216	19.9
28...	1432	1028	1028	270	1.00	8.9	7.5	216	19.9
28...	1433	1028	1028	300	.00	--	--	--	--

LEHIGH RIVER BASIN

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 5.0 mi northeast of White Haven. DRAINAGE AREA, 289 mi^2. PERIOD OF RECORD, February 1961 to current year. GAGE, water-stage recorder (U.S. Army Corps of Engineers datum).

REMARKS.--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; reservoir first reached conservation pool in June 1961. Total capacity (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. Flow regulated by three gates and low-flow by-pass system. Reservoir is used for flood control and recreation. Satellite telemetry at station.

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

EXTREMES FOR CURRENT YEAR.--Maximum recorded contents, 44,670 acre-ft, Sept. 19, elevation, 1,401.33 ft; minimum contents, 1,480 acre-ft, Dec. 22, elevation, 1,295.77 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 10.0 mi northeast of Palmerton. DRAINAGE AREA, 16.5 mi^2. PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by city of Bethlehem).

REMARKS.--Reservoir formed by a roller-compacted concrete dam with ungated concrete spillway at elevation 1,000.60 ft (capacity, 18,510 acre-ft). Storage began October 1958. Reservoir is used for municipal water supply. Regulation by valves on pipe through dam. Figures given herein represent total contents and include diversion since October 1969 from Tunkhannock Creek Basin to Wild Creek Basin.

COOPERATION.--Records provided by city of Bethlehem.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,800 acre-ft, Apr. 16, 1983, elevation, 1,001.69 ft; minimum contents, 0 acre-ft, many days during 1996, 1997, 1998, and 1999 water years, elevation, 890.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,060 acre-ft, Sept. 19, elevation, 1,001.67 ft; minimum contents, 18,490 acre-ft, July 7, elevation, 1,000.55 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^2. PERIOD OF RECORD, January 1941 to current year. GAGE, nonrecording gage. Datum of gage is sea level (levels by city of Bethlehem).

REMARKS.--Reservoir formed by earthfill dam with concrete ungated spillway at elevation 820.00 ft. Storage began January 27, 1941; reservoir first reached minimum contents 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. Regulation by valves on pipe through dam. Figures given herein represent usable contents and include diversion since October 1969 from Tunkhannock Creek Basin to Wild Creek Basin.

COOPERATION.--Records provided by city of Bethlehem.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,440 acre-ft, Sept. 19, elevation, 821.47 ft; minimum contents, 11,840 acre-ft, July 12, elevation 819.20 ft.

01449790 BELTZVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.4 mi upstream from gaging station on Pohopoco Creek, 0.6 mi upstream from Sawmill Run, and 2.3 mi northeast of Parryville. DRAINAGE AREA, 96.3 mi^2. PERIOD OF RECORD, February 1971 to current year. GAGE, water-stage recorder (U.S. Army Corps of Engineers datum).

REMARKS.--Lake formed by an earth and rockfill dam with ungated, partially lined spillway at an elevation of 651.00 ft. Storage began Feb. 8, 1971. Capacity at elevation 651.00 ft is 68,300 acre-ft. Ordinary minimum contents (conservation) pool elevation is 628.00 ft, capacity, 41,250 acre-ft. Dead storage is 1,390 acre-ft. Lake 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 49,730 acre-ft, Jan. 29, 1976, elevation, 636.30 ft; minimum contents, 15,110 acre-ft, Mar. 31, 1983, elevation, 588.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,660 acre-ft, Sept. 19, elevation, 636.19 ft; minimum contents, 40,580 acre-ft, Sept. 28, elevation, 627.29 ft.

LEHIGH RIVER BASIN

Lakes and Reservoirs in Lehigh River Basin--Continued

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
	01447780 Francis E. Walter Reservoir			01449400 Penn Forest Reservoir		
Sept. 30	1,305.96	2,350	---	1,000.90	18,660	--
Oct. 31	1,325.86	5,230	+46.8	1,000.96	18,690	+0.5
Nov. 30	1,337.53	7,810	+43.4	1,001.01	18,720	+0.5
Dec. 31	1,330.48	6,150	-27.0	1,000.79	18,610	-1.8
CAL YR 2003	--	--	+5.5	--	--	0
Jan. 31	1,301.26	1,910	-69.0	1,000.69	18,560	-0.8
Feb. 29	1,298.89	1,710	-3.5	1,000.64	18,530	-0.5
Mar. 31	1,302.90	2,050	+5.5	1,000.76	18,590	+1.0
Apr. 30	1,305.77	2,330	+4.7	1,000.73	18,580	-0.2
May 31	1,307.20	2,490	+2.6	1,000.73	18,580	0
June 30	1,301.04	1,890	-10.1	1,000.63	18,530	-0.8
July 31	1,300.99	1,880	-0.2	1,000.66	18,540	+0.2
Aug. 31	1,299.69	1,770	-1.8	1,000.73	18,580	+0.7
Sept. 30	1,308.89	2,670	+15.1	1,001.03	18,730	+2.5
WTR YR 2004	--	--	+0.4	--	--	+0.1
	01449700 Wild Creek Reservoir			01449790 Beltzville Lake		
Sept. 30	820.42	12,130	---	628.38	41,610	--
Oct. 31	820.54	12,160	+0.5	628.39	41,620	+0.2
Nov. 30	820.60	12,180	+0.3	629.87	43,070	+24.4
Dec. 31	820.39	12,120	-1.0	628.04	41,290	-29.0
CAL YR 2003	--	--	+0.1	--	--	+3.0
Jan. 31	820.12	12,040	-1.3	628.08	41,330	+0.7
Feb. 29	820.00	12,000	-0.7	628.09	41,340	+0.2
Mar. 31	820.18	12,050	+0.8	628.05	41,300	-0.7
Apr. 30	820.14	12,040	-0.2	628.17	41,410	+1.8
May 31	820.14	12,040	0	628.10	41,340	-1.1
June 30	819.92	11,980	-1.0	628.11	41,350	+0.2
July 31	819.92	11,980	0	628.13	41,370	+0.3
Aug. 31	820.12	12,040	+1.0	628.12	41,360	-0.2
Sept. 30	820.50	12,150	+1.8	627.65	40,920	-7.4
WTR YR 2004	--	--	0	--	--	-1.0

DELAWARE RIVER BASIN

01457500 DELAWARE RIVER AT RIEGELSVILLE, NJ

LOCATION.--Lat 40°35'40", long 75°11'24", Warren County, Hydrologic Unit 02040105, at suspension bridge at Riegelsville, NJ, 600 ft upstream from Musconetcong River, and at river mile 174.8. Water-quality samples are collected from the bridge and are unaffected by the flow of the Musconetcong River.

DRAINAGE AREA.--6,328 mi^2.

PERIOD OF RECORD.--Water years 1934, 1943, 1950, 1960-79, 1991 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570). The flow of the Musconetcong River is included in the instantaneous discharge, cfs (00061).

COOPERATION.---Field data and samples for laboratory analyses were provided by the New Jersey Department of Environmental Protection. Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, total suspended solids, fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Delaware River Main Stem, New Jersey Department of Environmental Protection Watershed Management Area 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
NOV													
17...	1030	12,200	1.3	.084	.064	764	11.2	91	7.7	163	10.5	6.6	56
FEB													
18...	1030	6,630	1.6	.052	.041	764	13.1	95	8.0	258	1.3	2.3	95
MAY													
05...	1030	19,800	7.8	.097	.075	756	9.4	91	7.6	133	17.0	13.7	41
AUG													
11...	1030	5,020	1.6	.075	.057	754	7.7	91	8.0	214	23.0	23.1	70

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
NOV													
17...	14.5	4.81	1.22	8.36	40	13.1	<.2	4.7	13.7	88	92	3	<.20
FEB													
18...	24.4	8.21	1.66	14.7	62	24.5	<.2	5.0	22.0	145	160	1	.30
MAY													
05...	11.2	3.22	.98	9.48	26	14.9	<.2	3.0	10.1	71	78	13	<.20
AUG													
11...	18.5	5.73	1.43	12.0	52	18.4	<.2	3.1	18.6	113	120	2	.20

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)
NOV													
17...	<.020	<.020	.84	.008	.03	.027	.023	.029	--	--	.2	<.1	.2
FEB													
18...	.062	--	1.60	.016	<.02	.046	.043	.053	1.9	--	.3	<.1	.3
MAY													
05...	.020	--	.60	.008	.17	.025	.025	--	--	--	1.6	<.1	1.6
AUG													
11...	.010	--	1.01	.013	.04	.057	.065	.073	1.2	1.2	.6	<.1	.5

DELAWARE RIVER BASIN

01457500 DELAWARE RIVER AT RIEGELSVILLE, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Boron, water, fltrd, µg/L (01020)
NOV			
17...	2.5	E1.8	11
FEB			
18...	1.7	<1.1	14
MAY			
05...	3.0	E1.1	10
AUG			
11...	2.7	<1.0	15

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-COLUMN BACTERIA ANALYSES
Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instan-taneous dis-charge, cfs (00061)	Entero-cocci, m-E MF, water, col/ 100 mL (31649)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, ECbroth water, MPN/ 100 mL (31615)
AUG					
12...	0915	5,340	290	<100	300
19...	0910	18,000	240	100	260
26...	0915	12,600	170	<100	<20
31...	0915	11,700	1,400	700	2,200
SEP					
09...	0920	17,200	1,190	<100	9,000

Remark codes used in this table:
< -- Less than

TOHICKON CREEK BASIN

01459350 NOCKAMIXON RESERVOIR NEAR OTTSVILLE, PA

LOCATION.--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, 1.3 mi east of Ottsville, and 2.9 mi upstream from Mink Run.

DRAINAGE AREA.-- 73.3 mi^2.

PERIOD OF RECORD.--October 2003 to current year. December 1973 to September 2000.

GAGE.--Nonrecording gage. Datum of gage is sea level (levels by Pennsylvania Department of Environmental Protection).

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

COOPERATION.--Records furnished by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,390 acre-ft, Sept. 17, 1999, elevation, 398.50 ft; minimum contents (after first filling), 15,900 acre-ft, around Dec. 31, 1975, elevation, 372.78 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents 43,690 acre-ft, Sept. 30, elevation, 397.40 ft; minimum contents, 39,920 acre-ft, June 30, elevation, 394.80 ft.

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
Sept. 30	395.84	41,370	---
Oct. 31	395.80	41,320	-1.6
Nov. 30	[a]395.20	40,480	-13.4
Dec. 31	395.10	40,340	-3.3
Jan. 31	[b]395.20	40,480	+3.3
Feb. 29	[b]395.20	40,480	0
Mar. 31	395.28	40,590	+1.6
Apr. 30	395.20	40,480	-1.7
May 31	395.00	40,200	-4.9
June 30	394.80	39,920	-5.0
July 31	395.20	40,480	+9.8
Aug. 31	395.04	40,260	-3.3
Sept. 30	397.40	43,690	+57.1
WTR YR 2004	--	--	+3.2

a Estimated. No reading.
b Estimated. Ice cover on reservoir.

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 site of Traugers bridge, 1.5 mi northeast of Pipersville, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--97.4 mi^2.

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 those for estimated daily discharges, which are poor. Flow regulated since December 1973 by Nockamixon Reservoir about 6.2 mi upstream. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	422	305	92	e115	105	273	113	106	13	141	56
2	72	362	196	83	e110	139	217	90	87	12	134	40
3	53	52	135	80	e140	180	294	134	65	11	98	30
4	47	56	104	83	e430	195	257	309	47	10	66	25
5	48	97	93	363	e400	198	225	229	40	9.1	62	22
6	42	218	127	488	e1300	284	150	171	38	8.1	45	20
7	37	239	117	276	2070	314	106	156	37	7.0	33	18
8	34	180	100	148	969	239	93	130	34	6.5	28	53
9	33	127	91	100	426	199	142	97	31	5.7	24	173
10	32	100	110	e90	313	174	135	76	30	5.6	22	167
11	30	85	3790	e80	277	145	104	64	33	5.0	43	91
12	29	146	1930	e70	217	121	94	54	32	164	54	54
13	29	219	569	e50	172	88	1240	46	29	709	111	39
14	27	165	393	e70	147	69	1550	39	27	725	160	30
15	519	128	844	e60	124	64	1040	36	26	1140	101	26
16	386	108	540	e70	94	63	428	117	25	445	62	26
17	188	92	1360	e60	73	83	250	63	24	185	44	25
18	141	78	1460	e80	63	88	168	53	32	146	33	3850
19	108	449	548	e90	64	144	127	49	28	462	29	3230
20	80	2680	309	e70	71	423	102	45	25	280	26	683
21	66	982	199	e70	100	710	82	41	21	140	26	253
22	57	411	146	e60	148	398	74	38	20	79	27	132
23	49	252	126	e60	144	250	66	35	20	60	24	82
24	41	180	1020	e70	134	163	63	34	19	105	22	57
25	36	214	1040	e80	127	131	55	35	18	74	20	47
26	34	189	456	e90	105	122	492	32	18	54	19	40
27	2320	149	265	e95	91	118	1240	78	17	772	17	34
28	3390	288	179	e100	83	108	496	167	15	3850	16	1030
29	3340	1220	140	e110	85	89	249	110	15	1280	16	3550
30	1620	564	127	e105	---	75	155	65	14	388	15	1230
31	556	---	105	e100	---	298	---	57	---	184	86	---
TOTAL	13543	10452	16924	3443	8592	5777	9967	2763	973	11335.0	1604	15113
MEAN	437	348	546	111	296	186	332	89.1	32.4	366	51.7	504
MAX	3390	2680	3790	488	2070	710	1550	309	106	3850	160	3850
MIN	27	52	91	50	63	63	55	32	14	5.0	15	18

e Estimated.

TOHICKON CREEK BASIN

01459500 TOHICKON CREEK NEAR PIPERSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	96.8	170	239	233	210	310	235	190	90.7	77.6	51.7	103
MAX	528	553	813	916	436	867	707	579	498	602	232	504
(WY)	1997	1976	1997	1979	1984	1994	1983	1984	2003	1984	1978	2004
MIN	5.87	5.12	3.61	16.4	28.3	43.1	36.9	29.1	5.73	2.11	3.92	4.03
(WY)	1983	2002	1999	1977	1974	1976	1985	1999	1999	1999	2002	1980

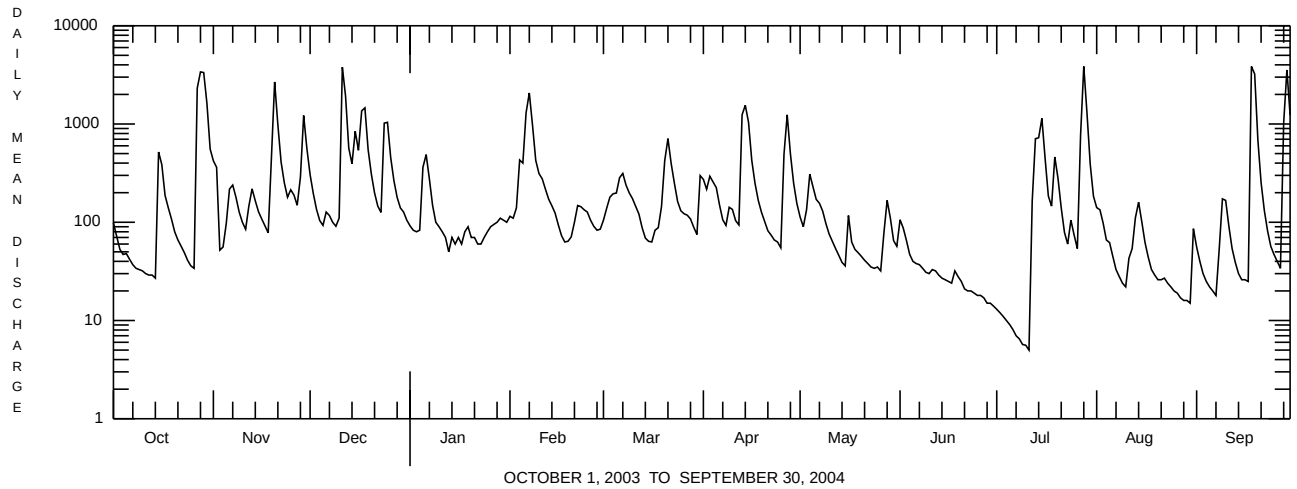
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	115634.3		100486.0			
ANNUAL MEAN	317		275		167	
HIGHEST ANNUAL MEAN					300	1984
LOWEST ANNUAL MEAN					74.0	2002
HIGHEST DAILY MEAN	3790	Dec 11	3850	Jul 28,Sep 18	6810	Dec 5 1993
LOWEST DAILY MEAN	6.5	Jul 21	5.0	Jul 11	1.5	Oct 26 2001
ANNUAL SEVEN-DAY MINIMUM	8.0	Jul 15	6.7	Jul 5	1.7	Sep 12 1991
MAXIMUM PEAK FLOW			8740	Sep 18	**a**18600	Sep 16 1999
MAXIMUM PEAK STAGE			9.22	Sep 18	11.90	Sep 16 1999
10 PERCENT EXCEEDS	801		558		405	
50 PERCENT EXCEEDS	126		98		49	
90 PERCENT EXCEEDS	24		25		6.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	43.4	138	183	190	235	300	217	121	79.0	54.0	66.8	54.3
MAX	367	601	464	501	572	795	612	430	413	288	515	513
(WY)	1956	1973	1973	1949	1971	1936	1952	1948	1972	1938	1955	1960
MIN	1.46	3.51	11.5	37.8	42.5	133	35.2	15.9	4.64	1.68	1.12	1.21
(WY)	1965	1965	1966	1966	1947	1949	1946	1955	1965	1957	1957	1957

SUMMARY STATISTICS	WATER YEARS 1936 - 1973	
ANNUAL MEAN	140	
HIGHEST ANNUAL MEAN	240	1973
LOWEST ANNUAL MEAN	45.8	1965
HIGHEST DAILY MEAN	6820	Sep 12 1960
LOWEST DAILY MEAN	.10	Sep 24 1941**b**
ANNUAL SEVEN DAY MINIMUM	.47	Jul 24 1955
MAXIMUM PEAK FLOW	**a**16000	Aug 18 1955
MAXIMUM PEAK STAGE	11.26	Aug 18 1955
INSTANTANEOUS LOW FLOW	.05	Sep 24 1941
ANNUAL RUNOFF (CFSM)	1.43	
ANNUAL RUNOFF (INCHES)	19.48	
10 PERCENT EXCEEDS	325	
50 PERCENT EXCEEDS	37	
90 PERCENT EXCEEDS	3.8	

a From rating curve extended above 13,600 ft^3/s on basis of slope-area measurement at gage height 10.48 ft.
b Also Sept. 29, Oct. 6, 1941.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

DELAWARE RIVER BASIN

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA

LOCATION.--Lat 40°25'06", long 75°03'42", Bucks County, Hydrologic Unit 02040105, on right bank at Forest Park Water Company pump station, 0.2 mi downstream from Tohickon Creek and 0.4 mi southeast of Point Pleasant.

DRAINAGE AREA.--6,570 mi^2.

PERIOD OF RECORD.--May 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 2000 to current year.
pH: May 2000 to current year.
WATER TEMPERATURE: May 2000 to current year.
DISSOLVED OXYGEN: May 2000 to current year.

INSTRUMENTATION.--Probes interfaced with a data collection platform with 30-minute recording interval. Satellite and landline telemetry at station.

REMARKS.--Specific conductance and pH records rated good except for period Oct. 24 to Dec. 17, which is poor. Dissolved oxygen record rated fair except for period Nov. 5 to Dec. 9, which is poor. Water temperature record rated good. Data collection discontinued Nov. 1 to Apr. 30 most years. Other interruptions in the record due to intermittent pumping. (See Distributary from Bradshaw Reservoir, station 01472618).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 298 microsiemens, Dec. 12, 2002; minimum recorded, 77 microsiemens, Sept. 5, 6, 2003.
pH: Maximum recorded, 9.6, Apr. 25, 30, May 3, 2003; minimum recorded, 6.7, Aug. 14, 2004.
WATER TEMPERATURE: Maximum, 32.5°C, Aug. 9, 2001; minimum, 2.0°C, Jan. 19-21, 2002.
DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Nov. 25, 2000; minimum, 6.1 mg/L, Aug. 11, 2001.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	120	116	117	102	92	98	117	113	115	---	---	---
2	132	120	126	114	100	108	119	115	116	---	---	---
3	143	132	135	124	113	118	123	117	120	---	---	---
4	145	139	142	135	122	126	133	121	125	---	---	---
5	153	144	150	138	127	133	136	129	131	---	---	---
6	153	145	151	141	138	139	144	136	140	---	---	---
7	148	141	144	140	135	138	150	142	147	---	---	---
8	152	148	150	146	136	137	157	149	151	---	---	---
9	157	152	154	147	140	143	160	151	154	---	---	---
10	167	157	162	150	146	148	165	158	161	---	---	---
11	171	167	169	155	149	153	163	160	161	---	---	---
12	178	171	175	158	154	156	172	102	139	---	---	---
13	181	177	178	160	156	158	105	95	99	---	---	---
14	187	181	183	158	149	154	103	97	100	---	---	---
15	195	180	186	155	149	150	127	101	116	---	---	---
16	184	140	166	161	154	157	138	125	131	---	---	---
17	142	132	135	170	160	163	133	130	132	---	---	---
18	141	133	138	170	164	167	---	---	---	---	---	---
19	148	140	142	172	170	171	---	---	---	---	---	---
20	154	146	147	172	161	167	---	---	---	---	---	---
21	152	148	150	162	96	127	---	---	---	---	---	---
22	152	149	150	99	95	96	---	---	---	---	---	---
23	158	148	151	107	97	103	---	---	---	---	---	---
24	166	157	159	117	107	112	---	---	---	---	---	---
25	173	160	169	127	116	123	---	---	---	---	---	---
26	164	161	162	135	127	129	---	---	---	---	---	---
27	165	164	165	137	129	131	---	---	---	---	---	---
28	166	123	151	142	132	136	---	---	---	---	---	---
29	125	123	124	150	139	144	---	---	---	---	---	---
30	126	89	97	144	113	119	---	---	---	---	---	---
31	95	87	90	---	---	---	---	---	---	---	---	---
MONTH	195	87	149	172	92	137	172	95	132	---	---	---

DELAWARE RIVER BASIN

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	---	---	---	152	127	144
2	---	---	---	---	---	---	---	---	---	157	152	153
3	---	---	---	---	---	---	---	---	---	160	153	156
4	---	---	---	---	---	---	---	---	---	159	134	149
5	---	---	---	---	---	---	---	---	---	134	123	130
6	---	---	---	---	---	---	---	---	---	140	132	137
7	---	---	---	---	---	---	---	---	---	141	132	137
8	---	---	---	---	---	---	---	---	---	146	135	143
9	---	---	---	---	---	---	---	---	---	146	139	143
10	---	---	---	---	---	---	---	---	---	149	139	144
11	---	---	---	---	---	---	---	---	---	150	135	142
12	---	---	---	---	---	---	---	---	---	151	141	147
13	---	---	---	---	---	---	---	---	---	145	134	139
14	---	---	---	---	---	---	---	---	---	134	129	131
15	---	---	---	---	---	---	---	---	---	135	130	131
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	154	150	152
18	---	---	---	---	---	---	---	---	---	155	152	152
19	---	---	---	---	---	---	---	---	---	179	153	160
20	---	---	---	---	---	---	---	---	---	178	159	167
21	---	---	---	---	---	---	---	---	---	184	160	166
22	---	---	---	---	---	---	---	---	---	171	164	168
23	---	---	---	---	---	---	---	---	---	177	171	174
24	---	---	---	---	---	---	---	---	---	192	177	183
25	---	---	---	---	---	---	---	---	---	191	184	187
26	---	---	---	---	---	---	---	---	---	190	181	185
27	---	---	---	---	---	---	---	---	---	189	180	185
28	---	---	---	---	---	---	---	---	---	184	171	177
29	---	---	---	---	---	---	144	138	142	171	155	159
30	---	---	---	---	---	---	148	140	144	156	147	152
31	---	---	---	---	---	---	---	---	---	147	138	143
MONTH	---	---	---	---	---	---	148	138	143	192	123	155

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	166	138	147	238	233	235	168	145	152	178	147	156
2	171	165	167	239	233	237	179	168	175	149	136	142
3	171	160	164	241	232	237	179	168	175	159	145	151
4	166	161	163	240	234	237	169	164	166	167	159	163
5	166	160	163	243	236	240	178	169	172	175	167	173
6	177	166	170	241	233	238	183	178	181	185	174	181
7	187	174	179	238	232	237	187	181	184	194	184	190
8	175	171	173	240	231	237	185	181	183	205	193	197
9	176	171	173	240	224	230	198	183	190	210	173	188
10	180	176	179	227	215	222	211	198	204	179	134	157
11	192	180	186	227	214	222	216	210	213	134	122	125
12	196	189	193	---	---	---	226	214	218	125	121	123
13	194	189	191	231	180	198	228	129	202	135	125	129
14	199	189	194	---	---	---	129	83	94	140	134	137
15	205	198	201	---	---	---	100	86	94	152	139	145
16	218	205	212	220	214	216	108	100	104	160	152	157
17	224	217	220	220	207	215	111	103	107	173	160	168
18	229	218	222	209	202	206	105	101	103	---	---	---
19	228	208	220	220	199	208	109	101	105	---	---	---
20	208	183	204	222	203	211	122	109	116	---	---	---
21	204	188	201	205	197	202	145	122	129	---	---	---
22	205	198	200	199	197	198	139	129	132	---	---	---
23	215	205	210	207	197	201	137	130	134	---	---	---
24	223	213	218	213	193	201	140	134	137	---	---	---
25	236	222	228	213	182	198	147	138	142	---	---	---
26	240	232	234	182	174	179	152	143	147	---	---	---
27	243	235	238	185	174	179	158	151	153	---	---	---
28	242	237	239	---	---	---	164	158	161	---	---	---
29	240	231	235	185	144	165	168	164	166	---	---	---
30	236	228	232	144	134	139	171	166	168	---	---	---
31	---	---	---	145	134	138	185	171	177	---	---	---
MONTH	243	138	199	243	134	208	228	83	154	210	121	158

DELAWARE RIVER BASIN

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	7.4	7.3	7.4	7.2	7.2	7.2	7.5	7.4	7.5	---	---	---
2	7.5	7.3	7.5	7.3	7.2	7.2	7.5	7.3	7.5	---	---	---
3	7.6	7.4	7.5	7.3	7.2	7.3	7.5	7.4	7.4	---	---	---
4	7.6	7.4	7.6	7.4	7.3	7.4	7.5	7.4	7.5	---	---	---
5	7.6	7.5	7.6	7.5	7.3	7.4	7.6	7.4	7.5	---	---	---
6	7.6	7.6	7.6	7.5	7.4	7.5	7.6	7.4	7.6	---	---	---
7	7.7	7.5	7.6	7.5	7.4	7.4	7.6	7.4	7.6	---	---	---
8	7.7	7.5	7.6	7.5	7.4	7.5	7.7	7.5	7.6	---	---	---
9	7.7	7.6	7.6	7.6	7.5	7.6	7.6	7.5	7.6	---	---	---
10	7.8	7.6	7.6	7.6	7.5	7.6	7.7	7.5	7.6	---	---	---
11	7.9	7.5	7.7	7.6	7.4	7.6	7.6	7.5	7.6	---	---	---
12	8.0	7.6	7.8	7.6	7.5	7.5	7.6	7.2	7.4	---	---	---
13	8.1	7.6	7.8	7.6	7.5	7.6	7.2	7.2	7.2	---	---	---
14	8.2	7.6	7.8	7.6	7.5	7.6	7.3	7.2	7.2	---	---	---
15	7.8	7.6	7.7	7.6	7.5	7.6	7.4	7.2	7.3	---	---	---
16	7.6	7.5	7.6	7.7	7.5	7.6	7.4	7.3	7.4	---	---	---
17	7.5	7.4	7.5	7.7	7.5	7.6	7.4	7.3	7.3	---	---	---
18	7.6	7.4	7.5	7.7	7.6	7.6	---	---	---	---	---	---
19	7.6	7.4	7.5	7.6	7.5	7.6	---	---	---	---	---	---
20	7.7	7.4	7.6	7.6	7.4	7.6	---	---	---	---	---	---
21	7.8	7.4	7.6	7.5	7.3	7.4	---	---	---	---	---	---
22	7.8	7.6	7.6	7.3	7.2	7.3	---	---	---	---	---	---
23	7.9	7.5	7.7	7.4	7.2	7.3	---	---	---	---	---	---
24	8.0	7.5	7.8	7.4	7.3	7.4	---	---	---	---	---	---
25	7.9	7.6	7.8	7.6	7.3	7.5	---	---	---	---	---	---
26	7.7	7.6	7.6	7.6	7.4	7.6	---	---	---	---	---	---
27	7.7	7.6	7.6	7.6	7.4	7.6	---	---	---	---	---	---
28	7.6	7.3	7.5	7.6	7.4	7.6	---	---	---	---	---	---
29	7.3	7.2	7.3	7.6	7.5	7.6	---	---	---	---	---	---
30	7.3	7.2	7.2	7.5	7.4	7.5	---	---	---	---	---	---
31	7.2	7.0	7.2	---	---	---	---	---	---	---	---	---
MAX	8.2	7.6	7.8	7.7	7.6	7.6	7.7	7.5	7.6	---	---	---
MIN	7.2	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	---	---	---	8.4	7.6	7.7
2	---	---	---	---	---	---	---	---	---	8.1	7.6	7.8
3	---	---	---	---	---	---	---	---	---	7.9	7.6	7.8
4	---	---	---	---	---	---	---	---	---	7.8	7.5	7.7
5	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
6	---	---	---	---	---	---	---	---	---	7.8	7.5	7.6
7	---	---	---	---	---	---	---	---	---	7.9	7.6	7.8
8	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8
9	---	---	---	---	---	---	---	---	---	7.8	7.6	7.8
10	---	---	---	---	---	---	---	---	---	7.9	7.6	7.8
11	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8
12	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
13	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
14	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
15	---	---	---	---	---	---	---	---	---	7.6	7.4	7.6
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
18	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
19	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
20	---	---	---	---	---	---	---	---	---	8.0	7.6	7.7
21	---	---	---	---	---	---	---	---	---	7.9	7.6	7.7
22	---	---	---	---	---	---	---	---	---	8.1	7.6	7.8
23	---	---	---	---	---	---	---	---	---	8.3	7.7	7.9
24	---	---	---	---	---	---	---	---	---	8.5	7.7	7.9
25	---	---	---	---	---	---	---	---	---	8.8	7.7	8.1
26	---	---	---	---	---	---	---	---	---	8.3	7.7	7.9
27	---	---	---	---	---	---	---	---	---	8.4	7.7	7.9
28	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
29	---	---	---	---	---	---	8.2	7.7	7.8	7.7	7.6	7.6
30	---	---	---	---	---	---	8.2	7.7	7.7	7.7	7.6	7.6
31	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
MAX	---	---	---	---	---	---	8.2	7.7	7.8	8.8	7.7	8.1
MIN	---	---	---	---	---	---	8.2	7.7	7.7	7.6	7.4	7.5

DELAWARE RIVER BASIN

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.5	7.6	8.8	7.9	8.2	7.5	7.4	7.4	7.9	7.6	7.6
2	7.7	7.5	7.6	8.7	7.9	8.2	7.7	7.5	7.5	7.6	7.4	7.4
3	8.3	7.6	7.7	8.7	7.9	8.2	7.7	7.5	7.5	8.0	7.4	7.5
4	8.2	7.8	8.0	8.7	7.9	8.2	7.7	7.5	7.5	8.3	7.5	7.6
5	8.0	7.8	7.9	8.7	7.9	8.3	7.8	7.5	7.6	8.0	7.5	7.6
6	8.0	7.8	7.9	8.7	7.9	8.2	7.8	7.5	7.6	8.6	7.5	7.8
7	8.1	7.6	7.9	8.6	7.9	8.2	7.9	7.6	7.7	8.7	7.6	7.9
8	8.3	7.8	7.9	8.4	7.8	8.0	8.0	7.6	7.7	8.5	7.6	7.8
9	8.5	7.7	8.0	8.3	7.8	8.0	8.2	7.6	7.8	7.6	7.5	7.5
10	8.3	7.7	7.9	8.2	7.8	8.0	8.4	7.7	8.0	7.5	7.3	7.4
11	8.1	7.7	7.8	8.3	7.8	8.1	8.4	7.8	8.0	7.3	7.2	7.2
12	8.4	7.7	8.0	8.2	7.4	7.8	8.3	7.7	7.9	7.3	7.2	7.2
13	8.4	7.8	8.0	7.7	7.4	7.5	8.0	7.2	7.7	7.4	7.2	7.3
14	8.6	7.8	8.0	---	---	---	7.2	6.7	6.8	7.5	7.3	7.4
15	8.8	7.8	8.3	---	---	---	6.9	6.8	6.9	7.6	7.3	7.4
16	8.8	7.9	8.4	7.8	7.6	7.6	7.1	6.9	7.0	7.8	7.4	7.5
17	8.6	7.8	8.1	7.9	7.6	7.7	7.2	7.0	7.1	7.9	7.5	7.6
18	8.4	7.7	8.0	7.7	7.5	7.7	7.2	7.1	7.2	---	---	---
19	8.2	7.6	7.9	7.8	7.6	7.6	7.2	7.1	7.1	---	---	---
20	8.3	7.7	7.9	7.9	7.6	7.7	7.3	7.1	7.2	---	---	---
21	8.5	7.7	8.0	8.0	7.6	7.7	7.3	7.2	7.3	---	---	---
22	8.0	7.7	7.8	8.1	7.6	7.8	7.3	7.2	7.2	---	---	---
23	7.9	7.6	7.7	8.0	7.6	7.7	7.3	7.2	7.2	---	---	---
24	7.8	7.5	7.6	7.6	7.5	7.6	7.3	7.2	7.3	---	---	---
25	8.6	7.5	7.6	7.8	7.5	7.6	7.5	7.3	7.3	---	---	---
26	8.4	7.8	8.0	7.8	7.5	7.6	7.5	7.3	7.4	---	---	---
27	8.5	7.8	8.0	7.6	7.5	7.6	7.6	7.3	7.4	---	---	---
28	8.7	7.8	8.1	---	---	---	7.7	7.4	7.5	---	---	---
29	8.7	7.9	8.2	7.4	7.3	7.3	7.8	7.4	7.5	---	---	---
30	8.7	7.9	8.2	7.4	7.3	7.3	7.9	7.4	7.6	---	---	---
31	---	---	---	7.5	7.3	7.4	7.8	7.5	7.6	---	---	---
MAX	8.8	7.9	8.4	8.8	7.9	8.3	8.4	7.8	8.0	8.7	7.6	7.9
MIN	7.7	7.5	7.6	7.4	7.3	7.3	6.9	6.7	6.8	7.3	7.2	7.2

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.5	15.5	16.0	---	---	---	---	---	---	---	---	---
2	15.5	14.5	15.5	---	---	---	---	---	---	---	---	---
3	14.5	13.5	14.5	---	---	---	---	---	---	---	---	---
4	13.5	13.0	13.5	---	---	---	---	---	---	---	---	---
5	13.5	12.5	13.0	---	---	---	---	---	---	---	---	---
6	13.0	12.0	12.5	---	---	---	---	---	---	---	---	---
7	13.5	12.0	12.5	---	---	---	---	---	---	---	---	---
8	14.0	12.5	13.0	---	---	---	---	---	---	---	---	---
9	14.5	13.0	14.0	---	---	---	---	---	---	---	---	---
10	15.0	14.0	14.5	---	---	---	---	---	---	---	---	---
11	16.0	14.5	15.0	---	---	---	---	---	---	---	---	---
12	16.5	15.0	16.0	---	---	---	---	---	---	---	---	---
13	17.5	15.5	16.5	---	---	---	---	---	---	---	---	---
14	17.0	15.5	16.0	---	---	---	---	---	---	---	---	---
15	15.5	15.0	15.5	---	---	---	---	---	---	---	---	---
16	15.0	14.0	14.5	---	---	---	---	---	---	---	---	---
17	14.5	13.0	14.0	---	---	---	---	---	---	---	---	---
18	13.5	12.5	13.0	---	---	---	---	---	---	---	---	---
19	13.0	12.0	12.5	---	---	---	---	---	---	---	---	---
20	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
21	12.5	11.0	11.5	---	---	---	---	---	---	---	---	---
22	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	17.5	11.0	14.0	---	---	---	---	---	---	---	---	---

DELAWARE RIVER BASIN

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	---	---	---	16.5	15.5	16.0
2	---	---	---	---	---	---	---	---	---	18.0	17.0	17.5
3	---	---	---	---	---	---	---	---	---	17.5	16.5	17.0
4	---	---	---	---	---	---	---	---	---	16.5	15.0	16.0
5	---	---	---	---	---	---	---	---	---	16.0	14.5	15.0
6	---	---	---	---	---	---	---	---	---	15.5	14.0	14.5
7	---	---	---	---	---	---	---	---	---	16.0	14.5	15.5
8	---	---	---	---	---	---	---	---	---	16.5	15.5	16.0
9	---	---	---	---	---	---	---	---	---	17.5	15.5	16.5
10	---	---	---	---	---	---	---	---	---	18.5	16.0	17.0
11	---	---	---	---	---	---	---	---	---	20.0	17.5	18.5
12	---	---	---	---	---	---	---	---	---	21.0	19.0	20.0
13	---	---	---	---	---	---	---	---	---	21.5	20.0	20.5
14	---	---	---	---	---	---	---	---	---	21.0	20.0	20.5
15	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	22.0	21.0	21.5
18	---	---	---	---	---	---	---	---	---	22.0	20.5	21.0
19	---	---	---	---	---	---	---	---	---	21.5	20.5	21.0
20	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
21	---	---	---	---	---	---	---	---	---	21.5	20.0	20.5
22	---	---	---	---	---	---	---	---	---	23.0	20.5	21.5
23	---	---	---	---	---	---	---	---	---	24.5	21.5	23.0
24	---	---	---	---	---	---	---	---	---	26.5	23.0	24.5
25	---	---	---	---	---	---	---	---	---	26.5	23.5	24.5
26	---	---	---	---	---	---	---	---	---	24.5	22.5	23.5
27	---	---	---	---	---	---	---	---	---	24.0	22.0	22.5
28	---	---	---	---	---	---	---	---	---	23.0	21.5	22.0
29	---	---	---	---	---	---	---	---	---	22.0	20.5	21.0
30	---	---	---	---	---	---	---	---	---	21.5	19.5	20.5
31	---	---	---	---	---	---	---	---	---	20.5	19.0	20.0
MONTH	---	---	---	---	---	---	---	---	---	26.5	14.0	19.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	20.5	18.5	19.5	26.5	23.0	24.5	25.0	23.5	24.0	24.5	23.0	24.0
2	21.0	18.5	19.5	28.5	24.0	26.0	26.0	24.0	25.0	24.0	22.5	23.0
3	21.5	19.5	20.5	28.5	24.5	26.5	27.5	25.0	26.0	24.5	22.0	23.0
4	22.0	19.5	20.5	28.5	25.0	26.5	28.0	25.5	26.5	24.5	22.0	23.0
5	20.5	19.5	20.0	29.0	25.5	27.0	26.5	25.0	26.0	23.0	21.5	22.5
6	19.5	18.0	18.5	29.0	25.5	27.0	25.5	23.5	24.5	23.0	21.0	22.0
7	20.5	17.5	19.0	29.0	25.0	26.5	23.5	22.0	23.0	23.5	21.0	22.0
8	22.5	19.0	20.5	28.5	26.0	27.0	24.0	21.0	22.5	23.0	22.0	22.5
9	24.5	21.0	22.5	27.5	25.0	26.5	24.5	21.0	23.0	23.0	22.0	22.5
10	24.5	23.0	23.5	28.0	24.0	26.0	25.0	22.0	23.5	22.5	21.5	22.0
11	23.5	22.0	23.0	28.5	25.0	26.5	25.5	23.0	24.0	22.0	21.0	21.5
12	24.0	21.0	22.5	---	---	---	25.5	23.5	24.5	21.5	20.5	21.0
13	22.5	21.0	21.5	23.5	22.0	22.5	24.5	22.0	24.0	22.0	20.5	21.0
14	22.5	20.5	21.0	---	---	---	22.5	20.5	21.0	21.5	20.5	21.0
15	25.0	21.0	23.0	---	---	---	21.0	20.5	21.0	21.0	20.0	20.5
16	25.5	23.0	24.0	23.5	21.5	22.5	21.5	20.5	21.0	21.5	20.5	21.0
17	26.5	24.5	25.0	25.0	21.5	23.5	22.0	21.0	21.5	21.5	20.5	21.0
18	28.0	25.0	26.0	24.0	22.5	23.0	22.0	21.5	21.5	---	---	---
19	27.5	25.5	26.5	23.5	22.0	22.5	22.5	21.0	21.5	---	---	---
20	26.5	23.5	25.0	25.5	22.0	23.5	23.5	21.5	22.5	---	---	---
21	25.5	22.5	24.0	26.0	22.5	24.5	23.5	22.0	22.5	---	---	---
22	23.5	22.5	23.0	27.0	24.0	25.5	22.0	20.5	21.0	---	---	---
23	25.5	22.5	23.5	26.5	25.0	25.5	21.0	20.0	20.5	---	---	---
24	26.5	23.0	24.5	25.5	24.0	24.5	22.0	20.5	21.0	---	---	---
25	26.5	23.5	25.0	25.0	23.5	24.0	22.5	21.0	21.5	---	---	---
26	26.0	24.0	25.0	26.5	23.5	24.5	22.5	21.0	22.0	---	---	---
27	26.0	23.0	24.5	24.5	---	24.0	23.0	21.5	22.0	---	---	---
28	25.5	22.5	24.0	---	---	---	24.0	21.5	22.5	---	---	---
29	26.0	22.0	24.0	24.0	22.0	23.0	25.0	22.5	23.5	---	---	---
30	26.5	22.5	24.5	23.0	22.0	22.5	24.5	23.5	24.0	---	---	---
31	---	---	---	24.5	22.0	23.0	24.5	23.5	24.0	---	---	---
MONTH	28.0	17.5	22.8	29.0	21.5	24.8	28.0	20.0	22.9	24.5	20.0	22.0

DELAWARE RIVER BASIN

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	9.1	9.2	---	---	---	12.1	11.3	11.7	---	---	---
2	9.6	9.3	9.5	---	---	---	12.9	11.5	12.2	---	---	---
3	9.9	9.6	9.8	---	---	---	13.4	12.3	12.8	---	---	---
4	10.2	9.9	9.9	---	---	---	13.7	12.7	13.2	---	---	---
5	10.2	10.0	10.1	9.8	9.2	9.6	13.9	13.0	13.5	---	---	---
6	10.2	10.1	10.2	9.8	9.1	9.6	14.0	12.9	13.4	---	---	---
7	10.3	10.2	10.2	10.0	9.2	9.6	13.9	13.2	13.5	---	---	---
8	10.4	10.2	10.3	10.5	9.4	9.8	13.7	13.1	13.4	---	---	---
9	10.3	10.1	10.2	11.2	10.1	10.6	13.5	12.9	13.1	---	---	---
10	10.2	9.9	10.1	11.4	10.5	10.9	---	---	---	---	---	---
11	10.3	9.9	10.0	11.7	10.9	11.4	---	---	---	---	---	---
12	10.3	9.8	10.0	11.5	10.9	11.2	---	---	---	---	---	---
13	10.3	9.8	10.0	11.3	10.7	11.0	---	---	---	---	---	---
14	10.6	9.6	10.2	11.5	10.7	11.1	---	---	---	---	---	---
15	10.0	9.4	9.7	11.8	11.0	11.4	---	---	---	---	---	---
16	10.4	9.8	10.2	11.8	11.1	11.5	---	---	---	---	---	---
17	10.5	10.1	10.4	11.9	11.2	11.5	---	---	---	---	---	---
18	10.9	10.5	10.7	11.8	11.1	11.4	---	---	---	---	---	---
19	11.0	10.7	10.8	11.5	10.6	10.9	---	---	---	---	---	---
20	11.4	11.0	11.2	10.9	9.8	10.5	---	---	---	---	---	---
21	---	---	---	10.8	9.8	10.3	---	---	---	---	---	---
22	---	---	---	11.1	10.2	10.7	---	---	---	---	---	---
23	---	---	---	11.2	10.5	10.8	---	---	---	---	---	---
24	---	---	---	11.3	10.6	11.0	---	---	---	---	---	---
25	---	---	---	11.1	10.3	10.6	---	---	---	---	---	---
26	---	---	---	11.5	10.3	11.0	---	---	---	---	---	---
27	---	---	---	11.8	10.9	11.3	---	---	---	---	---	---
28	---	---	---	11.9	11.2	11.6	---	---	---	---	---	---
29	---	---	---	11.5	10.8	11.2	---	---	---	---	---	---
30	---	---	---	12.0	10.8	11.5	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.4	9.1	10.1	12.0	9.1	10.8	14.0	11.3	13.0	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	10.1	8.1	9.2
2	---	---	---	---	---	---	---	---	---	9.4	7.5	8.7
3	---	---	---	---	---	---	---	---	---	9.0	7.3	8.5
4	---	---	---	---	---	---	---	---	---	9.7	7.7	9.1
5	---	---	---	---	---	---	---	---	---	10.1	8.8	9.7
6	---	---	---	---	---	---	---	---	---	10.5	9.2	10.1
7	---	---	---	---	---	---	---	---	---	10.4	9.1	10.1
8	---	---	---	---	---	---	---	---	---	10.4	9.1	10.0
9	---	---	---	---	---	---	---	---	---	10.5	9.1	10
10	---	---	---	---	---	---	---	---	---	10.4	9.1	10.1
11	---	---	---	---	---	---	---	---	---	10.0	9.5	9.8
12	---	---	---	---	---	---	---	---	---	9.5	9.0	9.2
13	---	---	---	---	---	---	---	---	---	9.2	8.9	9.0
14	---	---	---	---	---	---	---	---	---	9.1	8.3	9.0
15	---	---	---	---	---	---	---	---	---	9.1	8.6	9.0
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	8.9	6.9	8.3
18	---	---	---	---	---	---	---	---	---	8.2	7.9	8.0
19	---	---	---	---	---	---	---	---	---	8.9	7.8	8.1
20	---	---	---	---	---	---	---	---	---	9.2	8.0	8.6
21	---	---	---	---	---	---	---	---	---	9.3	8.0	8.5
22	---	---	---	---	---	---	---	---	---	8.8	8.0	8.4
23	---	---	---	---	---	---	---	---	---	8.8	7.7	8.2
24	---	---	---	---	---	---	---	---	---	8.6	7.5	8.1
25	---	---	---	---	---	---	---	---	---	9.1	7.0	8.1
26	---	---	---	---	---	---	---	---	---	8.7	6.9	7.8
27	---	---	---	---	---	---	---	---	---	9.0	7.1	8.1
28	---	---	---	---	---	---	---	---	---	7.9	7.3	7.6
29	---	---	---	---	---	---	10.4	9.4	9.8	8.1	7.4	7.8
30	---	---	---	---	---	---	10.1	9.0	9.6	8.4	7.8	8.1
31	---	---	---	---	---	---	---	---	---	8.1	7.9	8.0
MONTH	---	---	---	---	---	---	10.4	9.0	9.7	10.5	6.9	8.8

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	8.4	7.9	8.2	8.8	7.5	8.1	7.7	7.6	7.6	8.4	7.7	7.9
2	8.5	7.7	8.2	8.5	7.4	7.9	7.7	7.5	7.6	7.8	7.6	7.7
3	9.6	8.1	8.4	8.3	7.2	7.7	7.6	7.3	7.5	8.6	7.7	8.1
4	8.8	8.0	8.5	8.5	7.1	7.7	7.5	7.2	7.3	9.0	7.9	8.3
5	8.4	8.1	8.3	8.3	7.0	7.6	7.7	7.1	7.4	8.8	7.8	8.2
6	9.0	8.3	8.6	8.4	6.9	7.6	8.1	7.4	7.7	9.7	8.0	8.7
7	9.3	7.0	8.7	8.3	7.1	7.6	8.5	7.8	8.1	9.8	8.1	8.8
8	9.1	8.5	8.8	8.0	6.7	7.4	8.7	8.2	8.5	9.6	7.8	8.5
9	8.9	8.0	8.5	8.3	6.9	7.7	8.9	8.3	8.6	7.9	7.5	7.7
10	8.4	7.5	7.9	8.4	7.3	7.8	9.0	8.2	8.5	8.0	7.5	7.8
11	8.3	7.4	7.8	8.3	7.2	7.8	8.8	7.8	8.2	8.1	7.8	8.0
12	8.8	7.8	8.3	---	---	---	8.9	7.7	8.3	8.4	7.7	8.3
13	9.2	8.0	8.6	7.1	6.8	7.0	8.0	7.4	7.7	8.5	8.2	8.3
14	9.6	8.2	8.7	---	---	---	7.8	7.4	7.7	8.6	8.1	8.4
15	9.6	8.1	8.8	---	---	---	8.0	7.6	7.8	8.8	8.0	8.5
16	9.3	7.8	8.5	7.8	7.3	7.5	8.2	7.9	8.1	8.8	8.1	8.5
17	8.6	7.3	7.9	7.9	7.4	7.7	8.2	7.7	7.9	8.9	8.2	8.4
18	8.2	6.9	7.5	7.7	7.4	7.5	7.8	7.7	7.8	---	---	---
19	8.1	6.7	7.4	7.8	7.4	7.6	7.8	7.7	7.8	---	---	---
20	8.4	7.2	7.8	8.0	7.5	7.7	7.9	7.7	7.8	---	---	---
21	9.0	7.7	8.3	8.0	7.5	7.7	7.7	7.4	7.6	---	---	---
22	8.7	7.8	8.2	8.1	7.5	7.8	7.9	7.5	7.8	---	---	---
23	8.4	7.5	7.9	8.2	7.5	7.8	8.1	7.9	8.1	---	---	---
24	8.3	7.4	7.8	7.8	7.5	7.7	8.1	8.0	8.1	---	---	---
25	8.3	7.0	7.6	7.9	7.5	7.7	8.1	7.9	8.0	---	---	---
26	8.0	6.8	7.3	8.1	7.6	7.8	8.2	7.9	8.1	---	---	---
27	8.3	7.1	7.6	8.0	7.8	7.9	8.4	8.0	8.2	---	---	---
28	8.6	7.3	7.9	---	---	---	8.4	7.9	8.2	---	---	---
29	8.7	7.5	8.1	8.1	7.5	7.6	8.4	7.8	8.0	---	---	---
30	8.8	7.5	8.1	7.8	7.6	7.7	8.4	7.7	7.9	---	---	---
31	---	---	---	7.8	7.6	7.7	7.9	7.5	7.7	---	---	---
MONTH	9.6	6.7	8.1	8.8	6.7	7.7	9.0	7.1	7.9	9.8	7.5	8.2

01460200 DELAWARE RIVER BELOW TOHICKON CREEK AT POINT PLEASANT, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct- tance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUL									
29...	1051	1028	1028	685	.00	--	--	--	--
29...	1052	1028	1028	610	5.00	8.1	7.5	173	22.0
29...	1053	1028	1028	610	1.00	8.1	7.5	173	22.0
29...	1058	1028	1028	550	10.0	8.0	7.5	168	22.4
29...	1059	1028	1028	550	5.00	8.0	7.5	169	22.4
29...	1100	1028	1028	550	1.00	8.0	7.5	168	22.4
29...	1103	1028	1028	460	10.0	8.0	7.5	164	22.7
29...	1104	1028	1028	460	5.00	8.0	7.5	164	22.7
29...	1105	1028	1028	460	1.00	8.0	7.5	167	22.6
29...	1107	1028	1028	370	5.00	8.0	7.5	163	22.7
29...	1108	1028	1028	370	1.00	8.0	7.5	162	22.7
29...	1110	1028	1028	280	5.00	8.0	7.5	163	22.7
29...	1111	1028	1028	280	1.00	8.0	7.5	162	22.7
29...	1114	1028	1028	160	5.00	8.0	7.5	164	22.7
29...	1115	1028	1028	160	1.00	7.9	7.5	165	22.7
29...	1120	1028	1028	70	5.00	8.0	7.5	168	22.4
29...	1121	1028	1028	70	1.00	8.0	7.5	167	22.4
29...	1122	1028	1028	10	5.00	8.0	7.5	168	22.2
29...	1123	1028	1028	10	1.00	8.0	7.5	168	22.2

DELAWARE RIVER BASIN

01461000 DELAWARE RIVER AT LUMBERVILLE, PA

LOCATION.--Lat 40°24'27", long 75°02'16", Bucks County, Hydrologic Unit 02040105, at pedestrian bridge at Lumberville, 1.4 mi upstream from Lockatong Creek, and at river mile 155.4.

DRAINAGE AREA.--6,598 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.--Field data and samples for laboratory analyses were provided by the New Jersey Department of Environmental Protection. Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, total suspended solids, fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Delaware River Main Stem, New Jersey Department of Environmental Protection Watershed Management Area 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC													
04...	0800	23,300	2.4	.090	.069	762	12.8	96	7.9	131	5.3	3.1	41
FEB													
03...	0900	43,300	1.1	.052	.040	766	13.3	93	8.2	247	2.2	1.1	86
MAY													
12...	1100	17,300	7.1	.088	.068	766	8.3	88	7.8	160	22.8	18.5	52
AUG													
11...	1000	5,540	1.4	.076	.058	758	6.9	80	8.2	203	23.0	22.7	73

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
DEC													
04...	10.5	3.52	1.00	6.66	31	11.3	<.2	5.0	11.5	72	72	3	<.20
FEB													
03...	21.6	7.71	1.55	12.7	60	20.8	<.2	5.8	19.2	132	133	<1	<.20
MAY													
12...	13.7	4.20	1.06	9.96	36	17.3	<.2	3.0	11.4	86	94	7	<.20
AUG													
11...	19.0	6.26	1.40	11.9	55	18.8	<.2	3.2	18.1	116	123	<1	.18

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)
DEC													
04...	.020	.020	.82	<.003	.06	<.020	.017	.019	--	--	.3	<.1	.3
FEB													
03...	.050	--	1.40	.011	.04	.037	.039	.044	--	--	.3	<.1	.3
MAY													
12...	.032	--	.71	.008	.12	.029	.031	.033	--	--	.9	<.1	.9
AUG													
11...	.018	--	.97	.005	.18	.038	.049	.052	1.2	1.3	.7	<.1	.7

01461000 DELAWARE RIVER AT LUMBERVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Boron, water, fltrd, µg/L (01020)
DEC			
04...	2.5	<1.0	7.3
FEB			
03...	1.9	2.1	14
MAY			
12...	2.8	<1.0	14
AUG			
11...	2.6	2.2	15

Remark codes used in this table:
< -- Less than

WATER-COLUMN BACTERIA ANALYSES
Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Enterococci, m-EMF, water, col/100 mL (31649)	E coli, m-TECMF, water, col/100 mL (31633)	Fecal coliform, ECbroth water, MPN/100 mL (31615)
JUL					
07...	1020	3,500	80	<100	20
14...	0950	12,900	310	800	5,000
21...	0958	7,620	90	100	500
28...	1020	20,300	3,600	3,100	16,000
AUG					
04...	1039	10,100	60	<100	110

Remark codes used in this table:
< -- Less than

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ
(National Water-Quality Assessment Station)
(Pennsylvania Water-Quality Network Station

LOCATION.--Lat 40°13'18", long 74°46'41", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft upstream from Calhoun Street Bridge at Trenton, 0.5 mi upstream from Assunpink Creek, and at river mile 134.5.

DRAINAGE AREA.--6,780 mi^2.

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 NGVD 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 good, except estimated discharges which are fair. 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 and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs. Diversion to Bradshaw and Merrill Creek Reservoirs and to Delaware and Raritan Canal. Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply. Information on the above lakes and reservoirs can be found in the annual Water-Data Report NJ-04-1. Satellite gage-height and water-quality parameter telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above NGVD of 1929, discharge estimated, 295,000 ft^3/s. Maximum elevation known, 30.6 ft above NGVD of 1929, Mar. 8, 1904, from floodmark, due to ice jam.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 30	1915	84,800	16.78	Aug 14	0830	58,000	14.77
Nov 21	1915	52,600	14.33	Sep 19	1945	*201,000	*23.41
Dec 12	2245	77,700	16.28	Sep 29	0415	71,600	15.83
Dec 26	0645	69,300	15.66				

DISCHARGE, CUBIC FEET PER SECOND (CONTINUED)
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27,800	54,700	35,900	25,700	e7,100	6,710	15,800	15,300	11,000	4,240	14,500	14,100
2	23,000	41,700	31,800	23,400	e7,000	7,130	15,900	14,300	10,600	3,980	12,100	13,900
3	19,800	32,900	28,200	21,600	e7,000	8,260	17,800	14,400	10,900	4,010	11,500	11,800
4	17,500	28,600	24,600	20,300	e8,100	10,800	17,100	20,000	10,600	3,780	11,200	10,000
5	16,200	25,600	21,900	25,400	e8,500	16,500	15,500	21,400	10,200	3,630	10,100	8,610
6	15,800	25,300	20,400	35,700	e10,400	20,000	14,400	18,500	9,730	3,600	8,630	7,560
7	16,300	25,100	19,000	33,500	e20,000	24,300	13,600	17,600	9,580	3,590	7,860	6,550
8	14,400	22,900	17,900	27,800	e16,000	31,600	13,000	17,800	9,020	3,660	7,370	6,380
9	13,300	19,700	16,500	23,500	11,900	29,000	12,200	16,400	8,730	3,980	6,250	13,500
10	12,200	17,700	15,300	19,800	10,300	24,500	11,800	14,800	7,910	4,000	5,240	20,500
11	11,400	16,500	40,900	15,700	10,400	21,000	11,100	14,700	8,110	3,810	5,010	25,400
12	10,800	16,500	66,800	14,600	9,830	18,700	9,960	17,800	8,000	4,520	5,540	20,900
13	10,100	16,600	71,300	16,000	8,890	16,900	14,800	18,700	7,040	14,200	10,800	16,600
14	9,620	16,600	54,700	16,300	8,590	15,600	21,800	19,400	6,260	9,600	52,900	13,900
15	13,500	15,600	48,700	15,100	8,210	14,000	26,400	18,300	5,520	11,700	39,600	11,700
16	17,600	13,700	37,800	13,800	7,490	13,200	24,100	17,900	5,280	8,020	26,500	10,700
17	19,900	13,200	36,500	e13,400	6,530	13,700	20,100	15,700	5,420	7,160	22,300	9,950
18	17,300	12,700	38,900	e12,000	6,510	13,000	17,400	14,600	5,440	7,450	22,100	42,700
19	15,400	13,000	35,300	e12,400	6,870	12,900	15,700	13,600	6,370	8,140	18,900	181,000
20	14,100	30,200	30,900	12,600	6,910	13,200	14,300	13,400	6,370	8,500	15,800	139,000
21	13,500	45,300	27,000	12,600	6,940	14,600	13,400	12,500	5,830	7,830	17,600	72,300
22	13,700	45,900	24,400	11,700	7,570	14,000	12,800	11,300	5,180	7,240	32,300	50,800
23	12,400	36,600	21,900	e10,400	7,690	13,900	12,200	10,400	4,980	6,940	25,600	38,900
24	11,700	30,600	29,700	e9,000	7,100	13,300	11,900	9,020	5,220	8,140	20,400	31,100
25	11,600	26,800	52,000	e8,100	7,140	12,500	12,600	8,420	4,770	8,060	16,600	25,800
26	11,200	25,100	65,300	e8,000	6,800	12,500	13,800	8,770	4,990	8,290	14,200	22,000
27	16,200	22,800	50,800	e7,900	6,500	13,200	19,600	9,300	4,860	7,640	12,500	18,300
28	40,100	20,500	40,600	e7,800	6,420	13,600	22,000	13,200	4,610	23,400	11,200	22,100
29	68,600	32,400	34,200	e7,500	6,600	15,000	19,500	14,100	4,440	20,000	10,900	61,600
30	78,900	39,300	32,000	e7,600	---	15,500	16,800	13,000	4,530	19,100	9,800	49,400
31	74,400	---	29,600	e7,500	---	15,900	---	12,000	---	15,700	11,100	---
TOTAL	668,320	784,100	1,100,800	496,700	249,290	485,000	477,360	456,610	211,490	253,910	496,400	977,050
MEAN	21,560	26,140	35,510	16,020	8,596	15,650	15,910	14,730	7,050	8,191	16,010	32,570
MAX	78,900	54,700	71,300	35,700	20,000	31,600	26,400	21,400	11,000	23,400	52,900	181,000
MIN	9,620	12,700	15,300	7,500	6,420	6,710	9,960	8,420	4,440	3,590	5,010	6,380

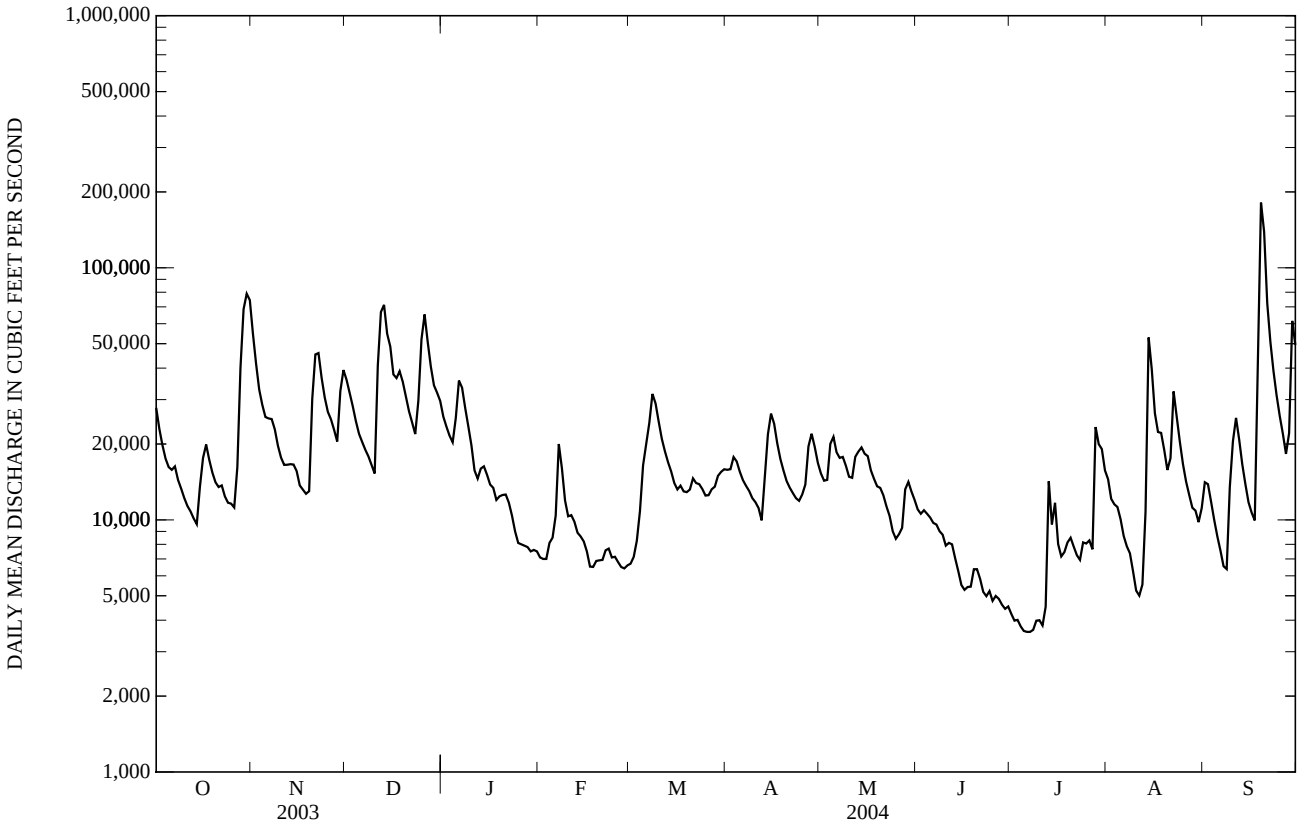
DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2004, BY WATER YEAR (WY)												
MEAN	7,014	10,530	12,820	12,420	12,680	20,530	22,080	14,140	9,365	7,018	6,047	6,209
MAX	28,710	27,340	42,860	34,950	27,550	60,840	52,680	31,690	33,460	25,720	30,290	32,570
(WY)	(1956)	(1928)	(1997)	(1979)	(1951)	(1936)	(1940)	(1989)	(1972)	(1928)	(1955)	(2004)
MIN	1,632	1,868	2,037	2,539	3,500	7,715	6,828	5,074	2,572	1,548	1,808	1,762
(WY)	(1942)	(1915)	(1923)	(1981)	(1920)	(1981)	(1985)	(1995)	(1965)	(1965)	(1965)	(1932)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1913 - 2004	
ANNUAL TOTAL	7,468,650		6,657,030			
ANNUAL MEAN	20,460		18,190		11,730	
HIGHEST ANNUAL MEAN					19,810	1928
LOWEST ANNUAL MEAN					4,708	1965
HIGHEST DAILY MEAN	79,000	Mar 23	181,000	Sep 19	279,000	Aug 20, 1955
LOWEST DAILY MEAN	5,350	Jul 21	3,590	Jul 7	1,240	Oct 31, 1914
ANNUAL SEVEN-DAY MINIMUM	5,780	Aug 26	3,750	Jul 4	1,310	Oct 31, 1914
MAXIMUM PEAK FLOW			201,000	Sep 19	329,000a	Aug 20, 1955
MAXIMUM PEAK STAGE			23.41	Sep 19	28.60b	Aug 20, 1955
INSTANTANEOUS LOW FLOW			3,570	Jul 4-7	1,180	Oct 31, 1963
10 PERCENT EXCEEDS	39,200		33,700		24,700	
50 PERCENT EXCEEDS	15,600		13,900		8,000	
90 PERCENT EXCEEDS	7,490		6,510		3,030	

a From rating curve extended above 230,000 ft^3/s, maximum flow since 1692.
b From high-water mark in gage house, current datum.
e Estimated



01463500 DELAWARE RIVER AT TRENTON, NJ--Continued
(National Water-Quality Assessment Station)
(Pennsylvania Water-Quality Network Station

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1945 to current year.

PERIOD OF DAILY RECORD.--
DISSOLVED OXYGEN: October 1962 to current year. Recorded as once daily during 1979.
DISSOLVED OXYGEN PERCENT SATURATION: October 2001 to current year.
pH: June 1968 to current year. Recorded as once daily during 1979.
SPECIFIC CONDUCTANCE: October 1963 to current year. Recorded as once daily during years 1964 to 1968, 1979.
SUSPENDED SEDIMENT DISCHARGE: September 1949 to September 1981.
WATER TEMPERATURE: October 1944 to current year. Recorded as once daily during years 1945 to 1953, 1962, 1964, 1979.
TURBIDITY: November 2000 to current year.

INSTRUMENTATION.--
TEMPERATURE MONITOR (in-situ system, max-min recorded): October 1953 to September 1961.
TEMPERATURE / DISSOLVED-OXYGEN MONITOR (in-situ system): October 1962 to September 1965: max-min recorded (only dissolved-oxygen concentration recorded during water year 1964). October 1965 to May 1968: measurements recorded hourly.
WATER-QUALITY MONITOR (continuous pumping system, measurements recorded hourly): June 1968 to August 1975: water withdrawn from raw-water intake within Trenton Water Filtration Plant, Trenton, NJ. November 1975 to November 1978: water withdrawn from river outside Trenton Water Filtration Plant, Trenton, NJ. December 1979 to September 1986: water withdrawn from raw-water intake within Trenton Water Filtration Plant, Trenton, NJ.
WATER-QUALITY MONITOR (in situ system, measurements recorded hourly): October 1986 to September 1995: probes located inside raw-water intake of Trenton Water Filtration Plant, Trenton, NJ. October 1995 to current year: monitor located inside raw-water intake of Morrisville Water Filtration Plant, Morrisville, Pa., 1,600 ft upstream from the gage house. YSI turbidimeter 6026, November 2000 to May 2004; YSI turbidimeter 6136, June to September 2004.

REMARKS.--Additional nutrient samples on Dec. 4 at 0931, Mar. 16 at 0931, June 21 at 1001, and Sept. 1 at 1051 were collected to fulfill the requirements of the Ambient Stream Monitoring Network. For definition of the type of quality-control data listed under SAMPLE TYPE, refer to "Water-Quality Control Data" in the Explanation of Water-Quality Records section of this report. Unpublished records of suspended-sediment discharge for the period Oct. 1, 1981, to Mar. 31, 1982, are available at the U.S. Geological Survey Office in West Trenton, NJ. Beginning October, 1999, pH daily value tables reported maximum, minimum and median values. Continuous turbidity-record values less than 2 were below the instrument detection level. Missing continuous water-quality records are the result of instrument malfunction or interruption of flow through the filtration plant. The calibration of water-quality sensors is verified by regular inspections. Cleaning or recalibration is needed occasionally as a result of sensor fouling or drift. When a sensor is reclaibrated, the continuous-record water-quality data for the period between inspections are adjusted to account for the difference between the sensor's response and a known value. The adjustment may be constant over the period or may be prorated. Continuous-record water-quality data for periods for which the difference between the sensor's response and a known value does not exceed recalibration criteria are considered to be reliable and are not adjusted. Recalibration criteria are listed in "Accuracy of the Records" in the Explanation of Water-Quality Records section of this report. Data from the following periods were adjusted:
DISSOLVED OXYGEN: Oct. 1 to Dec. 15, Jan. 5 to Feb. 17, Apr. 6 to Apr. 13, Apr. 29 to May 6, May 14 to June 1, June 15 to July 6, Aug. 4 to Aug. 16.
pH: Nov. 3 to Dec. 15, Apr. 13 to Apr. 26.
TURBIDITY: Apr. 13 to Apr. 26.

COOPERATION.--Samples were collected as part of the Delaware River Basin National Water-Quality Assessment Program (NAWQA) with cooperation from the Delaware River Basin Commission. Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, and dissolved hexavalent chromium on Dec. 4 at 0932, Mar. 16 at 0932, June 21 at 1002, and Sept. 1 at 1052; and fecal coliform, E. coli, and enterococcus bacteria collected synoptically during the summer months was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Delaware River Main Stem, New Jersey Department of Environmental Protection Watershed Management Area 11.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 468 microsiemens, Jan. 11, 1999; minimum, 63 microsiemens, July 7, 1984.
pH: Maximum, 10.3, Aug. 9, 10, 1983; minimum, 5.3, June 22, 1972.
WATER TEMPERATURE: Maximum, 34.0°C, June 18, 1957; minimum, -0.6°C, on many days during winter months in water years 1954-57.
DISSOLVED OXYGEN: Maximum, 20.0 mg/L, Feb. 11, 1989; minimum, 4.0 mg/L, Nov. 9, 1972, Sept. 9, 1995.
DISSOLVED OXYGEN PERCENT OF SATURATION: Maximum, 153, July 2, 2004; minimum, 64, Sept. 3, 2003, May 2, 2004.
TURBIDITY: Maximum, 760 FNU, Sept. 18, 2004; minimum, <2.0 FNU, on many days in water years 2000-04.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 311 microsiemens, Feb. 5, 6; minimum, 71 microsiemens, Sept. 19, 20.
pH: Maximum, 9.5, Feb. 27-29, Mar. 1; minimum, 6.6, Oct. 29-31, Nov. 1.
WATER TEMPERATURE: Maximum, 28.9°C, July 8; minimum, 0.0°C, on many days during January and February.
DISSOLVED OXYGEN: Maximum, 18.8 mg/L, Feb. 28; minimum, 5.9 mg/L, July 5.
DISSOLVED OXYGEN PERCENT OF SATURATION: Maximum, 153, July 2; minimum, 64, May 2.
TURBIDITY: Maximum, 760 FNU, Sept. 18; minimum, <2.0 FNU, many days.

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
NOV											
06...	0920	Environmental	24,900	6.2	--	--	--	764	10.4	98	7.5
DEC											
04...	0930	Environmental	24,900	3.1	6.4	.089	.068	773	14.2	106	7.4
04...	0931	Environmental	--	--	--	--	--	--	--	--	--
04...	0932	Environmental	--	--	--	--	--	--	--	--	--
JAN											
06...	0930	Environmental	35,900	7.1	--	--	--	760	E12.7	--	7.2
MAR											
16...	0930	Environmental	13,200	1.3	<2.0	.056	.043	766	13.1	102	7.7
16...	0931	Environmental	--	--	--	--	--	--	--	--	--
16...	0932	Environmental	--	--	--	--	--	--	--	--	--
APR											
19...	0900	Environmental	15,900	3.1	--	--	--	764	11.3	107	7.5
MAY											
17...	0940	Environmental	15,900	9.4	--	--	--	770	8.8	97	7.2
17...	*0941*	*Split Replicate*	--	--	--	--	--	--	--	--	--
JUN											
21...	*0959*	*Field Blank*	--	--	--	--	--	--	--	--	--
21...	1000	Environmental	5,780	3.1	2.7	.064	.049	762	8.7	104	8.4
21...	1001	Environmental	--	--	--	--	--	--	--	--	--
21...	1002	Environmental	--	--	--	--	--	--	--	--	--
JUL											
16...	0940	Environmental	8,140	13	--	--	--	754	8.3	96	7.7
SEP											
01...	1050	Environmental	14,900	10	9.4	.101	.078	765	8.7	101	7.7
01...	1051	Environmental	--	--	--	--	--	--	--	--	--
01...	1052	Environmental	--	--	--	--	--	--	--	--	--

Date	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
NOV													
06...	146	17.0	13.0	--	--	--	--	--	--	31	37	12.3	--
DEC													
04...	127	1.0	3.2	39	10.1	3.38	.99	6.44	30	--	53	10.8	<.2
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
06...	145	2.5	5.1	--	--	--	--	--	--	27	33	14.3	--
MAR													
16...	166	.0	5.1	50	13.0	4.36	.99	9.55	36	32	39	18.1	<.2
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
19...	173	13.0	13.1	--	--	--	--	--	--	35	42	18.4	--
MAY													
17...	162	24.5	20.8	--	--	--	--	--	--	32	39	15.8	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	--	--	--	--	--	--	--	--	--	--	--	*<.20*	--
21...	208	21.0	24.1	73	19.1	6.05	1.42	11.9	52	48	57	20.1	<.2
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
16...	216	27.0	22.1	--	--	--	--	--	--	54	66	20.7	--
SEP													
01...	176	21.0	23.1	66	18.0	5.11	1.52	10.1	43	--	48	15.4	<.2
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Partic-ulate nitro-gen, susp, water, mg/L (49570)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)
NOV													
06...	--	11.8	--	--	--	<.04	--	.72	<.008	--	.015	--	.045
DEC													
04...	4.9	11.6		72	--	E.03	--	.81	<.008	<.02	.012	--	.028
04...	--	--	--	--	<.20	--	--	.82	--	--	--	.017	--
04...	--	--	--	--	--	.026	.024	--	<.003	--	.022	--	--
JAN													
06...	--	11.8	--	--	--	<.04	--	.77	E.005	--	.013	--	.043
MAR													
16...	3.2	13.2	85	101	--	<.04	--	.86	.012	.06	E.005	--	.024
16...	--	--	--	--	<.20	--	--	.88	--	--	--	.014	--
16...	--	--	--	--	--	<.020	<.020	--	.009	--	<.020	--	--
APR													
19...	--	11.8	--	--	--	<.04	--	.72	.010	--	.006	--	.035
MAY													
17...	--	11.2	--	--	--	<.04	--	.77	.012	--	.019	--	.073
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	--	*<.2*	--	--	--	*<.04*	--	*<.06*	*<.008*	--	*<.006*	--	*<.004*
21...	2.8	17.2	111	114	--	<.04	--	.86	.008	.11	.029	--	.063
21...	--	--	--	--	.20	--	--	.86	--	--	--	.057	--
21...	--	--	--	--	--	<.010	E.009	--	.008	--	.035	--	--
JUL													
16...	--	19.1	--	--	--	<.04	--	1.33	.009	--	.054	--	.103
SEP													
01...	4.2	14.7		97	--	<.04	--	.92	E.006	.10	.047	--	.087
01...	--	--	--	--	.27	--	--	--	--	--	--	.060	--
01...	--	--	--	--	--	.020	E.033	--	.008	--	.054	--	--

Date	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Total nitro-gen, water, fltrd, mg/L (00602)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor-ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, high level, water, unfltrd mg/L (00340)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
NOV										
06...	1.00	--	--	--	--	--	--	--	8	538
DEC										
04...	1.00	--	.2	<.1	.2	2.4	--	10	3	202
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	E1.7	--	--	--
JAN										
06...	.97	--	--	--	--	--	--	--	12	1,160
MAR										
16...	1.04	--	.3	<.1	.3	2.1	--	<10	3	107
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	<1.0	--	--	--
APR										
19...	1.08	--	--	--	--	--	--	--	7	301
MAY										
17...	1.12	--	--	--	--	--	--	--	18	773
17...	--	--	--	--	--	--	--	--	*17*	--
JUN										
21...	*<.03*	--	--	--	--	--	--	--	*<1*	--
21...	1.20	--	.9	<.1	.9	2.4	--	<10	4	62
21...	--	1.1	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	E1.7	--	--	--
JUL										
16...	1.77	--	--	--	--	--	--	--	19	418
SEP										
01...	1.12	--	1.3	<.1	1.3	2.8	--	<10	12	483
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	<1.0	--	--	--

Remark codes used in this table:
< -- Less than
E -- Estimated value

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-COLUMN TRACT-ELEMENT ANALYSES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Arsenic water unfltrd µg/L (01002)	Barium, water, unfltrd recover-able, µg/L (01007)	Beryll-ium, water, unfltrd recover-able, µg/L (01012)	Boron, water, fltrd, µg/L (01020)	Boron, water, unfltrd recover-able, µg/L (01022)	Cadmium water, unfltrd µg/L (01027)	Chrom-ium(VI) water, fltrd, µg/L (01032)	Chrom-ium, water, fltrd, µg/L (01030)	Chrom-ium, water, unfltrd recover-able, µg/L (01034)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, unfltrd recover-able, µg/L (01045)
DEC													
04...	0930	<2	23.6	<.06	7.9	10	.05	--	<.8	E.4	1.1	.9	140
04...	0932	--	--	--	--	--	--	<5	--	--	--	--	--
MAR													
16...	0930	<2	25.5	<.06	10	10	.05	--	<.8	<.8	1.3	1.4	90
16...	0932	--	--	--	--	--	--	<5	--	--	--	--	--
JUN													
21...	1000	<2	29.6	<.06	17	19	.04	--	<.8	<.8	1.5	1.7	110
21...	1002	--	--	--	--	--	--	<5	--	--	--	--	--
SEP													
01...	1050	<2	26.7	E.04	18	17	.09	--	<.8	E.4	1.6	2.4	380
01...	1052	--	--	--	--	--	--	<5	--	--	--	--	--

Date	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Mercury water, fltrd, µg/L (71890)	Mercury water, unfltrd recover-able, µg/L (71900)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover-able, µg/L (01067)	Selen-ium, water, unfltrd µg/L (01147)	Silver, water, unfltrd recover-able, µg/L (01077)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
DEC											
04...	E.06	.29	19.5	<.02	<.02	.89	1.11	E.2	<.16	9.2	11
04...	--	--	--	--	--	--	--	--	--	--	--
MAR											
16...	E.07	.19	22.1	<.02	<.02	.87	.95	<.4	<.16	6.7	14
16...	--	--	--	--	--	--	--	--	--	--	--
JUN											
21...	E.08	.39	35.4	<.02	<.02	.88	.97	E.2	<.16	3.0	7
21...	--	--	--	--	--	--	--	--	--	--	--
SEP											
01...	.14	1.26	42.5	<.02	<.02	1.02	1.71	E.3	<.16	8.9	18
01...	--	--	--	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than
E -- Estimated value

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-COLUMN VOLATILE ORGANIC COMPOUND ANALYSES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	1,1,1-Tri-chloro-ethane, water, unfltrd µg/L (34506)	CFC-113 water unfltrd µg/L (77652)	1,1-Di-chloro-ethane, water unfltrd µg/L (34496)	1,1-Di-chloro-ethene, water, unfltrd µg/L (34501)	1,2-Di-chloro-benzene water unfltrd µg/L (34536)	1,2-Di-chloro-ethane, water, unfltrd µg/L (32103)	1,2-Di-chloro-propane water unfltrd µg/L (34541)	1,3-Di-chloro-benzene water unfltrd µg/L (34566)	1,4-Di-chloro-benzene water unfltrd µg/L (34571)	Benzene water unfltrd µg/L (34030)	Bromo-di-chloro-methane water unfltrd µg/L (32101)	Chloro-benzene water unfltrd µg/L (34301)
DEC													
04...	0930	<.1	<.1	<.1	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1
MAR													
16...	0930	<.1	<.1	<.1	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1
JUN													
21...	1000	<.1	<.1	<.1	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1
SEP													
01...	1050	<.1	<.1	<.1	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1

Date	cis-1,2-Di-chloro-ethene, water, unfltrd µg/L (77093)	Di-bromo-chloro-methane water unfltrd µg/L (32105)	Di-chloro-di-fluoro-methane wat unf µg/L (34668)	Di-chloro-methane water unfltrd µg/L (34423)	Di-ethyl ether, water, unfltrd µg/L (81576)	Diiso-propyl ether, water, unfltrd µg/L (81577)	Ethyl-benzene water unfltrd µg/L (34371)	Methyl tert-pentyl ether, water, unfltrd µg/L (50005)	meta- + para-Xylene, water, unfltrd µg/L (85795)	o-Xylene, water, unfltrd µg/L (77135)	Styrene water unfltrd µg/L (77128)	t-Butyl ethyl ether, water, unfltrd µg/L (50004)	Methyl t-butyl ether, water, unfltrd µg/L (78032)
DEC													
04...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1	<.2
MAR													
16...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1	E.1
JUN													
21...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1	1.1
SEP													
01...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1	E.1

Date	Tetra-chloro-ethene, water, unfltrd µg/L (34475)	Tetra-chloro-methane water unfltrd µg/L (32102)	Toluene water unfltrd µg/L (34010)	trans-1,2-Di-chloro-ethene, water, unfltrd µg/L (34546)	Tri-bromo-methane water unfltrd µg/L (32104)	Tri-chloro-ethene, water, unfltrd µg/L (39180)	Tri-chloro-fluoro-methane water unfltrd µg/L (34488)	Tri-chloro-methane water unfltrd µg/L (32106)	Vinyl chlor-ide, water, unfltrd µg/L (39175)
DEC									
04...	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
MAR									
16...	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
JUN									
21...	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
SEP									
01...	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

WATER-COLUMN PESTICIDE ANALYSES

REMARKS.--Pesticides in filtered water were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, on page 215). Only schedule-2001 compounds detected in one or more surface-water samples are included in the following table. Pesticides in unfiltered water were determined using laboratory schedule 1608. All schedule-1608 compounds are included in the following table.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	CIAT, water, fltrd, µg/L (04040)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	Aldrin, water, unfltrd µg/L (39330)	alpha-Endo-sulfan, water, unfltrd µg/L (34361)	alpha-HCH, water, fltrd, µg/L (34253)	alpha-HCH, water, unfltrd µg/L (39337)	Aroclor 1016 + 1242, water, unfltrd µg/L (81648)	Aroclor 1221, water, unfltrd µg/L (39488)
NOV											
06...	0920	Environmental	E.013	<.006	<.005	--	--	<.005	--	--	--
DEC											
04...	0930	Environmental	--	--	--	<.10	<.2	--	<.07	<.2	<2
JAN											
06...	0930	Environmental	E.010	<.006	<.005	--	--	<.005	--	--	--
MAR											
16...	0930	Environmental	E.012	<.006	<.005	<.04	<.1	<.005	<.03	<.1	<1
APR											
19...	0900	Environmental	E.013	<.006	<.005	--	--	<.005	--	--	--
MAY											
17...	0940	Environmental	E.022	.017	<.005	--	--	<.005	--	--	--
17...	*0941*	*Split Replicate*	*E.020*	*.014*	*<.005*	--	--	*<.005*	--	--	--
JUN											
21...	1000	Environmental	E.029	<.006	<.005	<.04	<.1	<.005	<.03	<.1	<1
JUL											
16...	0940	Environmental	E.022	<.006	<.005	--	--	<.005	--	--	--
SEP											
01...	1050	Environmental	E.016	<.006	<.005	<.04	<.1	<.005	<.03	<.1	<1

Date	Aroclor 1232, water, unfltrd µg/L (39492)	Aroclor 1248, water, unfltrd µg/L (39500)	Aroclor 1254, water, unfltrd µg/L (39504)	Aroclor 1260, water, unfltrd µg/L (39508)	Atra-zine, water, fltrd, µg/L (39632)	Ben-flur-alin, water, fltrd 0.7µ GF µg/L (82673)	beta-Endo-sulfan, water, unfltrd µg/L (34356)	beta-HCH, water, unfltrd µg/L (39338)	Car-baryl, water, fltrd 0.7µ GF µg/L (82680)	Chlor-dane, tech-nical, water, unfltrd µg/L (39350)	Chlor-pyrifos water, fltrd, µg/L (38933)	cis-Chlor-dane, water, unfltrd µg/L (39062)	DCPA, water fltrd 0.7µ GF µg/L (82682)
NOV													
06...	--	--	--	--	.012	<.010	--	--	<.041	--	<.005	--	<.003
DEC													
04...	<.2	<.2	<.2	<.2	--	--	<.10	<.07	--	<.2	--	<.2	--
JAN													
06...	--	--	--	--	.011	<.010	--	--	<.041	--	<.005	--	<.003
MAR													
16...	<.1	<.1	<.1	<.1	.015	<.010	<.04	<.03	<.041	<.1	<.005	<.1	<.003
APR													
19...	--	--	--	--	.013	<.010	--	--	<.041	--	<.005	--	<.003
MAY													
17...	--	--	--	--	.135	<.010	--	--	E.024	--	<.005	--	<.003
17...	--	--	--	--	*.122*	*<.010*	--	--	*<.041*	--	*<.005*	--	*<.003*
JUN													
21...	<.1	<.1	<.1	<.1	.103	<.010	<.04	<.03	<.041	<.1	<.005	<.1	<.003
JUL													
16...	--	--	--	--	.076	<.010	--	--	<.041	--	<.005	--	E.002
SEP													
01...	<.1	<.1	<.1	<.1	.022	<.010	<.04	<.03	E.030	<.1	<.005	<.1	<.003

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	delta-HCH, water, unfltrd µg/L (34259)	Desulf-inyl fipro-nil, water, fltrd, µg/L (62170)	Diazi-non, water, fltrd, µg/L (39572)	Diel-drin, water, unfltrd µg/L (39380)	Endo-sulfan sulfate water unfltrd µg/L (34351)	Endrin alde-hyde, water, unfltrd µg/L (34366)	Endrin, water, unfltrd µg/L (39390)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide water, fltrd, µg/L (62167)	Fipro-nil sulfone water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Hepta-chlor epoxide water unfltrd µg/L (39420)	Hepta-chlor, water, unfltrd µg/L (39410)
NOV													
06...	--	<.012	<.005	--	--	--	--	<.029	<.013	<.024	<.016	--	--
DEC													
04...	<.23	--	--	<.05	<1.5	<.5	<.15	--	--	--	--	<2.0	<.07
JAN													
06...	--	<.012	<.005	--	--	--	--	<.029	<.013	<.024	<.016	--	--
MAR													
16...	<.09	<.012	<.005	<.02	<.6	<.2	<.06	<.029	<.013	<.024	<.016	<.8	<.03
APR													
19...	--	<.012	<.005	--	--	--	--	<.029	<.013	<.024	<.016	--	--
MAY													
17...	--	<.012	<.005	--	--	--	--	<.029	<.013	<.024	<.016	--	--
17...	--	*<.012*	*<.005*	--	--	--	--	*<.029*	*<.013*	*<.024*	*<.016*	--	--
JUN													
21...	<.09	E.003	<.005	<.02	<.6	<.2	<.06	<.029	<.013	<.024	<.016	<.8	<.03
JUL													
16...	--	<.012	<.005	--	--	--	--	<.029	<.013	<.024	<.016	--	--
SEP													
01...	<.09	<.012	<.005	<.02	<.6	<.2	<.06	<.029	<.013	<.024	<.016	<.8	<.03

Date	Lindane water, fltrd, µg/L (39341)	Lindane water, unfltrd µg/L (39340)	Metola-chlor, water, fltrd, µg/L (39415)	p,p'-DDD, water, unfltrd µg/L (39310)	p,p'-DDE, water, unfltrd µg/L (39320)	p,p'-DDT, water, unfltrd µg/L (39300)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Prome-ton, water, fltrd, µg/L (04037)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron water fltrd 0.7µ GF µg/L (82670)	Toxa-phene, water, unfltrd µg/L (39400)	trans-Chlor-dane, water, unfltrd µg/L (39065)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)
NOV													
06...	<.004	--	E.008	--	--	--	<.022	<.01	.006	<.02	--	--	<.009
DEC													
04...	--	<.07	--	<.2	<.10	<.2	--	--	--	--	<5	<.2	--
JAN													
06...	<.004	--	E.008	--	--	--	<.022	<.01	<.005	<.02	--	--	<.009
MAR													
16...	<.004	<.03	E.007	<.1	<.04	<.1	<.022	<.01	<.005	<.02	<2	<.1	<.009
APR													
19...	<.004	--	E.008	--	--	--	<.022	.01	.006	<.02	--	--	<.009
MAY													
17...	<.004	--	.048	--	--	--	<.022	.02	.017	<.02	--	--	<.009
17...	*<.004*	--	*.044*	--	--	--	*E.008*	*.01*	*.015*	*<.02*	--	--	*<.009*
JUN													
21...	<.004	<.03	.032	<.1	<.04	<.1	<.022	.03	.016	<.02	<2	<.1	E.004
JUL													
16...	<.004	--	.047	--	--	--	<.022	.02	.009	<.02	--	--	<.009
SEP													
01...	<.004	<.03	E.012	<.1	<.04	<.1	<.022	.02	<.015	<.02	<2	<.1	<.009

WATER-COLUMN BACTERIA ANALYSES
Samples were collected synoptically over a 30-day period during the summer.

Date	Time	Instantaneous discharge, cfs (00061)	Enterococci, m-EMF, water, col/100 mL (31649)	E coli, m-TECMF, water, col/100 mL (31633)	Fecal coliform, ECbroth water, MPN/100 mL (31615)
MAY					
05...	1130	21,500	20	<100	20
12...	1035	17,800	30	<100	20
19...	1055	13,600	60	<100	90
26...	1115	8,980	60	200	80
JUN					
02...	1130	10,600	<10	100	40

Remark codes used in this table:
< -- Less than

Analyses of pesticides in surface-water and ground-water samples (schedule 2001)

Selected water samples from DELR-NAWQA study sites were analyzed for pesticides by use of NWQL schedule 2001. This table lists the pesticides on the schedule, the unit of measure (micrograms per liter, µg/L), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. **Only pesticides measured at or above the minimum reporting level for one or more samples are listed in the water-quality tables.**

SCHEDULE DESCRIPTION.--Pesticides in filtered water extracted on C-18 Solid Phase Extraction (SPE) cartridge and analyzed by Gas Chromatography/ Mass Spectrometry (GC/MS).

SAMPLE REQUIREMENTS.--1 liter of water filtered through 0.7-micron glass-fiber depth filter, chilled at 4^{o} C (packed in ice).

CONTAINER REQUIREMENTS.--1 liter baked amber glass bottle (GCC) from NWQL.

PCODE.--The USGS/EPA parameter code.

COMMON NAME.--Common or trade name(s) for constituent.

LRL.--Laboratory reporting level.

PCode	Common Name	LRL (µg/L)	PCode	Common Name	LRL (µg/L)
82660	2,6-Diethylaniline	0.006	82667	Parathion-methyl	0.006
49260	Acetochlor	0.006	39415	Metolachlor	0.013
46342	Alachlor	0.0045	82630	Metribuzin	0.006
34253	alpha-HCH	0.0046	82671	Molinate	0.0016
39632	Atrazine	0.007	82684	Napropamide	0.007
82673	Benfluralin	0.010	34653	p,p‘-DDE	0.0025
04028	Butylate	0.002	39542	Parathion	0.010
82680	Carbaryl	0.041	82669	Pebulate	0.0041
82674	Carbofuran	0.020	82683	Pendimethalin	0.022
38933	Chlorpyrifos	0.005	82687	cis-Permethrin	0.006
04041	Cyanazine	0.018	82664	Phorate	0.011
82682	Dacthal	0.0030	04037	Prometon	0.015
04040	Deethylatrazine	0.006	82676	Propyzamide	0.0041
39572	Diazinon	0.005	04024	Propachlor	0.010
39381	Dieldrin	0.0048	82679	Propanil	0.011
82677	Disulfoton	0.021	82685	Propargite	0.023
82668	EPTC	0.0020	04035	Simazine	0.005
82663	Ethalfluralin	0.009	82670	Tebuthiuron	0.016
82672	Ethoprophos	0.005	82665	Terbacil	0.034
04095	Fonofos	0.0027	82675	Terbufos	0.017
39341	Lindane	0.0040	82681	Thiobencarb	0.0048
82666	Linuron	0.035	82678	Triallate	0.0023
39532	Malathion	0.027	82661	Trifluralin	0.009
82686	Azinphos-methyl	0.05			

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued
(Pennsylvania Water-Quality Network Station)

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)
OCT 2003													
29...	1630	1028	9813	76100	--	7.4	6.7	105	101	11.4	38	9.9	3.3
DEC													
04...	0940	1028	9813	24800	14.2	7.4	7.6	128	126	3.2	40	10.3	3.4
FEB 2004													
25...	0830	1028	9813	7140	15.5	8.7	8.3	250	250	3.1	87	21.2	8.2
APR													
19...	0910	1028	9813	15900	11.3	7.5	7.4	174	173	13.1	53	14.2	4.4
JUN													
28...	0930	1028	9813	4710	9.2	8.4	7.9	237	241	23.5	83	21.0	7.4
AUG													
23...	1030	1028	9813	25500	8.8	7.5	7.1	132	135	20.0	46	12.8	3.4

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Fluoride, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, µg/L (01105)
OCT 2003													
29...	24	<.2	8.3	112	80	<.020	.60	<.040	.07	.160	1.2	6.2	1700
DEC													
04...	29	<.2	11.0	96	<2	<.020	.80	<.040	.02	.025	.91	2.8	<200
FEB 2004													
25...	61	<.2	19.9	148	2	<.020	1.41	<.040	.01	.017	1.7	2.2	<200
APR													
19...	36	<.2	12.9	116	12	<.020	.76	<.040	.01	.035	1.1	2.5	<200
JUN													
28...	59	<.2	19.1	204	<2	<.020	1.06	<.040	.05	.090	1.4	3.1	<200
AUG													
23...	31	<.2	10.8	128	24	<.020	.75	<.040	.04	.066	1.1	4.8	810

Date	Copper, water, unfltrd recoverable, µg/L (01042)	Cyanide amenable to chlorination wat unf mg/L (00722)	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, unfltrd recoverable, µg/L (01092)	Phenolic compounds, water, unfltrd µg/L (32730)
OCT 2003								
29...	<10	<1.00	2460	5.0	260	<50	70	<5
DEC								
04...	<10	<1.00	160	<1.0	20	<50	100	<5
FEB 2004								
25...	<10	<1.00	100	<1.0	30	<50	<10	<5
APR								
19...	<10	<1.00	180	<1.0	30	<50	10	<5
JUN								
28...	<10	<1.00	140	<1.0	50	<50	<10	<5
AUG								
23...	<10	<1.00	1120	2.0	120	<50	30	<5

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	10/27/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	3
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	4
Ephemerellidae	
Serratella	9
Heptageniidae	
Stenacron	6
Stenonema	9
Isonychiidae	
Isonychia	7
Plecoptera (STONEFLIES)	
Perlidae	
Agnetina	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	
Protoptila	2
Hydropsychidae	
Cheumatopsyche	28
Hydropsyche	4
Potamyia	1
Lepidostomatidae	
Lepidostoma	1
Leptoceridae	
Ceraclea	1

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/27/03
Benthic macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Philopotamidae	
Chimarra	3
Uenoidae	
Neophylax	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Dubiraphia	1
Optioservus	1
Stenelmis	8
Psephenidae (WATER PENNIES)	
Psephenus	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	7
Total Organisms	110
Total Taxa	26

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	124	115	118	107	94	102	119	114	116	141	133	137
2	131	118	125	116	105	110	119	114	116	144	140	142
3	140	131	136	---	---	---	125	119	121	148	144	146
4	146	140	144	132	125	128	130	124	126	154	148	151
5	158	146	150	137	129	133	136	130	133	154	149	152
6	158	155	156	146	137	141	146	136	141	149	124	138
7	156	146	150	145	137	141	151	146	149	129	122	123
8	155	147	150	143	138	140	156	151	153	133	124	128
9	158	154	156	150	142	145	158	156	157	139	133	136
10	167	156	162	155	147	150	167	157	163	150	139	145
11	174	166	170	158	153	155	179	120	156	162	150	156
12	182	172	176	164	155	159	183	111	147	180	162	173
13	182	178	181	163	160	162	111	98	102	183	168	177
14	189	181	185	163	152	159	111	99	102	168	162	164
15	189	181	185	154	151	153	136	109	123	167	162	164
16	197	172	186	161	153	157	139	132	136	---	---	---
17	172	141	153	168	159	165	141	136	138	200	182	191
18	147	136	140	172	166	169	161	140	156	205	196	200
19	153	143	145	178	168	173	159	148	153	202	196	198
20	153	144	149	170	145	157	149	147	148	197	188	194
21	156	150	153	161	104	135	154	149	152	203	193	197
22	157	147	153	105	95	98	154	152	153	205	194	200
23	157	135	152	110	98	103	159	154	156	208	195	203
24	166	153	160	117	109	112	164	147	156	209	205	207
25	177	163	169	128	116	122	163	122	147	224	207	214
26	173	162	167	132	128	130	122	102	108	227	219	223
27	---	---	---	134	130	132	112	102	106	227	220	224
28	159	140	152	139	134	136	123	112	117	230	224	227
29	140	104	114	151	139	144	136	122	127	232	226	229
30	110	93	100	139	116	123	138	130	133	238	231	235
31	98	89	92	---	---	---	133	129	130	238	230	235
MONTH	197	89	151	178	94	139	183	98	136	238	122	180
		FEBRUARY			MARCH			APRIL			MAY	
1	233	228	231	261	250	255	162	156	159	155	151	153
2	234	227	230	253	244	249	166	161	164	162	154	159
3	231	227	229	250	241	245	168	160	165	166	161	164
4	264	231	240	243	224	237	163	155	159	170	154	163
5	311	264	284	---	---	---	163	157	161	154	137	143
6	311	223	276	---	---	---	168	162	164	148	137	142
7	299	196	240	---	---	---	164	157	161	147	145	146
8	285	257	263	---	---	---	170	158	165	152	147	149
9	264	246	254	---	---	---	176	167	171	153	148	150
10	259	249	256	---	---	---	179	175	178	157	150	155
11	262	252	256	---	---	---	180	177	178	159	156	157
12	255	246	251	---	---	---	184	178	180	158	149	155
13	249	243	245	150	145	147	187	180	183	157	149	153
14	251	245	248	153	149	150	192	178	184	149	139	143
15	253	248	250	160	153	157	192	166	176	142	138	139
16	252	248	250	166	160	163	170	157	162	148	140	143
17	256	248	252	168	163	166	161	156	159	155	146	152
18	264	255	259	179	168	176	166	160	162	156	155	156
19	269	259	264	192	179	188	---	---	---	160	156	157
20	263	251	257	211	191	202	---	---	---	165	160	163
21	258	252	254	217	203	210	---	---	---	166	164	165
22	257	249	253	211	205	208	---	---	---	173	166	169
23	253	246	250	209	194	203	---	---	---	179	173	176
24	250	242	247	197	190	194	---	---	---	187	179	182
25	250	247	248	195	190	193	---	---	---	193	186	189
26	255	249	252	196	192	194	181	170	175	197	192	195
27	256	250	253	199	186	194	183	170	176	192	186	189
28	258	252	256	190	182	187	183	150	169	205	184	191
29	260	254	257	184	170	179	151	148	150	186	163	176
30	---	---	---	171	157	162	154	149	150	170	159	162
31	---	---	---	160	154	157	---	---	---	161	156	159
MONTH	311	196	252	---	---	---	---	---	---	205	137	161

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	163	156	158	243	236	238	150	137	145	184	154	173
2	174	163	170	245	242	243	---	---	---	154	140	148
3	178	169	175	248	244	246	---	---	---	152	140	147
4	172	167	169	249	245	247	181	170	175	166	152	160
5	170	165	167	250	246	248	176	169	172	176	165	170
6	173	164	169	251	249	250	188	175	181	183	176	178
7	186	173	180	251	247	249	195	186	189	192	183	187
8	185	178	180	248	246	247	195	189	192	197	192	195
9	179	177	178	251	247	248	197	191	193	209	181	200
10	188	177	180	248	236	240	208	197	202	182	154	172
11	191	183	186	236	232	234	218	208	214	154	127	136
12	207	191	196	233	195	220	223	210	220	129	126	127
13	203	198	200	239	193	215	233	222	228	135	128	130
14	200	197	198	204	192	199	224	78	112	142	135	139
15	---	---	---	209	166	186	95	79	86	147	141	144
16	---	---	---	225	209	220	107	93	98	159	147	153
17	---	---	---	223	217	219	111	106	109	168	159	163
18	---	---	---	223	200	213	109	104	106	171	130	158
19	---	---	---	210	205	207	110	103	106	132	71	89
20	---	---	---	226	207	220	119	109	113	90	71	80
21	---	---	---	220	208	211	130	119	125	100	90	96
22	---	---	---	211	204	206	144	130	137	107	100	104
23	---	---	---	207	199	204	140	132	136	116	107	112
24	---	---	---	205	201	203	142	137	139	---	---	---
25	---	---	---	220	203	212	146	142	143	---	---	---
26	---	---	---	210	187	196	150	146	149	---	---	---
27	---	---	---	188	171	183	158	150	155	---	---	---
28	---	---	---	195	121	162	167	157	162	---	---	---
29	---	---	---	194	159	185	170	166	168	---	---	---
30	243	237	240	159	142	148	173	170	172	---	---	---
31	---	---	---	143	139	140	184	169	175	---	---	---
MONTH	---	---	---	251	121	214	233	78	155	---	---	---
YEAR	311	71	173									

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.9	6.7	6.9	6.8	6.6	6.7	7.6	7.0	7.2	7.6	7.5	7.6
2	7.1	6.9	7.0	6.7	6.7	6.7	7.1	7.0	7.0	7.6	7.5	7.6
3	7.2	7.1	7.2	---	---	---	7.2	7.1	7.2	7.6	7.6	7.6
4	7.2	7.1	7.2	7.1	6.9	7.1	7.3	7.2	7.2	7.6	7.5	7.5
5	7.3	7.2	7.2	7.3	7.1	7.1	7.3	7.2	7.3	7.7	7.6	7.6
6	7.3	7.2	7.3	7.4	7.2	7.3	7.4	7.3	7.3	7.6	7.5	7.6
7	7.3	7.2	7.3	7.4	7.3	7.3	7.5	7.4	7.4	7.6	7.5	7.5
8	7.3	7.2	7.3	7.4	7.3	7.4	7.5	7.4	7.5	7.6	7.5	7.6
9	7.4	7.2	7.3	7.7	7.4	7.5	7.5	7.4	7.4	7.6	7.6	7.6
10	7.4	7.2	7.3	7.7	7.6	7.7	7.7	7.4	7.6	7.7	7.6	7.6
11	7.4	7.3	7.3	7.7	7.6	7.6	7.7	7.2	7.6	7.7	7.6	7.6
12	7.5	7.2	7.4	7.7	7.6	7.6	7.6	7.2	7.2	7.8	7.7	7.7
13	7.7	7.3	7.4	7.7	7.6	7.6	7.3	7.2	7.2	7.8	7.7	7.8
14	7.7	7.2	7.5	7.7	7.7	7.7	7.4	7.3	7.3	7.7	7.7	7.7
15	7.5	7.2	7.3	7.8	7.7	7.8	7.5	7.4	7.4	7.8	7.6	7.7
16	7.3	7.1	7.2	7.8	7.7	7.8	7.5	7.4	7.5	---	---	---
17	7.1	7.0	7.0	7.9	7.7	7.8	7.5	7.5	7.5	7.9	7.8	7.8
18	7.1	6.9	7.0	7.9	7.9	7.9	7.6	7.5	7.6	7.9	7.8	7.9
19	7.2	7.0	7.1	7.9	7.8	7.9	7.6	7.6	7.6	7.9	7.9	7.9
20	7.3	7.1	7.2	7.8	7.6	7.7	7.6	7.6	7.6	7.9	7.8	7.9
21	7.5	7.2	7.3	7.8	7.3	7.7	7.6	7.6	7.6	7.9	7.9	7.9
22	7.5	7.3	7.4	7.4	7.3	7.3	7.6	7.6	7.6	7.9	7.8	7.9
23	7.6	7.4	7.5	7.5	7.3	7.4	7.6	7.6	7.6	7.9	7.8	7.9
24	7.7	7.4	7.6	7.6	7.4	7.5	7.7	7.5	7.6	7.9	7.9	7.9
25	7.8	7.4	7.6	7.6	7.5	7.6	7.7	7.4	7.5	8.0	7.9	7.9
26	7.7	7.4	7.6	7.7	7.6	7.6	7.4	7.4	7.4	8.0	7.9	8.0
27	---	---	---	7.6	7.5	7.6	7.4	7.4	7.4	8.0	7.9	7.9
28	7.1	7.0	7.1	7.6	7.5	7.6	7.5	7.4	7.5	8.0	7.9	7.9
29	7.0	6.6	6.7	7.8	7.6	7.8	7.5	7.4	7.5	8.0	8.0	8.0
30	6.7	6.6	6.7	7.6	7.5	7.6	7.5	7.5	7.5	8.0	7.9	8.0
31	6.7	6.6	6.6	---	---	---	7.5	7.5	7.5	8.0	8.0	8.0
MAX	7.8	7.4	7.6	7.9	7.9	7.9	7.7	7.6	7.6	8.0	8.0	8.0
MIN	6.7	6.6	6.6	6.7	6.6	6.7	7.1	7.0	7.0	7.6	7.5	7.5
	FEBRUARY			MARCH			APRIL			MAY		
1	8.0	8.0	8.0	9.5	9.2	9.4	---	---	---	7.7	7.2	7.4
2	8.0	8.0	8.0	9.4	9.2	9.3	---	---	---	7.6	6.9	7.2
3	8.0	8.0	8.0	9.4	9.1	9.2	---	---	---	7.5	7.0	7.2
4	8.0	7.9	8.0	9.2	8.5	8.9	---	---	---	7.4	7.0	7.3
5	8.0	7.9	8.0	---	---	---	---	---	---	7.3	6.9	7.1
6	8.0	7.7	7.9	---	---	---	---	---	---	7.6	6.8	7.4
7	7.8	7.7	7.7	---	---	---	9.0	8.0	8.7	7.6	7.3	7.4
8	7.8	7.7	7.8	---	---	---	8.8	8.0	8.6	7.6	7.2	7.4
9	8.0	7.8	7.8	---	---	---	9.0	7.6	8.5	7.6	7.2	7.3
10	8.0	7.8	7.9	---	---	---	9.0	8.1	8.7	7.8	7.3	7.6
11	8.0	7.8	8.0	---	---	---	8.8	7.8	8.0	7.8	7.4	7.6
12	8.1	7.9	8.0	---	---	---	8.6	7.6	8.1	7.6	7.4	7.5
13	8.2	8.0	8.1	8.5	7.6	8.0	8.1	7.4	7.7	7.6	7.3	7.4
14	8.4	8.0	8.1	8.8	7.7	8.2	7.5	7.2	7.3	7.6	7.3	7.4
15	8.5	8.2	8.3	9.0	7.8	8.6	7.6	7.3	7.4	7.6	7.2	7.5
16	8.5	8.3	8.4	8.8	7.8	8.1	7.5	7.2	7.3	7.6	7.2	7.3
17	8.7	8.3	8.6	8.9	7.8	8.4	8.0	7.3	7.5	7.6	7.3	7.5
18	8.8	8.6	8.7	9.2	8.0	8.8	8.1	7.2	7.6	7.6	7.3	7.4
19	8.9	8.6	8.8	9.2	8.3	8.9	---	---	---	7.7	7.4	7.6
20	9.0	8.7	8.8	9.2	8.3	8.9	8.5	7.6	8.3	7.8	7.4	7.6
21	9.0	8.8	8.9	9.0	8.0	8.7	8.6	7.5	8.3	7.8	7.6	7.6
22	9.1	8.8	9.0	9.2	7.9	8.8	8.7	7.5	8.4	8.0	7.4	7.6
23	9.2	8.9	9.0	9.2	8.3	8.9	8.4	7.5	7.9	8.2	7.7	7.8
24	9.1	8.9	9.0	9.1	7.7	8.9	8.6	7.3	8.0	8.4	7.6	7.9
25	9.3	8.8	9.1	9.1	7.9	8.4	8.6	7.6	7.8	8.6	7.9	8.2
26	9.4	9.0	9.2	9.1	7.6	8.4	7.7	7.2	7.4	8.3	7.8	8.0
27	9.5	9.2	9.3	---	---	---	7.3	7.0	7.2	8.2	7.8	7.9
28	9.5	9.2	9.3	---	---	---	7.3	7.0	7.1	8.0	7.7	7.8
29	9.5	9.2	9.4	---	---	---	7.8	7.0	7.5	7.8	7.6	7.7
30	---	---	---	---	---	---	8.0	7.2	7.6	7.9	7.6	7.7
31	---	---	---	---	---	---	---	---	---	7.7	7.6	7.6
MAX	9.5	9.2	9.4	---	---	---	---	---	---	8.6	7.9	8.2
MIN	7.8	7.7	7.7	---	---	---	---	---	---	7.3	6.8	7.1

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.6	7.8	8.8	7.9	8.5	7.6	7.4	7.5	8.0	7.7	7.8
2	8.1	7.8	7.9	8.9	7.7	8.6	7.8	7.5	7.7	7.8	7.5	7.7
3	8.1	7.8	7.9	8.7	7.5	8.5	7.9	7.6	7.8	7.7	7.4	7.5
4	8.2	7.7	7.9	8.8	7.3	8.4	8.0	7.7	7.8	8.1	7.6	7.8
5	8.0	7.8	7.8	8.6	7.6	8.1	7.9	7.6	7.7	7.9	7.7	7.8
6	7.9	7.6	7.7	9.1	8.1	8.7	8.1	7.7	7.8	8.4	7.7	8.0
7	8.0	7.7	7.9	9.0	8.3	8.7	8.1	7.7	7.9	8.5	7.9	8.2
8	8.2	7.7	8.0	8.8	8.0	8.5	8.3	7.7	7.9	8.5	8.1	8.2
9	8.5	7.9	8.1	8.8	7.5	8.2	8.5	7.8	8.1	8.1	7.7	7.8
10	8.4	7.8	8.0	8.7	7.7	8.2	8.6	7.8	8.3	7.7	7.6	7.6
11	8.2	7.7	8.0	8.9	7.8	8.3	8.7	7.9	8.3	7.6	7.4	7.5
12	8.6	7.6	8.1	8.6	7.6	7.8	8.7	7.9	8.2	7.5	7.4	7.4
13	8.7	7.9	8.3	7.7	7.5	7.6	8.6	7.7	8.2	7.6	7.4	7.5
14	8.7	8.0	8.3	7.6	7.5	7.5	7.7	7.0	7.1	7.8	7.5	7.6
15	---	---	---	7.6	7.4	7.5	7.2	7.0	7.1	7.8	7.6	7.6
16	---	---	---	7.8	7.6	7.7	7.3	7.1	7.2	7.9	7.6	7.7
17	---	---	---	8.0	7.6	7.8	7.4	7.3	7.4	7.9	7.6	7.7
18	---	---	---	7.8	7.7	7.7	7.4	7.3	7.4	7.9	7.4	7.7
19	8.8	8.2	8.6	7.9	7.7	7.8	7.4	7.3	7.4	7.7	7.0	7.1
20	8.8	8.1	8.5	8.1	7.8	7.9	7.6	7.3	7.4	7.2	7.0	7.1
21	8.9	8.1	8.6	8.1	7.8	7.9	7.6	7.5	7.5	7.3	7.2	7.2
22	9.0	8.2	8.6	8.2	7.8	8.0	7.6	7.5	7.5	7.3	7.3	7.3
23	9.1	7.9	8.8	8.0	7.8	7.8	7.5	7.5	7.5	7.4	7.3	7.3
24	9.0	8.0	8.6	7.8	7.6	7.7	7.6	7.5	7.6	---	---	---
25	9.0	7.8	8.5	8.0	7.7	7.8	7.7	7.5	7.6	---	---	---
26	8.8	7.9	8.2	8.2	7.8	7.9	7.8	7.6	7.7	---	---	---
27	8.6	7.5	8.2	7.9	7.6	7.8	7.8	7.6	7.7	---	---	---
28	8.7	7.3	8.1	7.7	7.3	7.5	8.0	7.6	7.8	---	---	---
29	8.8	7.5	8.4	7.7	7.6	7.6	8.1	7.7	7.8	---	---	---
30	8.9	8.0	8.5	7.6	7.3	7.4	8.0	7.7	7.8	---	---	---
31	---	---	---	7.5	7.4	7.4	8.1	7.7	7.8	---	---	---
MAX	9.1	8.2	8.8	9.1	8.3	8.7	8.7	7.9	8.3	---	---	---
MIN	7.9	7.3	7.7	7.5	7.3	7.4	7.2	7.0	7.1	---	---	---

YEAR			
	MAX	MAXIMUM 9.5	MINIMUM 6.7
	MIN	MAXIMUM 9.2	MINIMUM 6.6
	MEDIAN	MAXIMUM 9.4	MINIMUM 6.6

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.4	15.6	15.8	11.3	10.6	10.9	6.8	6.2	6.6	4.0	3.5	3.8
2	15.6	14.5	15.0	12.2	11.3	11.8	6.2	5.0	5.8	4.1	3.6	3.9
3	14.5	13.4	13.9	---	---	---	5.0	4.0	4.4	4.9	4.1	4.5
4	13.8	12.6	13.0	13.4	12.8	13.1	4.0	3.3	3.5	5.6	4.9	5.3
5	12.8	11.9	12.4	13.3	13.1	13.2	3.3	2.4	2.8	5.6	5.4	5.6
6	12.7	11.5	12.1	13.1	12.9	13.1	2.4	1.5	1.9	5.4	4.1	4.9
7	12.7	11.4	12.2	13.0	12.5	12.8	1.9	1.5	1.7	4.1	2.2	3.1
8	13.0	12.0	12.5	12.5	10.8	11.6	2.2	1.4	1.8	2.2	1.2	1.6
9	13.9	12.5	13.2	10.8	9.3	9.9	2.3	1.8	2.1	1.2	0.4	0.9
10	14.2	13.5	13.9	9.3	7.9	8.3	3.4	2.2	2.7	0.4	0.0	0.0
11	15.3	14.0	14.6	8.0	7.0	7.3	6.4	3.4	4.8	0.2	0.0	0.0
12	16.0	14.9	15.3	7.8	7.2	7.4	6.2	5.0	5.8	0.8	0.0	0.2
13	16.3	15.2	15.7	8.0	7.4	7.8	5.0	3.9	4.4	1.4	0.8	1.0
14	15.8	15.4	15.7	7.4	6.7	7.0	3.9	3.1	3.4	0.9	0.1	0.3
15	15.8	14.8	15.5	7.4	6.8	7.1	3.1	2.3	2.6	0.2	0.0	0.0
16	14.8	13.8	14.3	7.1	6.6	6.9	2.5	2.1	2.3	---	---	---
17	14.3	13.0	13.6	7.5	6.9	7.2	2.9	2.3	2.6	0.2	0.0	0.1
18	13.0	12.2	12.6	7.9	7.2	7.5	3.3	2.9	3.0	0.4	0.0	0.2
19	12.6	11.9	12.2	9.9	7.9	8.8	3.1	2.9	3.0	0.7	0.0	0.3
20	12.1	11.2	11.7	10.6	9.9	10.4	3.1	2.8	2.9	0.6	0.0	0.3
21	12.0	11.2	11.7	10.1	9.1	9.5	2.8	2.4	2.6	0.3	0.0	0.1
22	12.2	11.5	11.9	9.1	8.3	8.7	2.5	2.1	2.4	0.3	0.0	0.1
23	11.5	10.1	10.8	8.4	8.0	8.2	3.5	2.4	2.9	0.2	0.0	0.0
24	10.3	9.5	9.9	8.7	8.0	8.3	5.2	3.5	4.3	0.1	0.0	0.0
25	10.0	9.1	9.7	8.6	8.1	8.3	5.1	4.1	4.8	0.1	0.0	0.0
26	10.7	9.8	10.3	8.1	7.4	7.7	4.1	3.4	3.7	0.0	0.0	0.0
27	---	---	---	7.4	7.0	7.2	3.7	3.3	3.5	0.0	0.0	0.0
28	12.6	11.9	12.4	7.7	7.0	7.2	3.8	3.4	3.6	0.0	0.0	0.0
29	11.9	11.2	11.4	7.9	7.5	7.7	3.8	3.3	3.5	0.0	0.0	0.0
30	11.2	10.5	10.8	7.6	6.8	7.2	4.0	3.4	3.7	0.0	0.0	0.0
31	10.6	10.2	10.4	---	---	---	4.0	3.5	3.8	0.1	0.0	0.0
MONTH	16.4	9.1	12.8	13.4	6.6	9.0	6.8	1.4	3.4	5.6	0.0	1.2
		FEBRUARY			MARCH			APRIL			MAY	
1	0.1	0.0	0.0	6.6	5.2	5.9	9.6	9.0	9.3	17.2	15.0	16.0
2	0.0	0.0	0.0	7.1	5.9	6.5	9.5	8.7	9.0	17.8	16.8	17.3
3	0.0	0.0	0.0	7.7	6.5	7.1	8.7	8.4	8.6	17.8	16.4	17.3
4	1.0	0.0	0.3	7.5	6.6	7.1	8.7	7.9	8.5	16.4	15.4	15.8
5	2.2	0.9	1.6	---	---	---	7.9	6.7	7.3	15.5	14.2	14.7
6	2.2	1.0	1.9	---	---	---	8.1	6.4	7.3	15.4	13.7	14.7
7	2.2	0.9	1.6	---	---	---	9.2	7.7	8.4	15.9	14.2	15.1
8	2.2	1.1	1.5	---	---	---	9.1	8.4	8.9	16.3	14.8	15.6
9	1.6	0.7	1.2	---	---	---	10.6	8.8	9.6	16.9	15.0	15.9
10	3.0	1.6	2.3	---	---	---	11.3	9.6	10.5	18.0	16.3	17.2
11	3.6	2.7	3.0	---	---	---	10.8	9.8	10.3	19.7	17.5	18.5
12	3.0	2.6	2.9	---	---	---	10.2	9.6	9.9	20.5	18.8	19.7
13	3.4	2.3	2.8	5.8	4.6	5.2	9.6	9.0	9.2	21.4	19.6	20.5
14	3.7	2.7	3.1	5.5	4.5	5.0	9.5	9.2	9.4	21.1	19.7	20.4
15	3.2	2.1	2.8	6.3	4.8	5.6	10.3	8.9	9.6	21.7	19.7	20.8
16	2.3	1.4	1.8	6.2	4.3	5.1	10.8	9.2	10.0	22.1	20.5	21.4
17	2.2	1.3	1.7	4.3	4.0	4.2	12.4	10.1	11.1	22.0	20.7	21.3
18	3.4	1.9	2.5	5.0	3.8	4.4	13.8	11.7	12.7	21.4	20.4	21.0
19	4.0	2.5	3.2	5.4	4.2	4.9	---	---	---	21.4	20.4	20.9
20	4.1	3.2	3.6	6.2	4.7	5.5	16.4	14.9	15.7	21.5	20.0	20.7
21	5.0	3.8	4.4	6.6	5.9	6.2	16.3	15.3	15.9	20.8	20.1	20.5
22	5.2	4.2	4.6	6.2	5.2	5.8	17.1	15.4	16.3	22.8	20.4	21.4
23	5.2	4.1	4.6	6.2	4.8	5.6	17.2	16.4	16.9	23.9	22.0	22.9
24	4.9	4.0	4.6	6.7	5.1	6.0	16.9	15.4	16.1	25.2	23.3	24.1
25	4.3	3.1	3.7	6.8	6.4	6.6	16.3	14.3	15.2	25.6	23.8	24.6
26	4.1	3.0	3.5	8.5	6.8	7.5	14.3	13.4	13.8	24.5	22.2	23.3
27	4.5	3.4	3.9	9.4	8.3	8.8	13.9	12.8	13.4	23.0	21.7	22.3
28	5.3	3.5	4.3	10.7	9.3	9.9	13.9	12.4	13.1	22.8	22.0	22.5
29	6.1	4.3	5.1	11.1	9.9	10.6	14.2	12.2	13.2	22.1	20.5	21.1
30	---	---	---	10.8	9.8	10.1	15.7	13.4	14.5	21.2	19.5	20.5
31	---	---	---	9.8	9.2	9.4	---	---	---	20.9	19.1	19.9
MONTH	6.1	0.0	2.6	---	---	---	17.2	6.4	11.5	25.6	13.7	19.6

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	18.6	19.3	26.2	23.7	25.0	24.3	23.2	23.8	24.3	22.8	23.6
2	20.6	19.1	19.8	27.9	24.4	26.1	25.4	23.7	24.4	23.8	22.7	23.3
3	21.2	19.6	20.3	28.4	25.4	26.9	26.3	24.9	25.5	23.5	22.1	22.9
4	21.2	20.1	20.6	28.1	25.5	26.7	27.3	25.7	26.5	23.7	22.5	23.1
5	20.5	19.1	19.9	28.4	25.3	26.8	26.8	25.5	26.2	23.1	21.6	22.6
6	19.1	18.2	18.6	28.5	26.2	27.4	25.5	23.8	24.5	22.2	20.8	21.5
7	20.3	17.8	18.9	28.5	25.6	27.1	23.8	22.3	23.1	23.3	21.5	22.3
8	21.7	19.5	20.5	28.9	26.2	27.5	23.4	21.6	22.4	23.4	22.3	22.8
9	23.6	21.3	22.3	27.7	26.1	26.9	24.4	22.1	23.2	22.7	22.2	22.5
10	24.4	23.3	23.8	27.6	24.5	26.1	24.8	22.6	23.7	22.3	21.4	21.9
11	23.5	22.0	22.7	28.3	25.4	26.8	25.4	23.3	24.3	21.8	20.8	21.2
12	23.6	21.3	22.4	27.1	23.6	25.3	25.2	23.7	24.4	21.4	20.3	20.9
13	22.7	21.2	22.1	23.8	22.3	22.8	24.7	23.6	24.2	21.7	20.0	20.8
14	21.8	20.8	21.3	23.1	22.2	22.5	23.6	20.3	21.5	21.4	20.4	20.8
15	24.2	21.2	22.6	23.2	21.4	22.3	21.0	20.2	20.5	20.5	20.1	20.3
16	24.8	23.2	24.1	23.3	21.9	22.5	21.3	20.3	20.8	21.2	20.3	20.7
17	26.3	24.1	25.1	24.3	22.2	23.2	22.1	20.7	21.4	21.1	20.5	20.8
18	27.5	24.9	26.1	23.7	22.4	23.3	21.9	21.0	21.5	21.3	18.3	20.3
19	27.1	25.7	26.5	23.5	22.2	22.7	21.8	20.9	21.4	18.3	16.4	17.3
20	25.8	24.1	24.9	24.8	22.6	23.5	23.0	21.2	22.1	16.5	16.0	16.3
21	25.5	23.2	24.4	25.6	23.7	24.5	23.0	22.2	22.7	17.0	16.2	16.5
22	24.4	23.3	23.9	26.1	24.6	25.3	22.2	20.7	21.2	17.6	16.6	17.0
23	24.6	22.5	23.5	25.8	25.1	25.5	21.0	19.8	20.4	18.3	17.2	17.7
24	25.7	23.3	24.5	25.1	23.8	24.5	21.2	20.0	20.7	---	---	---
25	25.9	23.9	24.8	24.4	23.3	23.7	21.9	20.6	21.2	---	---	---
26	25.6	24.2	24.8	25.3	23.4	24.2	22.1	20.8	21.5	---	---	---
27	25.4	23.2	24.4	24.5	23.3	24.0	22.9	21.3	22.1	---	---	---
28	25.7	23.0	24.3	23.3	21.7	22.1	23.5	21.9	22.7	---	---	---
29	25.6	23.0	24.3	23.8	21.8	22.7	24.4	22.9	23.6	---	---	---
30	25.8	23.0	24.5	23.7	22.4	23.1	24.2	23.6	23.9	---	---	---
31	---	---	---	23.9	22.1	23.0	24.7	23.8	24.2	---	---	---
MONTH	27.5	17.8	22.8	28.9	21.4	24.6	27.3	19.8	22.9	---	---	---
YEAR	28.9	0.0	13.2									

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.0	9.7	9.9	11.0	10.7	10.8	12.6	11.9	12.3	14.2	14.0	14.1
2	10.2	9.8	10.0	10.8	10.3	10.7	13.1	12.5	12.8	14.2	13.9	14.1
3	10.5	10.1	10.3	---	---	---	13.7	13.1	13.5	14.1	13.7	13.9
4	10.6	10.3	10.5	10.5	10.2	10.4	14.1	13.5	13.9	13.7	13.3	13.5
5	10.9	10.5	10.7	10.4	10.2	10.3	14.2	13.9	14.0	13.5	13.2	13.4
6	11.0	10.6	10.8	10.4	10.2	10.3	14.5	13.9	14.2	13.9	13.3	13.6
7	11.0	10.6	10.8	10.5	10.3	10.4	14.4	14.3	14.4	14.7	13.9	14.3
8	10.9	10.6	10.8	11.0	10.4	10.8	14.5	14.3	14.4	15.2	14.6	15.0
9	10.8	10.5	10.6	11.6	11.0	11.4	14.4	14.2	14.3	15.4	15.2	15.3
10	10.5	10.1	10.3	12.1	11.5	11.9	14.3	13.6	14.1	15.8	15.3	15.6
11	10.5	10.0	10.2	12.4	12.0	12.2	13.6	12.1	12.9	15.7	15.5	15.6
12	10.4	9.7	10.0	12.3	11.7	12.1	12.6	12.1	12.3	15.5	15.0	15.2
13	10.5	9.6	10.0	11.9	11.5	11.7	13.1	12.2	12.8	15.0	14.6	14.8
14	10.4	9.3	9.9	12.2	11.6	12.0	13.5	12.7	13.2	15.0	14.7	14.9
15	9.8	9.3	9.5	12.2	11.9	12.1	13.9	13.2	13.6	15.6	14.7	15.1
16	10.0	9.4	9.7	12.4	11.9	12.1	14.1	13.9	14.0	---	---	---
17	10.1	9.7	10	12.5	11.9	12.2	14.1	13.6	13.9	15.4	15.2	15.3
18	10.5	10.1	10.3	12.4	12.1	12.3	13.7	13.5	13.6	15.2	14.7	14.9
19	10.7	10.1	10.4	12.1	11.2	11.7	13.8	13.6	13.7	14.9	14.7	14.8
20	11.2	10.4	10.7	11.2	10.6	10.9	14.0	13.6	13.8	15.1	14.7	14.9
21	11.3	10.6	10.9	11.3	10.9	11.1	14.3	13.9	14.1	15.6	15.1	15.2
22	11.0	10.6	10.8	11.7	11.1	11.4	14.4	14.2	14.4	15.2	14.9	15.1
23	11.3	10.7	11.0	12.0	11.6	11.8	14.4	14.0	14.2	15.1	14.9	15.0
24	12.0	11.2	11.6	12.0	11.7	11.9	14.0	13.2	13.6	15.1	14.9	15.0
25	12.4	10.7	11.9	12.0	11.6	11.8	13.5	13.1	13.3	15.2	15.0	15.1
26	12.0	11.5	11.8	12.3	11.9	12.1	13.8	13.5	13.7	15.1	15.0	15.1
27	---	---	---	12.5	12.0	12.2	14.0	13.8	13.9	15.1	14.8	14.9
28	10.4	10.2	10.3	12.3	11.8	12.1	14.1	13.9	14.0	14.8	14.5	14.7
29	10.6	10.2	10.4	12.0	11.3	11.7	14.2	13.8	14.1	14.7	14.5	14.6
30	10.8	10.0	10.6	12.1	11.5	11.8	14.1	13.9	14.0	14.6	14.4	14.5
31	10.9	10.0	10.7	---	---	---	14.2	13.8	14.0	14.5	14.3	14.4
MONTH	12.4	9.3	10.5	12.5	10.2	11.5	14.5	11.9	13.7	15.8	13.2	14.7
		FEBRUARY			MARCH			APRIL			MAY	
1	14.6	14.4	14.5	18.4	14.6	16.6	---	---	---	11.1	8.9	9.8
2	15.2	14.4	14.9	17.7	14.4	16.1	---	---	---	9.8	6.2	8.2
3	15.1	14.5	14.7	17.6	14.1	15.7	---	---	---	10.2	7.8	9.0
4	14.5	14.2	14.3	15.4	12.9	13.9	---	---	---	11.2	7.7	9.8
5	14.8	14.2	14.4	---	---	---	---	---	---	11.8	9.1	10.3
6	14.5	14.0	14.2	---	---	---	---	---	---	11.7	9.7	10.4
7	14.6	13.7	14.2	---	---	---	14.4	12.4	13.3	10.0	9.2	9.7
8	14.6	13.8	14.3	---	---	---	13.9	11.8	13.0	---	---	---
9	15.0	14.5	14.7	---	---	---	14.8	11.2	13.0	---	---	---
10	14.8	13.9	14.3	---	---	---	14.9	11.5	13.3	---	---	---
11	14.2	13.7	13.9	---	---	---	13.2	11.0	12.0	---	---	---
12	14.6	13.5	14.0	---	---	---	13.9	11.4	12.7	---	---	---
13	14.6	13.9	14.2	15.2	13.2	14.1	---	---	---	---	---	---
14	14.9	13.8	14.3	15.5	13.6	14.5	---	---	---	---	---	---
15	15.0	13.9	14.5	16.0	13.6	14.7	---	---	---	9.2	7.4	8.7
16	15.6	14.4	15.0	14.3	12.9	13.6	---	---	---	8.8	7.4	8.3
17	16.1	14.8	15.5	15.9	13.4	14.6	---	---	---	9.2	7.5	8.6
18	16.0	14.8	15.4	16.9	14.1	15.3	---	---	---	9.0	8.0	8.6
19	15.8	14.4	15.1	16.6	13.9	15.2	---	---	---	9.2	7.8	8.8
20	16.0	14.2	15.1	17.0	13.9	15.3	---	---	---	9.5	8.6	9.1
21	15.8	13.9	14.9	14.9	13.1	14.1	---	---	---	9.5	8.6	9.1
22	16.3	13.7	14.9	16.4	12.5	14.4	---	---	---	9.8	7.6	9.0
23	16.8	14.0	15.4	16.4	13.3	14.7	---	---	---	9.7	8.7	9.2
24	15.7	13.9	14.8	16.6	11.9	14.5	---	---	---	9.8	8.2	8.9
25	17.6	14.1	15.7	14.5	12.8	13.5	---	---	---	10.0	8.0	8.9
26	18.5	15.0	16.6	15.8	11.0	13.5	---	---	---	8.8	7.9	8.3
27	18.7	15.3	16.9	---	---	---	---	---	---	9.4	8.0	8.7
28	18.8	15.2	16.8	---	---	---	---	---	---	8.9	8.1	8.5
29	18.4	14.7	16.6	---	---	---	---	---	---	9.3	8.1	8.7
30	---	---	---	---	---	---	11.4	9.4	10.5	9.7	8.6	9.1
31	---	---	---	---	---	---	---	---	---	9.1	8.6	8.9
MONTH	18.8	13.5	15.0	---	---	---	---	---	---	---	---	---

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.1	8.8	9.0	11.1	8.2	9.7	---	---	---	9.1	8.1	8.6
2	9.3	8.7	8.9	12.0	7.4	9.6	---	---	---	9.1	8.4	8.7
3	9.3	8.3	8.9	11.4	7.0	9.4	8.4	7.8	8.1	8.8	7.5	8.4
4	9.5	8.2	8.9	10.8	6.0	8.9	8.3	7.3	7.8	9.5	8.3	8.9
5	8.9	8.4	8.7	10.3	5.9	7.9	8.2	7.1	7.7	9.2	7.7	8.6
6	9.4	8.4	8.9	11.3	8.0	9.6	8.9	7.7	8.2	10.2	8.7	9.4
7	10.0	9.0	9.5	10.9	7.5	9.1	9.2	7.9	8.5	10.4	8.8	9.5
8	10.1	8.8	9.5	10.3	7.1	8.6	9.6	8.3	8.9	9.9	8.7	9.2
9	10.1	8.8	9.4	10.1	6.3	8.3	9.9	8.3	9.1	9.1	8.1	8.6
10	9.8	8.2	8.9	10.3	7.2	8.8	10.2	8.3	9.2	8.7	8.0	8.5
11	9.5	7.6	8.7	10.3	7.1	8.6	10.3	8.2	9.1	9.0	8.6	8.8
12	10.5	8.4	9.4	8.9	7.2	7.7	10.2	8.0	8.9	9.1	8.6	8.9
13	10.8	8.7	9.7	8.0	7.2	7.7	9.8	7.7	8.5	9.3	8.8	9.0
14	11.0	9.1	9.9	8.0	7.5	7.7	8.5	7.8	8.1	9.4	8.7	9.0
15	11.8	9.2	10.5	8.2	7.6	8.0	8.6	8.4	8.5	9.3	8.7	9.0
16	12.0	8.5	10.3	8.7	7.6	8.1	8.9	8.4	8.6	9.2	8.5	8.9
17	11.1	8.3	9.8	8.7	7.7	8.2	8.7	8.1	8.4	9.3	8.4	8.8
18	10.5	7.8	9.2	8.2	7.6	7.9	8.6	8.2	8.4	8.9	8.4	8.6
19	9.9	8.0	9.0	8.4	7.6	8.0	8.6	8.2	8.4	9.6	8.4	9.0
20	10.1	7.8	8.9	8.5	7.8	8.1	8.7	8.1	8.4	10.0	9.6	9.9
21	10.3	7.9	9.1	8.5	7.4	8.0	8.6	7.9	8.3	10.3	10.0	10.2
22	10.7	8.2	9.3	8.2	7.1	7.7	8.8	8.3	8.6	10.7	10.3	10.4
23	11.4	7.9	9.7	7.6	7.0	7.2	9.1	8.7	9.0	10.6	10.3	10.4
24	11.1	7.7	9.6	7.2	6.8	7.0	9.2	9.0	9.1	---	---	---
25	10.9	7.7	9.4	7.5	6.8	7.1	9.3	8.7	9.1	---	---	---
26	10.6	8.0	9.1	7.5	6.7	7.1	9.4	8.9	9.1	---	---	---
27	11.2	7.9	9.6	---	---	---	9.3	8.7	9.0	---	---	---
28	11.3	8.2	9.8	---	---	---	9.4	8.6	9.0	---	---	---
29	11.3	8.6	9.9	---	---	---	9.3	8.4	8.8	---	---	---
30	11.5	8.3	9.9	---	---	---	9.0	8.2	8.6	---	---	---
31	---	---	---	---	---	---	9.2	8.2	8.6	---	---	---
MONTH	12.0	7.6	9.4	12.0	5.9	8.2	10.3	7.1	8.6	---	---	---
YEAR	18.8	5.9	11.4									

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN DIS. PERCENT, IN % OF SATURATION, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	101	99	100	99	97	98	102	97	101	---	---	---
2	102	98	100	100	96	99	104	101	102	---	---	---
3	103	98	100	---	---	---	105	102	104	109	107	107
4	101	98	99	100	97	99	106	102	104	107	105	106
5	103	98	100	100	97	99	105	102	104	108	105	107
6	103	99	101	99	97	98	104	102	103	107	105	106
7	104	98	101	100	98	99	104	102	103	108	105	107
8	104	99	101	101	97	99	105	103	104	109	106	107
9	105	99	102	103	99	101	105	102	104	108	106	108
10	102	99	100	104	99	102	105	102	104	108	106	107
11	105	97	101	103	100	101	103	98	101	108	106	107
12	106	96	100	103	98	101	100	96	98	106	105	105
13	107	96	101	100	97	99	100	96	99	106	103	104
14	105	94	100	101	96	99	102	95	100	104	102	103
15	99	93	95	102	98	100	102	98	100	107	101	103
16	99	92	95	103	97	100	103	101	102	---	---	---
17	97	95	96	104	98	102	103	101	102	106	104	105
18	100	95	97	104	101	102	102	100	101	104	102	103
19	100	94	97	103	99	101	103	101	102	104	101	102
20	104	95	99	99	95	97	104	101	103	105	101	103
21	105	97	101	99	96	98	105	102	104	107	104	105
22	102	98	100	100	96	98	106	104	105	104	102	104
23	102	97	99	102	98	100	107	104	106	104	102	103
24	107	98	102	103	100	102	106	104	105	104	102	103
25	110	94	105	103	99	101	104	103	104	104	103	104
26	108	103	105	103	100	102	104	103	104	104	103	104
27	---	---	---	104	99	102	106	104	105	104	101	102
28	98	96	97	102	99	101	107	105	106	101	99	100
29	98	94	96	100	95	98	108	104	106	101	99	100
30	98	90	96	100	95	98	107	105	106	100	99	99
31	98	90	96	---	---	---	109	104	107	100	98	99
MONTH	110	90	99	104	95	100	109	95	103	109	98	104
		FEBRUARY			MARCH			APRIL			MAY	
1	100	99	99	150	115	134	---	---	---	114	88	99
2	104	99	102	146	116	131	---	---	---	103	64	86
3	104	99	101	148	115	130	---	---	---	105	81	93
4	101	97	99	128	106	116	---	---	---	113	77	99
5	108	101	104	---	---	---	---	---	---	117	89	102
6	105	102	103	---	---	---	---	---	---	116	97	102
7	103	100	102	---	---	---	125	104	114	100	93	97
8	104	100	102	---	---	---	120	101	112	---	---	---
9	107	103	105	---	---	---	133	97	114	---	---	---
10	109	101	105	---	---	---	136	102	119	---	---	---
11	107	101	104	---	---	---	119	99	108	---	---	---
12	109	100	104	---	---	---	124	100	112	---	---	---
13	109	102	105	121	103	111	---	---	---	---	---	---
14	113	102	107	122	106	114	---	---	---	---	---	---
15	112	103	107	130	106	117	---	---	---	105	81	97
16	114	103	108	116	101	107	---	---	---	100	82	94
17	117	105	111	123	102	112	---	---	---	105	86	97
18	120	107	113	132	107	119	---	---	---	102	90	96
19	121	107	113	132	107	119	---	---	---	103	88	99
20	123	106	114	138	109	121	---	---	---	108	95	102
21	124	106	115	122	105	115	---	---	---	106	96	101
22	129	105	116	133	99	116	---	---	---	114	84	103
23	132	108	120	133	104	117	---	---	---	115	100	107
24	122	109	115	136	95	117	---	---	---	119	96	106
25	136	106	119	119	104	111	---	---	---	123	95	107
26	142	112	126	134	90	113	---	---	---	106	94	98
27	145	115	129	---	---	---	---	---	---	110	91	100
28	149	115	130	---	---	---	---	---	---	104	93	98
29	148	114	131	---	---	---	---	---	---	105	91	98
30	---	---	---	---	---	---	114	91	103	110	94	101
31	---	---	---	---	---	---	---	---	---	102	95	98
MONTH	149	97	111	---	---	---	---	---	---	---	---	---

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN DIS. PERCENT, IN % OF SATURATION, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	100	94	98	138	97	118	---	---	---	109	95	102
2	104	94	98	153	89	120	---	---	---	107	99	102
3	105	91	98	147	86	119	102	96	100	104	87	98
4	107	91	99	138	74	111	105	90	98	113	96	104
5	99	92	96	133	72	99	102	89	96	106	90	100
6	101	90	95	146	100	122	108	93	99	117	98	106
7	111	95	103	141	92	115	108	92	100	122	100	110
8	115	96	106	134	88	110	113	94	103	117	100	107
9	119	100	109	128	78	104	119	95	107	106	93	99
10	118	96	106	131	87	109	123	96	109	100	92	98
11	110	89	101	132	87	108	126	96	109	102	98	100
12	124	95	109	112	89	94	124	95	107	103	95	99
13	125	99	112	93	85	90	118	92	102	106	98	101
14	126	102	113	94	87	90	94	90	92	106	98	101
15	141	104	122	96	88	93	97	93	95	103	96	100
16	145	100	123	102	87	94	99	95	96	104	94	100
17	138	99	119	104	89	96	100	91	96	105	94	99
18	133	95	114	97	90	93	98	92	96	100	91	96
19	124	99	112	99	88	93	97	93	95	98	89	94
20	124	93	108	103	91	96	101	92	97	103	98	101
21	126	93	110	104	88	96	100	92	97	106	102	105
22	128	96	111	102	86	94	100	94	97	112	106	108
23	137	92	114	93	86	89	102	97	100	113	108	110
24	136	91	115	88	82	84	104	99	102	---	---	---
25	135	92	114	90	80	84	106	97	102	---	---	---
26	130	96	111	---	---	---	108	101	104	---	---	---
27	137	93	115	---	---	---	109	99	104	---	---	---
28	138	96	118	---	---	---	111	99	104	---	---	---
29	139	101	118	---	---	---	112	98	104	---	---	---
30	142	97	119	---	---	---	108	97	102	---	---	---
31	---	---	---	---	---	---	111	97	103	---	---	---
MONTH	145	89	110	153	72	101	126	89	101	---	---	---
YEAR	153	64	104									

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TURBIDITY, FIELD, IN (NTU), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20	5.7	12	29	8.1	16	10	3.9	6.5	6.4	2.9	4.4
2	7.8	2.9	5.7	16	7.6	11	8.7	2.9	5.6	5.1	2.7	3.8
3	7.8	3.5	6.1	---	---	---	5.0	2.5	3.6	5.3	3.0	4.3
4	8.9	3.0	4.7	---	---	---	3.4	<2.0	2.4	4.8	3.0	3.9
5	4.9	2.5	3.4	6.9	<2.0	2.9	2.9	<2.0	2.0	10	3.1	4.9
6	3.7	<2.0	2.7	13	<2.0	4.8	3.2	<2.0	<2.0	10	5.6	8.0
7	4.0	<2.0	2.3	4.4	<2.0	2.9	2.5	<2.0	<2.0	11	4.5	8.8
8	3.5	<2.0	2.3	4.6	<2.0	2.6	3.3	<2.0	<2.0	8.3	4.8	6.1
9	4.0	<2.0	2.7	3.6	<2.0	2.3	3.1	<2.0	<2.0	5.4	<2.0	3.7
10	3.7	<2.0	2.6	3.0	<2.0	2.0	2.9	<2.0	<2.0	4.5	2.3	3.1
11	3.7	<2.0	2.6	2.6	<2.0	<2.0	250	<2.0	84	3.6	<2.0	2.8
12	5.8	<2.0	3.0	2.6	<2.0	<2.0	120	14	46	4.6	2.4	3.2
13	4.1	<2.0	2.5	2.4	<2.0	<2.0	41	15	27	3.9	<2.0	3.0
14	3.0	<2.0	<2.0	2.6	<2.0	<2.0	26	5.5	14	3.9	<2.0	3.0
15	16	<2.0	7.0	2.3	<2.0	<2.0	16	6.3	9.8	3.5	<2.0	2.7
16	21	6.0	10	2.2	<2.0	<2.0	9.0	4.0	6.7	---	---	---
17	11	4.1	6.9	2.9	<2.0	<2.0	28	4.2	11	3.8	<2.0	2.3
18	8.6	4.5	6.1	2.7	<2.0	<2.0	21	6.7	13	3.4	<2.0	2.2
19	6.6	3.6	4.9	30	<2.0	3.4	8.2	3.0	5.9	3.5	<2.0	2.3
20	4.9	<2.0	3.1	81	11	41	5.4	2.1	3.9	2.9	<2.0	<2.0
21	3.2	<2.0	<2.0	23	5.2	11	4.2	<2.0	3.1	2.2	<2.0	<2.0
22	3.3	<2.0	<2.0	30	8.6	15	4.3	2.2	3.1	3.3	<2.0	<2.0
23	2.2	<2.0	<2.0	11	2.6	6.0	3.9	<2.0	2.7	4.4	<2.0	<2.0
24	2.5	<2.0	<2.0	6.0	2.2	4.1	59	<2.0	20	<2.0	<2.0	<2.0
25	3.2	<2.0	<2.0	5.0	<2.0	3.2	42	11	24	<2.0	<2.0	<2.0
26	<2.0	<2.0	<2.0	4.3	<2.0	2.8	50	14	26	<2.0	<2.0	<2.0
27	---	---	---	3.6	<2.0	2.1	31	6.1	14	<2.0	<2.0	<2.0
28	110	9.8	41	2.8	<2.0	<2.0	13	5.3	8.9	<2.0	<2.0	<2.0
29	37	9.0	22	21	2.6	9.7	9.0	4.1	6.1	<2.0	<2.0	<2.0
30	65	15	27	25	3.2	9.3	6.7	3.5	5.3	<2.0	<2.0	<2.0
31	43	15	29	---	---	---	6.7	3.8	5.4	<2.0	<2.0	<2.0
MONTH	110	<2.0	---	81	<2.0	---	250	<2.0	---	11	<2.0	---
		FEBRUARY			MARCH			APRIL			MAY	
1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.3	<2.0	<2.0	---	---	---
2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.8	<2.0	<2.0	---	---	---
3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.2	<2.0	<2.0	---	---	---
4	7.5	<2.0	2.8	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	---	---	---
5	8.3	3.0	5.2	---	---	---	2.1	<2.0	<2.0	---	---	---
6	51	2.1	16	---	---	---	<2.0	<2.0	<2.0	---	---	---
7	44	21	30	---	---	---	<2.0	<2.0	<2.0	4.4	<2.0	<2.0
8	28	11	21	---	---	---	<2.0	<2.0	<2.0	3.8	<2.0	<2.0
9	15	5.1	9.5	---	---	---	<2.0	<2.0	<2.0	3.1	<2.0	<2.0
10	7.8	2.3	4.7	---	---	---	<2.0	<2.0	<2.0	3.1	<2.0	<2.0
11	5.5	2.3	3.7	---	---	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
12	3.2	<2.0	2.4	---	---	---	<2.0	<2.0	<2.0	4.0	<2.0	<2.0
13	3.0	<2.0	2.1	3.9	<2.0	<2.0	33	<2.0	9.4	2.8	<2.0	<2.0
14	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	89	7.3	30	6.5	<2.0	2.1
15	2.2	<2.0	<2.0	<2.0	<2.0	<2.0	18	4.6	11	7.1	<2.0	3.0
16	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	7.2	<2.0	2.9	8.6	<2.0	3.3
17	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5.5	<2.0	2.5	9.5	<2.0	5.2
18	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.1	<2.0	2.2	3.1	<2.0	<2.0
19	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	---	---	5.7	<2.0	3.3
20	<2.0	<2.0	<2.0	2.1	<2.0	<2.0	2.6	<2.0	<2.0	5.1	2.0	3.0
21	<2.0	<2.0	<2.0	5.9	<2.0	3.2	3.1	<2.0	<2.0	5.3	<2.0	3.2
22	<2.0	<2.0	<2.0	3.0	<2.0	<2.0	2.9	<2.0	<2.0	5.4	<2.0	3.1
23	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.2	<2.0	<2.0	7.3	2.2	5.0
24	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.5	<2.0	<2.0	3.5	<2.0	2.2
25	2.6	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	5.8	<2.0	2.3
26	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.0	<2.0	<2.0	4.4	<2.0	2.3
27	<2.0	<2.0	<2.0	2.1	<2.0	<2.0	13	<2.0	6.4	3.6	<2.0	<2.0
28	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.5	<2.0	2.9	5.7	<2.0	2.8
29	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	8.1	2.1	4.2	7.7	<2.0	3.8
30	---	---	---	<2.0	<2.0	<2.0	---	---	---	4.8	<2.0	2.7
31	---	---	---	3.7	<2.0	<2.0	---	---	---	---	---	---
MONTH	51	<2.0	---	---	<2.0	---	89	<2.0	---	9.5	<2.0	---

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TURBIDITY, FIELD, IN (NTU), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.3	<2.0	2.8	2.5	<2.0	<2.0	160	3.0	34	15	6.8	9.7
2	5.6	<2.0	2.9	7.1	<2.0	<2.0	30	2.9	12	27	6.8	11
3	6.1	<2.0	3.0	4.9	<2.0	<2.0	8.4	2.7	5.3	31	5.2	18
4	4.3	<2.0	2.1	<2.0	<2.0	<2.0	9.4	2.3	5.1	15	5.2	8.6
5	3.8	<2.0	2.4	<2.0	<2.0	<2.0	7.1	<2.0	4.1	7.5	2.2	3.9
6	4.7	<2.0	2.0	<2.0	<2.0	<2.0	5.0	2.0	3.6	5.0	2.5	3.4
7	3.8	<2.0	2.3	<2.0	<2.0	<2.0	3.6	<2.0	2.4	3.1	<2.0	2.2
8	4.9	<2.0	2.3	<2.0	<2.0	<2.0	2.5	<2.0	<2.0	3.3	<2.0	<2.0
9	4.3	<2.0	2.9	<2.0	<2.0	<2.0	2.4	<2.0	<2.0	120	<2.0	25
10	2.4	<2.0	<2.0	2.2	<2.0	<2.0	<2.0	<2.0	<2.0	100	18	29
11	3.5	<2.0	<2.0	6.7	<2.0	<2.0	13	<2.0	<2.0	30	14	21
12	3.5	<2.0	2.3	21	<2.0	3.5	13	<2.0	<2.0	16	3.1	10
13	2.7	<2.0	<2.0	67	<2.0	28	45	<2.0	4.0	12	4.2	8.4
14	2.3	<2.0	<2.0	30	12	20	160	30	97	7.5	2.5	4.9
15	2.7	<2.0	<2.0	110	11	40	130	26	54	6.4	<2.0	3.6
16	2.8	<2.0	2.2	18	2.5	6.7	33	9.4	18	4.3	<2.0	3.4
17	2.8	<2.0	2.2	6.0	2.1	4.2	15	2.6	9.7	3.9	<2.0	2.5
18	2.7	<2.0	<2.0	25	2.9	7.1	18	4.8	9.9	760	<2.0	210
19	3.0	<2.0	2.1	14	2.3	5.5	26	7.0	15	500	300	360
20	3.4	<2.0	2.4	8.4	3.4	6.0	23	4.2	9.4	310	72	180
21	3.2	2.0	2.7	6.8	2.5	4.6	15	2.2	7.0	72	34	51
22	3.9	2.2	2.8	5.1	2.1	3.3	720	14	73	41	23	29
23	4.4	<2.0	2.5	5.1	<2.0	2.8	36	11	20	24	18	21
24	6.4	<2.0	2.3	12	4.7	8.2	14	6.7	10	---	---	---
25	6.2	<2.0	2.3	13	3.5	7.8	10	3.7	6.6	---	---	---
26	6.2	<2.0	2.4	5.7	2.2	3.8	6.8	4.0	5.4	---	---	---
27	4.4	<2.0	2.1	88	<2.0	10	6.7	3.5	4.5	---	---	---
28	6.9	<2.0	2.3	210	12	79	5.2	2.9	3.7	---	---	---
29	6.3	<2.0	2.1	46	12	27	4.1	2.0	3.1	---	---	---
30	2.5	<2.0	<2.0	30	<2.0	11	5.2	2.8	3.7	---	---	---
31	---	---	---	21	4.3	10	10	2.4	3.9	---	---	---
MONTH	6.9	<2.0	---	210	<2.0	---	720	<2.0	---	---	<2.0	---
YEAR	760	<2.0	---									

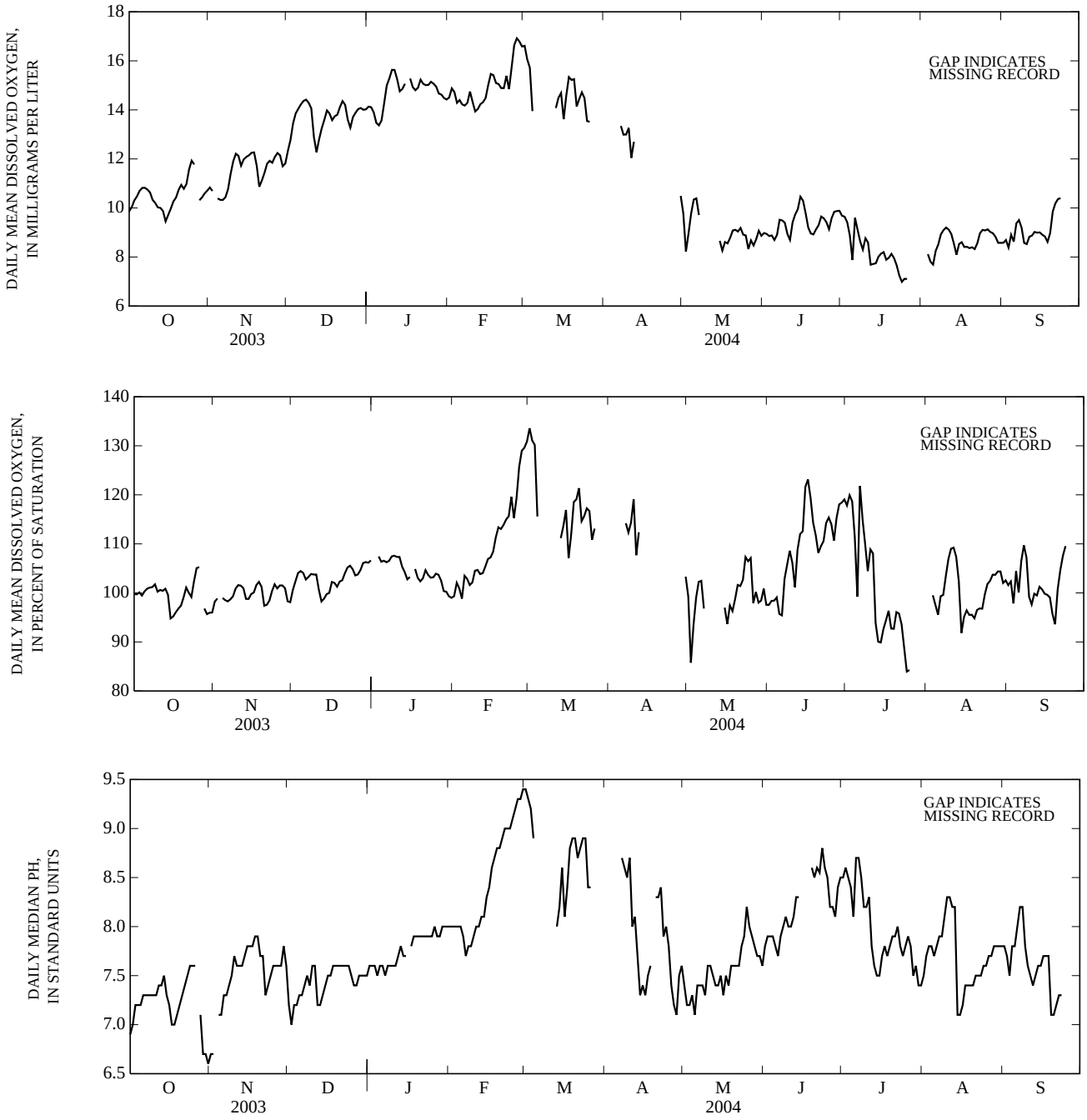


Figure 12.--Water-qualiity monitor values recorded at 01463500 Delaware River at Trenton, water year 2004.

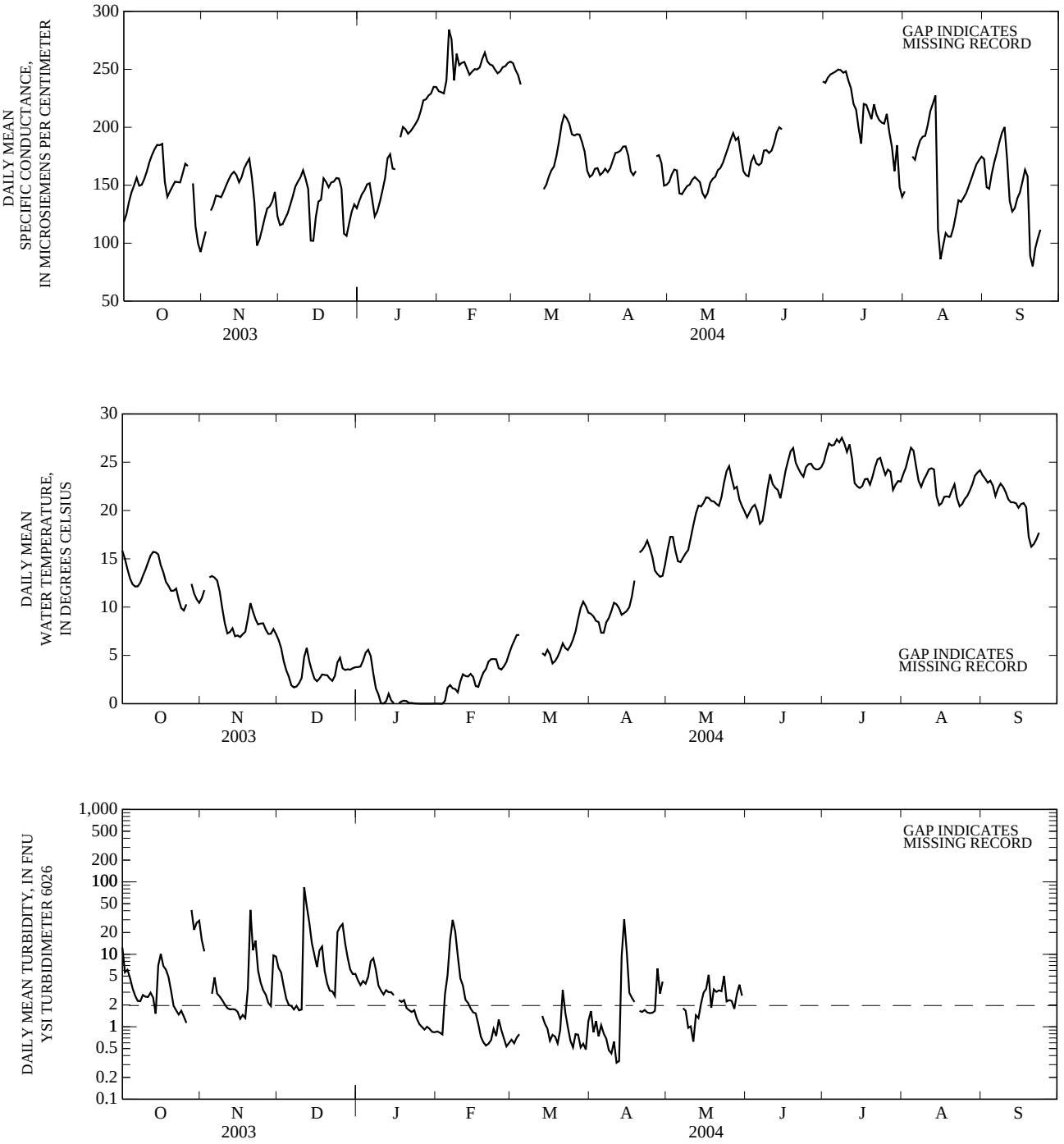


Figure 12.--Water-quality monitor values recorded at 01463500 Delaware River at Trenton, NJ, water year 2004--continued.
[--- turbidimeter instrument detection level; values less than 2.0 FNU are approximate]

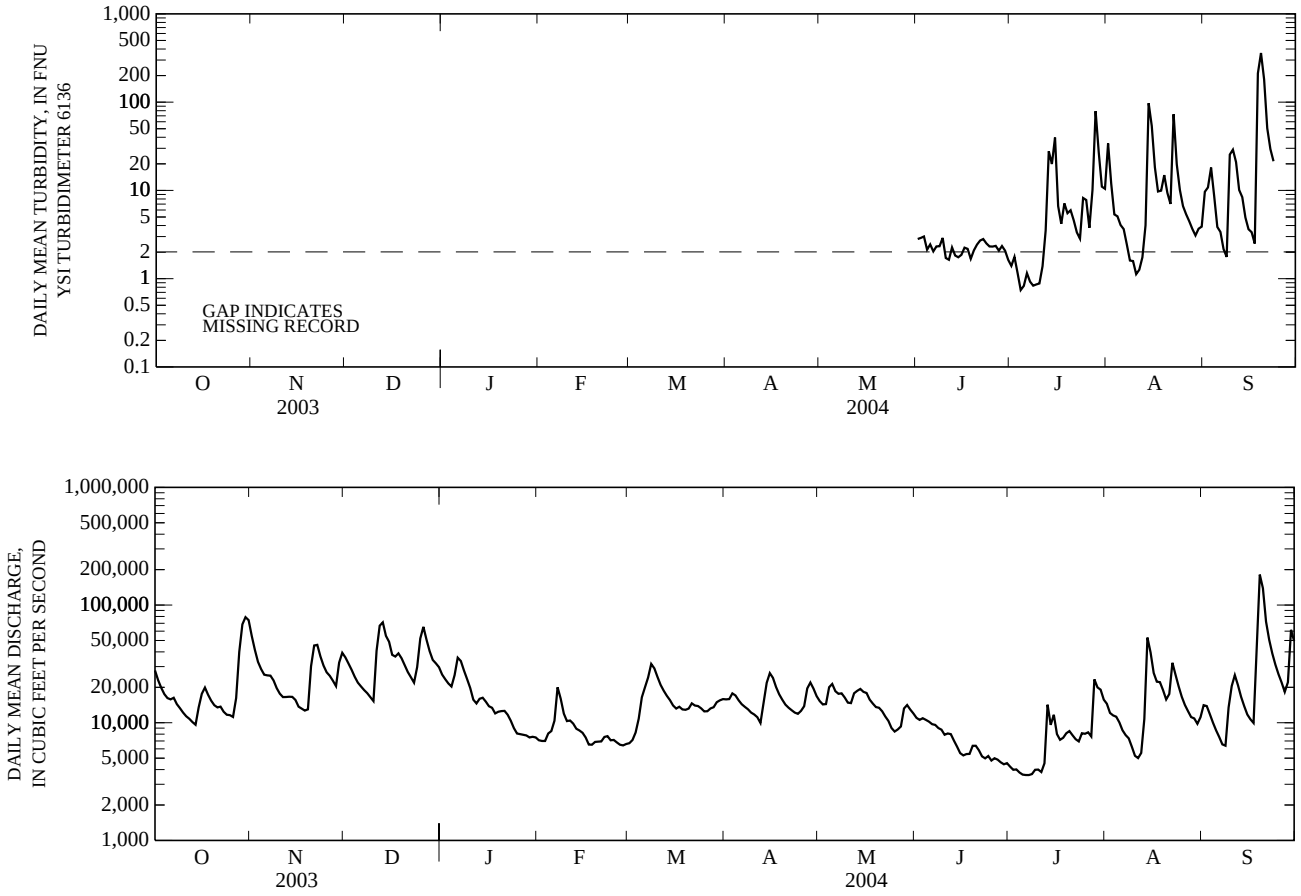
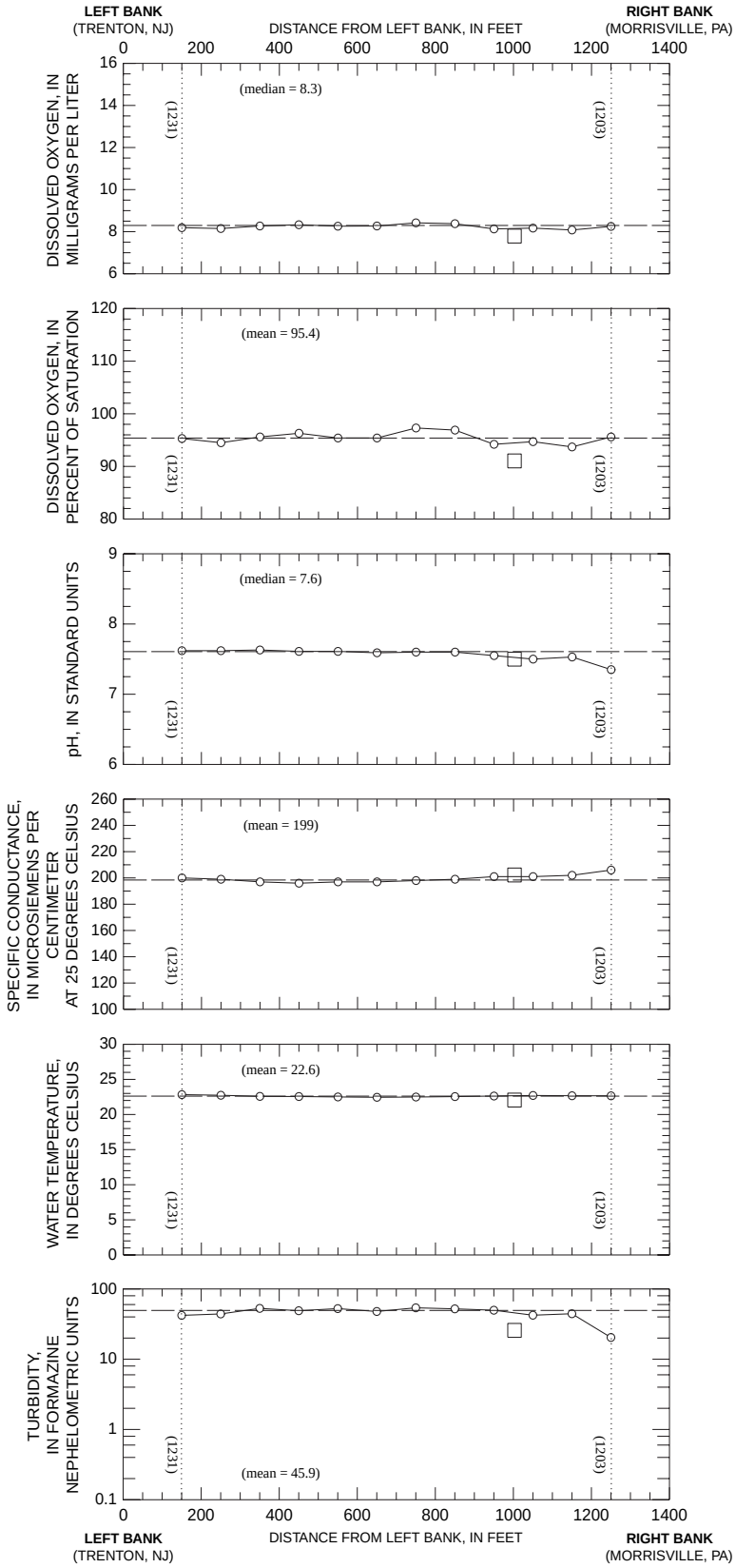


Figure 12.--Water-quality monitor values recorded at 01463500 Delaware River at Trenton, water year 2004--continued.
[--- turbidimeter instrument detection level; values less than 2.0 FNU are approximate]



EXPLANATION

Water-quality measurement from the Calhoun Street Bridge at specified time and distance

Mean or median of indicated water-quality measurements from the Calhoun Street Bridge

(1203) Time of cross sectional water-quality measurement from the Calhoun Street Bridge

Monitor value, recorded 1200 hours

Cross sectional measurements were made periodically to document river variability and verify that recorded monitor values were representative of river conditions.

The water-quality monitor is located in the raw-water intake of the Morrisville Water Filtration Plant, Morrisville, PA.

Water-quality measurements acquired from the Calhoun Street Bridge at increments of 100 feet (distance from left bank looking downstream).

The path of water flowing past the mouth of the raw water intake of the Morrisville Water Filtration Plant passes the Calhoun Street Bridge, 2,050 feet downstream, at an approximate distance of 1,000 feet from the left bank.

The daily mean discharge of 9,600 ft^3/s for the Delaware River at Trenton on July 14, 2004, was equalled or exceeded 44 percent of time by all daily mean discharges for the Delaware River at Trenton between water year 1968 and water year 2004.

Figure 13.--Cross sectional water-quality measurements with recorded monitor values at Delaware River at Trenton, NJ, July 14, 2004.

NESHAMINY CREEK BASIN

01464645 NORTH BRANCH NESHAMINY CREEK BELOW LAKE GALENA NEAR NEW BRITAIN, PA

LOCATION.--Lat 40°18'44", long 75°12'25", Bucks County, Hydrologic Unit 02040201, on left bank 0.3 mi downstream from Lake Galena (Peace Valley Reservoir), 1.5 mi west of New Britain, 2.0 mi north of Chalfont on Callowhill Road, and 4.0 mi west of Doylestown.

DRAINAGE AREA.--16.2 mi^2.

PERIOD OF RECORD.--November 1985 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Lake Galena (Peace Valley Reservoir). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

COOPERATION.--Records of change in contents in Lake Galena provided by Forest Park Water Company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	69	51	25	27	27	27	26	25	30	160	30
2	37	50	39	25	27	27	27	26	28	30	138	29
3	31	39	32	25	29	27	28	29	27	30	92	31
4	30	33	28	25	32	27	28	28	27	29	61	34
5	30	31	28	31	30	27	27	27	26	28	47	34
6	29	36	27	35	52	29	27	27	26	30	35	30
7	26	36	27	30	42	27	27	29	26	30	30	30
8	26	32	26	26	39	27	27	28	29	31	30	31
9	25	28	26	25	37	27	26	28	33	30	29	30
10	25	27	31	25	39	27	26	28	32	30	28	29
11	25	27	741	25	41	27	26	27	33	30	28	28
12	25	28	397	25	37	26	27	29	30	35	29	28
13	25	27	139	26	34	24	46	32	30	36	28	29
14	25	27	101	25	34	24	89	31	30	36	28	30
15	30	27	178	25	33	23	213	31	31	64	27	28
16	26	27	112	27	33	24	116	33	30	44	27	26
17	26	27	182	29	32	23	71	32	30	33	29	27
18	26	27	172	29	32	24	51	31	30	30	31	94
19	26	40	94	26	32	27	39	30	31	41	30	113
20	26	176	62	26	31	29	32	29	31	36	32	65
21	25	109	45	29	31	28	28	28	31	30	32	43
22	25	70	36	29	31	26	27	29	30	31	27	33
23	25	50	31	29	29	26	27	29	30	33	29	30
24	25	40	150	28	26	25	27	31	31	37	30	28
25	25	36	172	28	26	27	27	30	31	32	31	27
26	25	31	94	28	26	27	33	28	28	28	30	26
27	114	28	62	28	27	27	38	28	28	89	31	29
28	211	38	45	28	27	26	35	28	29	673	31	170
29	434	100	37	27	27	26	30	27	28	251	31	718
30	226	69	31	27	---	26	27	24	29	115	32	192
31	110	---	27	27	---	29	---	24	---	72	30	---
TOTAL	1813	1385	3223	843	943	816	1279	887	880	2074	1273	2072
MEAN	58.5	46.2	104	27.2	32.5	26.3	42.6	28.6	29.3	66.9	41.1	69.1
MAX	434	176	741	35	52	29	213	33	33	673	160	718
MIN	25	27	26	25	26	23	26	24	25	28	27	26
(≠)	+1.5	-1.7	-3.6	-16.3	+6.4	+3.1	+6.7	-4.1	+2.7	+5.7	-5.0	+10.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

MEAN	25.5	26.1	50.1	34.4	28.0	39.7	32.6	29.0	28.4	24.2	21.1	27.5
MAX	81.8	86.4	145	80.4	58.8	123	80.0	81.1	85.6	66.9	43.8	114
(WY)	1997	1996	1997	1996	1988	1994	1996	1998	2003	2004	2003	1999
MIN	3.91	5.85	17.5	6.62	5.36	4.75	4.68	6.55	5.38	4.92	4.97	3.63
(WY)	1989	1992	1995	1986	1989	1988	1988	1986	1986	1990	1987	1988

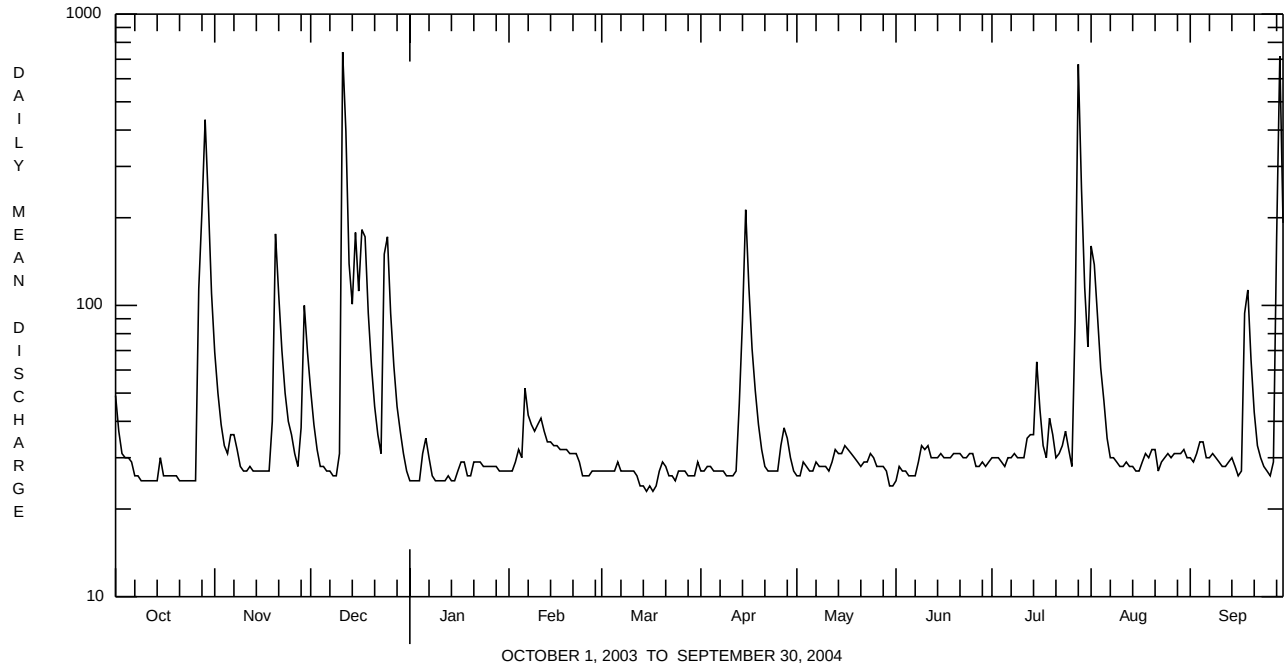
≠ Change in contents, equivalent in cubic feet per second, in Lake Galena.

NESHAMINY CREEK BASIN

01464645 NORTH BRANCH NESHAMINY CREEK BELOW LAKE GALENA NEAR NEW BRITAIN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004	
ANNUAL TOTAL	19303		17488			
ANNUAL MEAN	52.9		47.8		31.1	
HIGHEST ANNUAL MEAN					47.8	2004
LOWEST ANNUAL MEAN					13.1	1992
HIGHEST DAILY MEAN	741	Dec 11	741	Dec 11	1040	Sep 17 1999
LOWEST DAILY MEAN	23	Feb 8,9	23	Mar 15,17	3.1	Dec 22 1989
ANNUAL SEVEN-DAY MINIMUM	24	Feb 3	24	Mar 12	3.1	Dec 22 1989
MAXIMUM PEAK FLOW			**a**1330	Dec 11	**a**2340	Sep 16 1999
MAXIMUM PEAK STAGE			4.50	Dec 11	4.96	Sep 16 1999
10 PERCENT EXCEEDS	106		71		55	
50 PERCENT EXCEEDS	31		29		24	
90 PERCENT EXCEEDS	25		26		5.2	

a From rating curve extended above 580 ft^3/s on basis of slope-conveyance computation.



NESHAMINY CREEK BASIN

01464720 NORTH BRANCH NESHAMINY CREEK AT CHALFONT, PA

LOCATION.--Lat 40°17'17", long 75°12'15"', Bucks County, Hydrologic Unit 02040201, on right bank 250 ft upstream from Route 202 bridge in Chalfont, and 0.6 mi upstream from mouth.

DRAINAGE AREA.--31.5 mi^2.

PERIOD OF RECORD.--December 1990 to current year.

REVISED RECORDS.--WDR PA-99-1: 1993-98(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except those above 1,270 ft^3/s, which are poor. Diversion for municipal supply by Forest Park Water Company upstream of gage. Flow regulated by Lake Galena (Peace Valley Reservoir) 1.8 mi upstream, drainage area 15.8 mi^2, normal pool capacity 6,539 acre-ft. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by Forest Park Water Company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	92	63	29	14	18	32	22	17	6.7	393	15
2	37	64	45	26	14	21	31	20	16	6.8	204	12
3	27	48	33	26	32	20	47	35	13	6.4	112	11
4	25	37	26	27	76	24	40	37	12	6.5	68	15
5	26	50	28	74	42	23	32	23	11	6.0	53	16
6	21	69	29	59	315	37	24	25	9.9	6.4	29	13
7	16	55	25	37	289	29	22	32	10	7.8	21	12
8	14	39	23	26	91	26	21	25	9.4	6.8	24	31
9	15	30	22	25	48	28	23	21	10	7.0	19	27
10	13	26	48	30	60	29	20	17	10	6.7	16	15
11	14	26	1320	21	60	26	19	16	18	6.4	16	12
12	13	42	801	20	42	21	26	14	13	90	14	11
13	12	34	202	20	34	17	199	15	11	56	15	12
14	13	26	187	18	35	16	223	14	11	54	14	11
15	105	24	357	17	31	15	377	15	13	95	15	9.8
16	27	23	163	26	26	17	150	40	11	34	12	8.4
17	22	21	370	20	25	19	93	20	8.5	18	12	9.7
18	29	20	277	25	24	23	63	17	19	28	12	370
19	22	114	135	22	24	45	43	21	12	59	14	149
20	18	428	90	17	25	65	33	17	10	32	12	63
21	17	151	63	18	28	78	26	15	9.7	15	25	36
22	17	92	49	18	27	40	22	13	8.9	14	17	20
23	15	63	41	21	22	29	21	12	8.6	49	12	16
24	13	47	391	18	20	26	23	12	7.8	71	12	14
25	13	46	292	33	20	27	20	11	10	26	11	12
26	14	35	133	16	17	25	65	11	14	19	11	11
27	497	29	89	17	18	25	89	18	8.6	289	11	10
28	398	79	65	17	17	23	41	14	6.8	1290	11	770
29	868	196	49	14	17	20	27	11	9.8	380	11	1370
30	320	92	41	16	---	20	22	12	7.2	137	15	331
31	145	---	32	23	---	53	---	12	---	89	24	---
TOTAL	2837	2098	5489	776	1493	885	1874	587	336.2	2918.5	1235	3412.9
MEAN	91.5	69.9	177	25.0	51.5	28.5	62.5	18.9	11.2	94.1	39.8	114
MAX	868	428	1320	74	315	78	377	40	19	1290	393	1370
MIN	12	20	22	14	14	15	19	11	6.8	6.0	11	8.4
(†)	22.8	22.5	22.3	22.7	23.7	23.1	24.2	25.9	26.0	25.8	25.4	24.6
(≠)	+1.5	-1.7	-3.6	-16.3	+6.4	+3.1	+6.7	-4.1	+2.7	+5.7	-5.0	+10.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	32.4	32.7	69.9	58.3	39.6	76.7	49.8	31.2	32.5	23.6	23.1	37.2
MAX	131	108	236	209	74.6	222	121	136	136	94.1	67.5	197
(WY)	1997	1996	1997	1996	1998	1994	1996	1998	2003	2004	1994	1999
MIN	6.76	4.86	5.06	7.43	6.09	18.6	11.8	11.1	5.92	7.65	4.82	5.86
(WY)	2002	2002	2002	2002	2002	2002	1995	1995	1995	1999	1995	1992

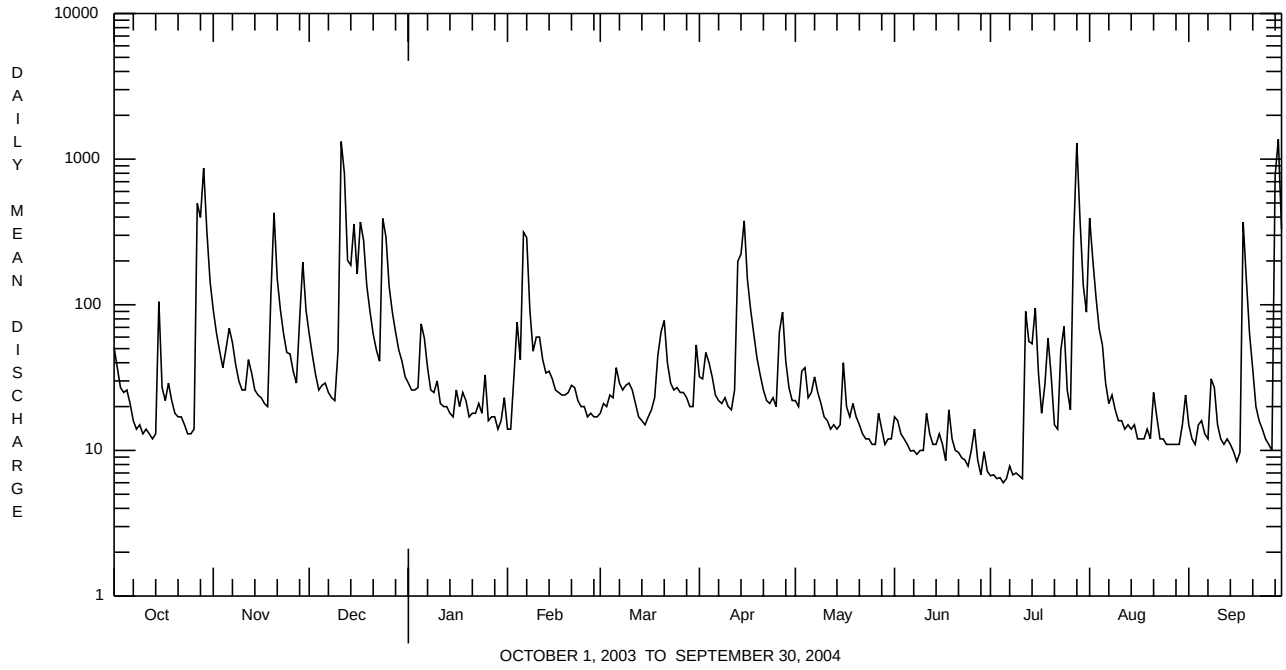
† Diversion by Forest Park Water Company, equivalent in cubic feet per second.
≠ Change in contents, equivalent in cubic feet per second, in Lake Galena.

NESHAMINY CREEK BASIN

01464720 NORTH BRANCH NESHAMINY CREEK AT CHALFONT, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004	
ANNUAL TOTAL	27062.4		23941.6			
ANNUAL MEAN	74.1		65.4		42.6	
HIGHEST ANNUAL MEAN					67.0	1996
LOWEST ANNUAL MEAN					12.1	2002
HIGHEST DAILY MEAN	1320	Dec 11	1370	Sep 29	2090	Sep 16 1999
LOWEST DAILY MEAN	**e**7.0	Feb 21	6.0	Jul 5	2.3	Aug 18 1991
ANNUAL SEVEN-DAY MINIMUM	**a**7.9	Feb 15	6.6	Jun 30	3.0	Aug 12 1991
MAXIMUM PEAK FLOW			**b**3950	Sep 28	**b**6930	Sep 16 1999
MAXIMUM PEAK STAGE			9.21	Sep 28	11.36	Sep 16 1999
10 PERCENT EXCEEDS	186		134		83	
50 PERCENT EXCEEDS	28		23		16	
90 PERCENT EXCEEDS	11		11		6.4	

a Computed using estimated daily discharges.
b From rating curve extended above 1,270 ft^3/s on basis of velocity-area study of peak flow at gage height 11.36 ft.
e Estimated.



NESHAMINY CREEK BASIN

01464750 NESHAMINY CREEK NEAR RUSHLAND, PA

LOCATION.--Lat 40°15'37", long 75°02'07"', Bucks County, Hydrologic Unit 02040201, on left bank at bridge on Rushland Road, 2,000 ft upstream from confluence with Little Neshaminy Creek.

DRAINAGE AREA.--91.0 mi^2.

PERIOD OF RECORD.--December 1986 to September 1992; October 2001 to current year.

REVISED RECORDS.--WDR PA-02-1: 1988-92 (P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those greater than 916 ft^3/s and those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,950 ft^3/s and maximum(*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 29	1030	3,300	9.06
Nov. 20	0200	2,920	8.48
Dec. 11	1200	6,450	14.29
Dec. 15	0115	2,090	7.25
Dec. 17	1600	1,990	7.10
Dec. 24	1245	2,400	7.70
Feb. 6	1500	Unknown	Ice jam
Feb. 6	1900	3,190	8.90
July 28	0745	3,860	9.91
Aug. 1	1345	2,350	7.63
Sept. 18	2130	2,740	8.20
Sept. 29	0245	*7,750	*15.04

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	243	207	123	e60	78	194	116	81	32	936	74
2	115	186	166	117	e60	87	161	111	66	30	475	49
3	93	154	137	115	e100	98	307	177	57	28	233	39
4	84	131	120	111	e350	99	232	274	47	26	160	35
5	94	335	118	321	e450	114	220	147	46	25	155	36
6	78	538	127	268	e1300	187	151	134	46	29	108	36
7	69	294	116	e150	1160	173	130	144	45	32	80	31
8	62	196	107	e120	401	141	119	130	43	32	72	65
9	59	155	101	e110	196	156	123	108	40	28	69	152
10	57	136	123	e100	220	149	107	100	40	24	59	67
11	54	124	3520	e100	250	128	96	94	50	22	58	46
12	52	193	1280	e95	165	115	98	81	58	441	58	38
13	47	177	473	e90	139	94	805	73	44	463	62	35
14	49	127	558	e90	136	84	876	68	40	154	64	35
15	473	110	1140	e85	125	80	1060	68	50	487	63	32
16	136	100	438	e85	102	86	407	145	52	128	53	33
17	97	95	967	e80	103	105	271	93	43	77	47	33
18	138	90	717	e80	90	119	207	65	62	114	45	1010
19	107	327	357	e75	90	250	171	86	51	325	44	577
20	85	1610	255	e75	94	380	136	93	39	126	43	165
21	77	444	200	e70	100	449	118	67	36	82	55	106
22	75	268	173	e70	106	225	106	60	36	60	115	77
23	75	204	157	e70	95	158	99	53	37	264	47	59
24	66	172	1240	e65	89	134	111	50	34	361	41	52
25	58	181	739	e65	93	126	98	48	34	123	38	46
26	59	148	352	e75	85	120	245	49	68	85	34	42
27	1480	129	251	e80	77	115	542	73	42	101	32	40
28	1130	168	197	e75	75	116	217	66	33	2400	33	1330
29	2120	778	171	e70	74	100	152	55	56	1400	30	3850
30	758	281	156	e65	---	92	129	43	46	411	31	746
31	367	---	138	e65	---	326	---	47	---	248	336	---
TOTAL	8355	8094	14801	3160	6385	4684	7688	2918	1422	8158	3676	8936
MEAN	270	270	477	102	220	151	256	94.1	47.4	263	119	298
MAX	2120	1610	3520	321	1300	449	1060	274	81	2400	936	3850
MIN	47	90	101	65	60	78	96	43	33	22	30	31
CFSM	2.96	2.96	5.25	1.12	2.42	1.66	2.82	1.03	0.52	2.89	1.30	3.27
IN.	3.42	3.31	6.05	1.29	2.61	1.91	3.14	1.19	0.58	3.33	1.50	3.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

MEAN	97.4	130	173	159	153	181	165	171	161	129	79.9	115
MAX	270	270	477	311	315	391	321	374	443	315	149	298
(WY)	2004	2004	2004	1990	1988	2003	1987	1989	1989	1989	2003	2004
MIN	28.2	22.6	37.1	62.5	41.2	95.7	61.9	70.0	30.4	32.5	32.2	24.8
(WY)	2002	2002	2002	2002	2002	1990	1988	1987	1991	1992	1987	1992

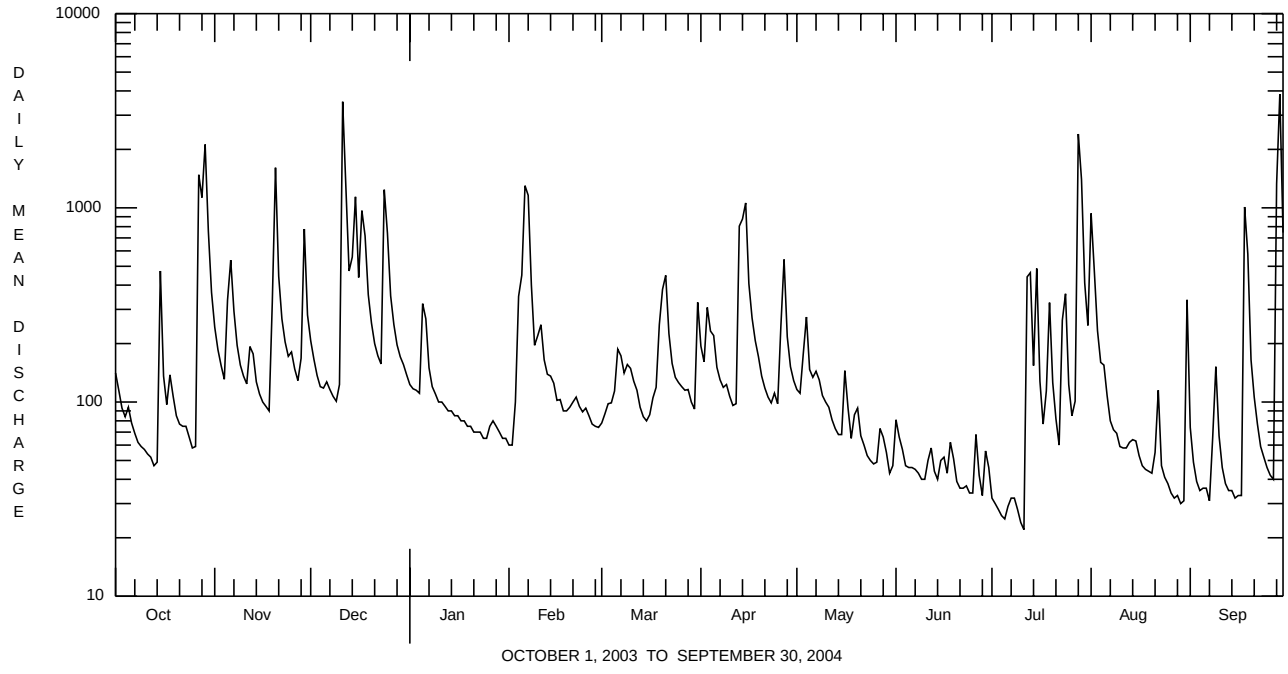
e Estimated.

NESHAMINY CREEK BASIN

01464750 NESHAMINY CREEK NEAR RUSHLAND, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004	
ANNUAL TOTAL	88410		78277			
ANNUAL MEAN	242		214		144	
HIGHEST ANNUAL MEAN					214	1989,2004
LOWEST ANNUAL MEAN					66.4	2002
HIGHEST DAILY MEAN	3520	Dec 11	3850	Sep 29	3850	Sep 29 2004
LOWEST DAILY MEAN	**e**26	Feb 20	22	Jul 11	15	Aug 14 1987
ANNUAL SEVEN-DAY MINIMUM	**a**28	Feb 14	27	Jul 5	16	Sep 14 1992
MAXIMUM PEAK FLOW			**b**7750	Sep 29	**b**7750	Sep 29 2004
MAXIMUM PEAK STAGE			15.04	Sep 29	15.04	Sep 29 2004
ANNUAL RUNOFF (CFSM)	2.66		2.35		1.58	
ANNUAL RUNOFF (INCHES)	36.14		32.00		21.50	
10 PERCENT EXCEEDS	579		446		306	
50 PERCENT EXCEEDS	123		100		70	
90 PERCENT EXCEEDS	48		40		25	

a Computed using estimated daily discharges.
b From rating curve extended above 916 ft^3/s based on slope-area measurement at gage height 10.33 ft.
e Estimated.



NESHAMINY CREEK BASIN

01464907 LITTLE NESHAMINY CREEK AT VALLEY ROAD NEAR NESHAMINY, PA
(National Water-Quality Assessment Station)

LOCATION.--Lat 40°13'45", long 75°07'12"', Bucks County, Hydrologic Unit 02040201, on left bank just upstream from bridge on Valley Road, 6.8 mi upstream from confluence with Neshaminy Creek, 3.0 mi downstream from Bradford Dam, 2.0 mi downstream from Park Creek, and 1.1 mi east of Neshaminy.

DRAINAGE AREA.--26.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1998 to current year.

REVISED RECORDS.--WDR PA-01-1: 1999, 2000 (P).

GAGE.--Water stage recorder and crest-stage gage. Datum of gage is 190.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,100 ft^3/s (revised) and maximum(*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	0930	4,010	8.71
Feb. 6	1600	2,200	6.63
July 23	2115	2,180	6.61
Aug. 1	1215	2,270	6.72
Sept. 28	2300	*5,440	*10.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	48	44	30	e18	18	60	32	21	5.1	636	14
2	20	39	36	30	e20	21	55	29	13	28	102	9.1
3	17	35	31	29	e170	22	133	75	10	6.1	50	8.1
4	18	31	29	27	258	27	109	75	9.1	4.4	39	7.9
5	17	384	31	125	102	25	72	41	9.1	3.8	33	6.3
6	15	318	32	63	761	70	45	34	10	4.6	25	e6.5
7	13	126	28	37	425	44	38	30	9.3	5.1	21	e6.0
8	12	63	26	28	91	40	34	25	8.4	6.4	18	17
9	12	47	25	26	50	50	35	23	7.5	4.7	15	23
10	12	41	103	e24	77	38	28	21	8.1	3.1	14	12
11	12	36	1630	e20	60	30	25	20	7.8	3.0	12	8.3
12	11	87	367	e19	38	26	35	17	7.7	300	16	7.3
13	10	56	74	e18	33	21	431	16	6.4	87	17	6.6
14	14	40	375	e18	33	19	301	15	6.0	116	13	6.0
15	208	35	357	e17	28	19	325	15	8.7	171	22	5.9
16	31	31	88	e17	21	22	82	42	7.9	27	14	6.1
17	26	31	364	e16	19	29	59	19	8.8	16	11	6.1
18	48	28	139	e30	19	42	49	16	12	107	9.7	425
19	25	322	72	e35	20	119	43	31	8.0	107	9.6	87
20	20	558	55	e20	22	160	37	24	6.1	30	8.8	28
21	19	87	45	e19	26	137	32	17	5.1	19	26	18
22	19	57	41	e18	24	57	30	15	5.0	14	22	14
23	18	45	39	e16	21	40	32	13	6.2	462	11	11
24	15	41	746	e15	20	34	46	13	5.2	199	9.2	9.3
25	14	50	175	e16	20	32	30	11	6.3	46	8.4	8.7
26	14	38	75	e17	18	29	171	14	27	28	7.9	8.1
27	775	33	54	e16	17	30	197	21	8.1	172	7.4	7.6
28	265	86	45	e16	16	28	65	13	5.7	e600	7.3	1270
29	791	215	41	e15	16	24	45	11	12	302	6.4	1390
30	123	56	38	e16	---	23	37	9.4	7.7	89	6.7	512
31	66	---	32	e17	---	113	---	12	---	61	60	---
TOTAL	2683	3064	5237	810	2443	1389	2681	749.4	273.2	3027.3	1258.4	3944.9
MEAN	86.5	102	169	26.1	84.2	44.8	89.4	24.2	9.11	97.7	40.6	131
MAX	791	558	1630	125	761	160	431	75	27	600	636	1390
MIN	10	28	25	15	16	18	25	9.4	5.0	3.0	6.4	5.9
CFSM	3.23	3.81	6.30	0.97	3.14	1.67	3.33	0.90	0.34	3.64	1.51	4.91
IN.	3.72	4.25	7.27	1.12	3.39	1.93	3.72	1.04	0.38	4.20	1.75	5.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	31.3	41.4	58.9	39.1	52.5	72.5	43.2	30.7	69.8	27.5	28.2	73.3
MAX	86.5	102	169	71.2	84.2	105	89.4	46.8	211	97.7	47.5	174
(WY)	2004	2004	2004	1999	2004	2003	2004	2002	2001	2004	2000	1999
MIN	3.22	3.40	2.47	17.8	9.04	38.3	15.4	13.3	3.06	1.40	5.41	11.2
(WY)	2002	2002	1999	2002	2002	2002	2002	1999	1999	1999	2002	2002

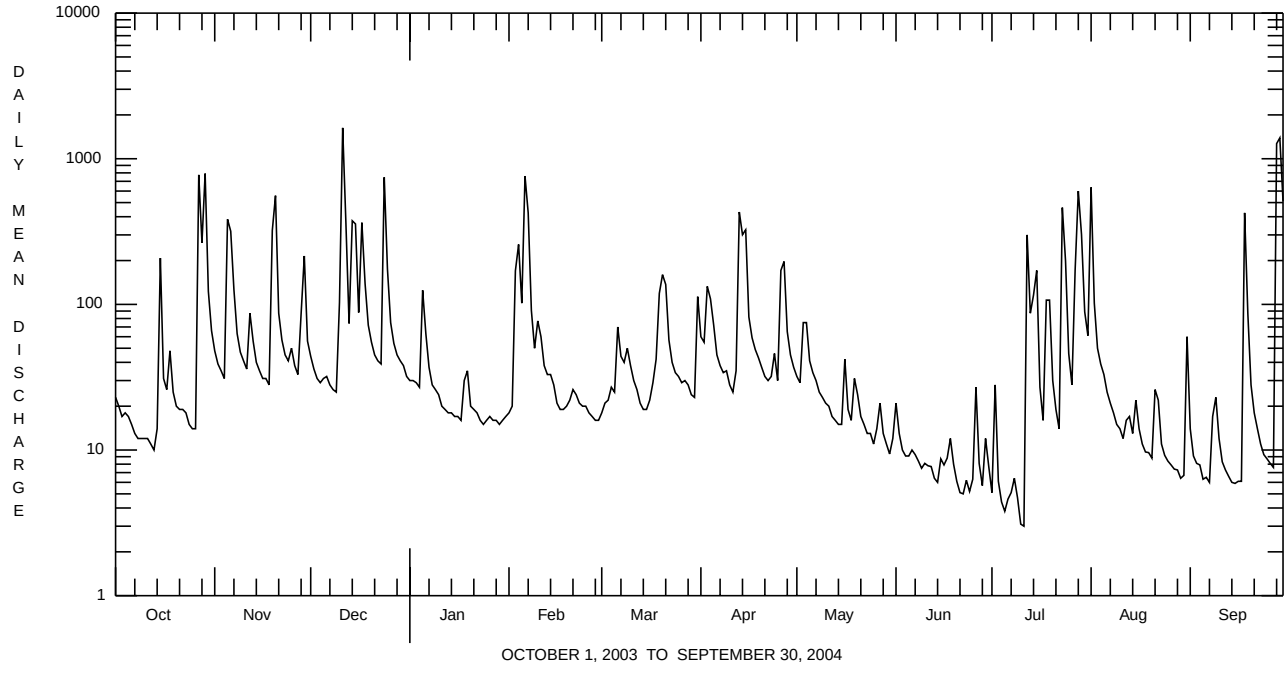
e Estimated.

NESHAMINY CREEK BASIN

01464907 LITTLE NESHAMINY CREEK AT VALLEY ROAD NEAR NESHAMINY, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1999 - 2004	
ANNUAL TOTAL	27680.2		27560.2			
ANNUAL MEAN	75.8		75.3		48.4	
HIGHEST ANNUAL MEAN					75.3	2004
LOWEST ANNUAL MEAN					16.1	2002
HIGHEST DAILY MEAN	1630	Dec 11	1630	Dec 11	2830	Sep 16 1999
LOWEST DAILY MEAN	4.9	Jul 17,31	3.0	Jul 11	0.24	Aug 2 1999
ANNUAL SEVEN-DAY MINIMUM	6.1	Jul 15	4.4	Jul 5	0.27	Aug 1 1999
MAXIMUM PEAK FLOW			**a**5440	Sep 28	**a**11300	Jun 16 2001
MAXIMUM PEAK STAGE			10.07	Sep 28	**b**14.57	Jun 16 2001
INSTANTANEOUS LOW FLOW			2.6	Jul 11,12	0.15	Aug 8 1999
ANNUAL RUNOFF (CFSM)	2.83		2.81		1.81	
ANNUAL RUNOFF (INCHES)	38.42		38.26		24.55	
10 PERCENT EXCEEDS	210		170		93	
50 PERCENT EXCEEDS	29		26		16	
90 PERCENT EXCEEDS	9.2		7.8		4.4	

a From rating curve extended above 758 ft^3/s on basis of contracted-opening measurements at gage height 11.68 and at peak flow.
b From outside high-water mark.



01464907 LITTLE NESHAMINY CREEK AT VALLEY ROAD NEAR NESHAMINY, PA--Continued
(National Water-Quality Assessment Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1998 to current year.

REMARKS.--These samples were collected as part of the Delaware River Basin National Water-Quality Assessment Program (DELR NAWQA). For the definition of the type of quality-control data listed under SAMPLE TYPE refer to "Water-Quality-Control Data" in the "Introduction".

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
NOV											
06...	1200	Environmental	170	56	758	9.1	91	7.3	205	16.5	15.2
DEC											
11...	1100	Environmental	3,260	240	734	11.4	100	7.0	146	12.0	8.1
JAN											
06...	1110	Environmental	58	31	760	13.4	106	7.4	338	4.0	5.2
MAR											
15...	0840	Environmental	19	4.0	760	13.6	109	8.1	674	11.5	5.7
APR											
19...	1200	Environmental	42	3.7	758	17.2	179	8.9	490	28.0	16.9
MAY											
17...	1230	Environmental	18	5.7	765	9.6	110	7.7	513	23.1	22.3
17...	*1231*	*Split Replicate*	--	--	--	--	--	--	--	--	--
JUN											
21...	*1049*	*Field Blank*	--	--	--	--	--	--	--	--	--
21...	1050	Environmental	5.3	4.0	759	8.7	97	7.7	676	25.0	20.4
JUL											
16...	1240	Environmental	25	12	754	9.0	104	7.6	341	26.5	21.6
SEP											
01...	1510	Environmental	13	12	759	11.8	137	8.6	401	29.0	22.5

Date	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV												
06...	52	63	15.9	16.1	<.04	.62	<.008	.077	.22	1.54	33	15
DEC												
11...	16	19	25.8	5.9	.05	.38	E.007	.059	.42	1.48	281	2,470
JAN												
06...	62	75	43.2	25.0	.05	1.20	.019	.014	.097	1.76	24	3.8
MAR												
15...	99	119	116	38.7	<.04	1.28	.018	E.005	.047	1.64	7	.36
APR												
19...	95	107	69.3	30.6	<.04	.90	.018	.012	.051	1.30	4	.45
MAY												
17...	92	111	65.8	31.7	.06	1.40	.062	.046	.117	2.17	6	.29
17...	--	--	*66.1*	*31.7*	*.06*	*1.42*	*.063*	*.047*	*.116*	*2.11*	*6*	--
JUN												
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	144	174	94.0	44.5	E.03	1.05	.014	.081	.124	1.72	6	.09
JUL												
16...	76	91	36.1	30.4	<.04	1.08	.008	.088	.141	1.55	12	.81
SEP												
01...	83	100	49.5	29.8	<.04	.92	E.005	.095	.179	1.70	24	.84

Remark codes used in this table:
< -- Less than
E -- Estimated value

01464907 LITTLE NESHAMINY CREEK AT VALLEY ROAD NEAR NESHAMINY, PA--Continued

WATER-COLUMN PESTICIDE ANALYSES

REMARKS.--The following were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, on page 215). Only pesticides detected in one or more surface-water samples are listed in the following table.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	CIAT, water, fltrd, µg/L (04040)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	Atra-zine, water, fltrd, µg/L (39632)	Ben-flur-alin, water, fltrd 0.7µ GF µg/L (82673)	Car-baryl, water, fltrd 0.7µ GF µg/L (82680)	Chlor-pyrifos water, fltrd, µg/L (38933)	DCPA, water fltrd 0.7µ GF µg/L (82682)
NOV											
06...	1200	Environmental	E.006	<.006	<.005	<.005	.009	<.010	E.048	<.005	<.003
JAN											
06...	1110	Environmental	E.010	<.006	<.005	<.005	.011	<.010	E.010	<.005	<.003
MAR											
15...	0840	Environmental	E.018	<.006	<.005	<.005	.016	<.010	<.041	<.005	<.003
APR											
19...	1200	Environmental	E.014	.007	<.005	<.005	.020	E.006	E.027	<.005	<.003
MAY											
17...	1230	Environmental	E.055	.030	<.005	<.005	.566	E.006	E.160	<.005	<.003
17...	*1231*	*Split Replicate*	*E.058*	*.031*	*<.005*	*<.005*	*.588*	*E.005*	*E.165*	*<.005*	*<.003*
JUN											
21...	*1049*	*Field Blank*	*<.006*	*<.006*	*<.005*	*<.005*	*<.007*	*<.010*	*<.041*	*<.005*	*<.003*
21...	1050	Environmental	E.020	<.006	<.005	<.005	.039	<.010	<.041	<.005	<.003
JUL											
16...	1240	Environmental	E.012	<.006	<.005	<.005	.053	<.010	E.497	<.005	E.002
SEP											
01...	1510	Environmental	E.012	<.006	<.005	<.005	.019	<.010	E.036	<.005	<.003

Date	Desulf-inyl fipro-nil, water, fltrd, µg/L (62170)	Diazi-non, water, fltrd, µg/L (39572)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide water, fltrd, µg/L (62167)	Fipro-nil sulfone water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Lindane water, fltrd, µg/L (39341)	Metola-chlor, water, fltrd, µg/L (39415)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Prome-ton, water, fltrd, µg/L (04037)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron water fltrd 0.7µ GF µg/L (82670)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)
NOV													
06...	<.012	E.008	<.029	<.013	<.024	E.007	<.004	.022	<.022	.01	<.005	<.02	<.009
JAN													
06...	<.012	.008	<.029	<.013	<.024	E.012	.005	.014	<.022	.01	.014	<.02	<.009
MAR													
15...	<.012	<.005	<.029	<.013	<.024	E.015	<.004	E.008	<.022	.01	<.008	E.02	<.009
APR													
19...	E.004	<.005	<.029	<.013	<.024	E.012	<.004	E.009	E.015	.01	.011	E.01	E.007
MAY													
17...	E.005	<.005	<.029	<.013	<.024	E.019	<.004	.671	<.022	.02	.017	.03	E.007
17...	*E.005*	*<.005*	*<.029*	*<.013*	*<.024*	*E.025*	*<.004*	*.685*	*<.022*	*.02*	*.021*	*.03*	*E.005*
JUN													
21...	*<.012*	*<.005*	*<.029*	*<.013*	*<.024*	*<.016*	*<.004*	*<.013*	*<.022*	*<.01*	*<.005*	*<.02*	*<.009*
21...	E.009	<.005	<.029	E.005	E.007	E.025	<.004	.018	<.022	.02	.006	<.02	<.009
JUL													
16...	<.012	.010	<.029	<.013	<.024	E.013	<.004	.105	<.022	.03	<.010	<.02	<.009
SEP													
01...	<.012	<.005	<.029	<.013	<.024	E.032	<.004	.021	<.022	.04	<.005	<.02	<.009

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA
(Pennsylvania Water-Quality Network Station)

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^2.

WATER-DISCHARGE RECORDS

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 except those for estimated daily discharges, which are poor. 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, 2,000 acre-ft, 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, and September, October 1961. Interceptor sewer installed along left bank during May and June 1966. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23, 1933 reached a stage of 17.3 ft, from floodmark, discharge, about 30,000 ft^3/s, from rating curve extended as explained in footnotes on next page.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,500 ft^3/s and maximum(*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	2330	6,010	8.36
Oct. 29	1200	7,240	9.31
Nov. 20	0430	6,780	9.00
Dec. 11	1730	16,800	14.04
Dec. 15	0030	5,380	7.82
Dec. 24	1500	6,560	8.82
Feb. 6	2100	7,930	9.76
Apr. 13	2300	6,240	8.56
July 28	0830	6,530	8.80
Aug. 1	1630	4,790	7.30
Sept. 29	0630	*19,900	*15.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	472	389	314	e180	186	426	282	151	66	1860	174
2	186	365	326	296	e200	198	361	263	140	76	1090	109
3	158	312	280	289	e300	219	707	372	122	66	460	89
4	141	276	252	278	e750	221	572	645	103	50	333	77
5	146	774	255	604	e900	250	543	341	99	49	312	76
6	134	2070	273	687	3190	343	363	306	101	46	249	72
7	121	849	249	356	3410	402	322	305	96	53	200	69
8	110	465	229	290	1090	323	299	284	91	54	176	90
9	104	345	218	e260	475	352	301	240	84	57	166	237
10	101	302	237	e230	468	346	275	226	84	47	151	146
11	97	277	9310	e210	577	301	252	214	112	42	169	99
12	92	380	3090	e200	379	270	257	201	104	1110	208	80
13	86	401	1110	e200	326	237	2370	188	86	1350	156	72
14	84	285	1280	e190	314	214	2870	179	76	343	158	68
15	1060	245	3180	e190	297	208	2620	159	88	1100	181	67
16	300	229	1070	e180	253	214	985	234	101	277	155	66
17	186	221	2000	e180	232	253	641	206	88	174	130	66
18	242	208	1750	e170	224	269	483	159	136	281	119	921
19	211	752	839	e170	222	516	392	175	105	740	112	1330
20	163	4200	603	e160	229	849	346	214	78	275	109	272
21	144	1020	464	e170	234	1110	308	161	65	184	117	175
22	139	574	398	e180	248	543	284	146	62	139	230	134
23	133	415	369	e170	224	375	272	132	64	467	130	106
24	120	355	3640	e170	215	329	320	122	63	1320	105	92
25	108	361	2150	e160	218	305	264	116	119	310	97	83
26	104	315	901	e160	208	294	493	114	231	204	89	77
27	2510	280	636	e170	194	284	1520	137	104	878	83	71
28	2730	338	493	e170	186	282	558	150	70	4530	79	1970
29	4840	1570	418	e160	182	252	367	120	92	2870	77	11900
30	1680	562	383	e160	---	234	313	98	99	721	73	2150
31	729	---	343	e170	---	562	---	100	---	564	426	---
TOTAL	17181	19218	37135	7294	15925	10741	20084	6589	3014	18443	8000	20938
MEAN	554	641	1198	235	549	346	669	213	100	595	258	698
MAX	4840	4200	9310	687	3410	1110	2870	645	231	4530	1860	11900
MIN	84	208	218	160	180	186	252	98	62	42	73	66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2004, BY WATER YEAR (WY)

MEAN	137	244	374	405	455	539	434	287	218	189	170	174
MAX	840	1170	1424	1509	1074	1246	1455	862	1049	1161	1694	1330
(WY)	1997	1973	1997	1979	1939	1936	1983	1989	2003	1938	1955	1999
MIN	13.8	23.2	34.3	47.2	75.9	105	89.8	54.5	33.7	21.8	15.1	15.4
(WY)	1958	1937	1966	1981	2002	1985	1985	1963	1965	1957	1966	1951

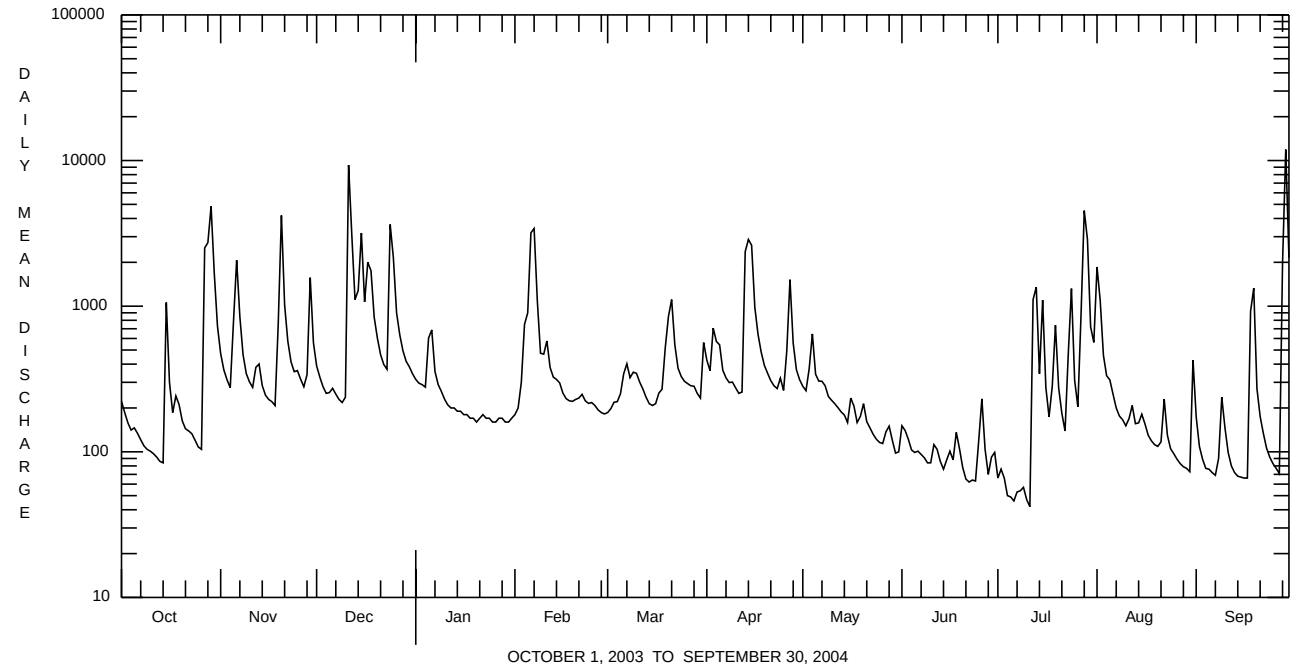
e Estimated.

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1935 - 2004	
ANNUAL TOTAL	198181		184562			
ANNUAL MEAN	543		504		301	
HIGHEST ANNUAL MEAN					565	1973
LOWEST ANNUAL MEAN					121	1985
HIGHEST DAILY MEAN	9310	Dec 11	11900	Sep 29	27300	Aug 19 1955
LOWEST DAILY MEAN	**e**65	Feb 16	42	Jul 11	2.9	Sep 8 1957
ANNUAL SEVEN-DAY MINIMUM	**a**70	Feb 13	50	Jul 5	8.2	Aug 26 1944
MAXIMUM PEAK FLOW			**b**19900	Sep 29	**b**49300	Aug 19 1955
MAXIMUM PEAK STAGE			15.21	Sep 29	**c**22.84	Aug 19 1955
INSTANTANEOUS LOW FLOW			40	Jul 12	1.9	Sep 8 1957
10 PERCENT EXCEEDS	1240		1080		585	
50 PERCENT EXCEEDS	252		233		140	
90 PERCENT EXCEEDS	99		84		33	

a Computed using estimated daily discharges.
b From rating curve extended above 6,720 ft^3/s on basis of slope-area measurement of peak flow at gage height 22.84 ft.
c From floodmark.
e Estimated.



NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-tance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
06...	1430	1028	9813	136	12.1	8.2	8.2	446	450	13.1	130	33.4	12.2
DEC													
04...	1130	1028	9813	254	14.3	7.7	7.9	343	366	2.2	110	26.9	10.5
FEB 2004													
25...	0940	1028	9813	221	16.7	8.9	8.7	467	471	2.4	120	30.4	11.1
APR													
19...	1030	1028	9813	393	11.6	8.8	8.3	386	376	15.6	110	26.7	9.6
JUN													
28...	1030	1028	9813	71	9.4	7.8	7.6	506	516	21.9	130	31.4	12.9
AUG													
23...	1140	1028	9813	127	9.3	7.8	7.6	418	429	21.8	120	29.8	10.7

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
06...	87	35.3	318	4	<.020	2.74	<.200	.16	.160	3.1	3.3	<200	<10
DEC													
04...	72	31.4	254	<2	<.020	3.00	<.040	.08	.106	3.3	3.0	<200	<10
FEB 2004													
25...	71	31.5	288	2	<.020	2.29	<.200	.02	.043	2.7	3.3	<200	<10
APR													
19...	62	27.3	236	8	.050	1.66	<.040	.05	.084	2.1	3.5	<200	<10
JUN													
28...	80	38.7	374	4	.040	2.18	.040	.24	.267	2.6	4.5	210	<10
AUG													
23...	72	30.6	284	4	.020	1.99	<.200	.14	.175	2.4	4.5	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
06...	140	<1.0	20	<50	10
DEC					
04...	240	<1.0	20	<50	170
FEB 2004					
25...	130	<1.0	30	<50	<10
APR					
19...	210	<1.0	40	<50	<10
JUN					
28...	400	<1.0	90	<50	10
AUG					
23...	200	<1.0	50	<50	<10

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/10/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	19
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	1
Arthropoda	
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	1
Baetis	60
Heptageniidae	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	
Glossosoma	3
Hydropsychidae	
Cheumatopsyche	4
Hydropsyche	13
Potamyia	1
Lepidostomatidae	
Lepidostoma	1
Philopotamidae	
Chimarra	146
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	4
Stenelmis	45
Psephenidae (WATER PENNIES)	
Psephenus	4
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	12
Simuliidae (BLACK FLIES)	
Simulium	1
Total Organisms	321
Total Taxa	17

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 Interstate Highway 95, 3,000 ft upstream from mouth, and in northeast Philadelphia.

DRAINAGE AREA.--21.4 mi^2.

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, crest-stage gage, and concrete low-water control. Datum of gage is 2.68 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Flow occasionally affected by tide.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 29	0745	1,450	7.42	Apr. 13	2345	2,780	9.36
Nov. 19	2030	1,820	8.03	July 12	2015	3,200	9.86
Dec. 11	1200	3,130	9.78	July 28	0045	2,680	9.23
Dec. 14	2015	1,310	7.17	Aug. 1	1130	3,110	9.76
Dec. 24	1015	2,560	9.08	Sept. 28	2245	*5,430	*12.19
Feb. 6	1500	2,420	8.90				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	10	12	17	10	11	22	19	40	5.1	e380	8.6
2	6.4	9.1	11	17	11	12	54	18	14	6.9	e50	7.0
3	6.6	8.5	10	16	168	11	92	88	14	4.7	33	6.6
4	6.5	8.4	10	18	63	21	77	49	8.0	4.2	27	6.4
5	8.0	57	12	77	23	12	28	33	27	25	e20	6.3
6	6.3	60	15	26	739	85	18	28	21	6.4	13	6.1
7	6.0	30	14	17	130	20	16	18	8.6	6.1	12	6.1
8	5.9	11	13	15	33	55	18	16	7.3	11	11	26
9	5.8	9.4	13	15	21	33	20	15	6.7	4.3	10	9.1
10	5.8	9.1	43	13	21	21	14	18	12	3.7	10	6.5
11	5.8	9.0	945	13	20	15	14	15	16	3.4	99	6.1
12	5.5	41	54	14	16	13	55	14	7.5	e690	32	5.7
13	5.2	12	25	14	15	12	660	13	6.2	e80	12	e5.3
14	14	9.8	268	13	15	11	454	13	6.2	119	11	5.1
15	229	9.9	100	13	14	11	94	13	14	66	47	5.1
16	9.5	8.9	28	12	13	39	38	29	10	12	27	6.3
17	8.5	8.7	138	13	12	45	31	13	7.5	9.1	12	5.6
18	21	8.5	43	75	12	35	26	13	28	201	10	59
19	7.2	319	24	23	12	127	23	38	6.7	72	9.4	16
20	6.1	300	20	14	12	39	e22	18	5.6	14	9.0	6.3
21	5.8	25	18	15	12	33	e21	12	5.2	10	35	5.6
22	6.2	15	17	12	12	18	e20	12	11	8.8	15	5.2
23	5.7	13	16	10	12	16	e50	11	9.8	107	9.5	4.7
24	5.5	12	680	10	13	14	e70	10	5.3	30	8.3	4.6
25	5.3	16	58	9.4	14	15	e30	9.8	5.2	12	8.0	4.6
26	5.1	11	30	9.8	12	14	e140	12	16	10	7.7	4.5
27	318	10	24	10	11	16	e160	10	5.4	194	7.4	4.4
28	59	65	21	11	11	14	e50	9.3	4.8	e700	7.1	1030
29	475	71	20	11	11	13	e40	8.5	35	e130	6.9	1060
30	25	14	20	10	---	12	e25	8.1	6.5	18	8.6	43
31	13	---	18	9.7	---	58	---	37	---	14	69	---
TOTAL	1299.4	1191.3	2720	552.9	1468	851	2382	620.7	370.5	2577.7	1016.9	2375.8
MEAN	41.9	39.7	87.7	17.8	50.6	27.5	79.4	20.0	12.3	83.2	32.8	79.2
MAX	475	319	945	77	739	127	660	88	40	700	380	1060
MIN	5.1	8.4	10	9.4	10	11	14	8.1	4.8	3.4	6.9	4.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

MEAN	21.4	26.3	34.3	34.0	34.2	40.2	36.8	33.4	30.3	37.1	31.0	30.3
MAX	59.9	112	124	136	105	98.0	104	74.2	84.7	112	130	109
(WY)	1997	1973	1997	1979	1979	1994	1983	1989	1989	1989	1971	1999
MIN	3.63	4.23	3.58	4.34	6.03	9.17	8.91	10.6	5.94	3.98	4.22	3.93
(WY)	2002	2002	1999	1981	2002	1985	1985	1977	1966	1999	1995	1970

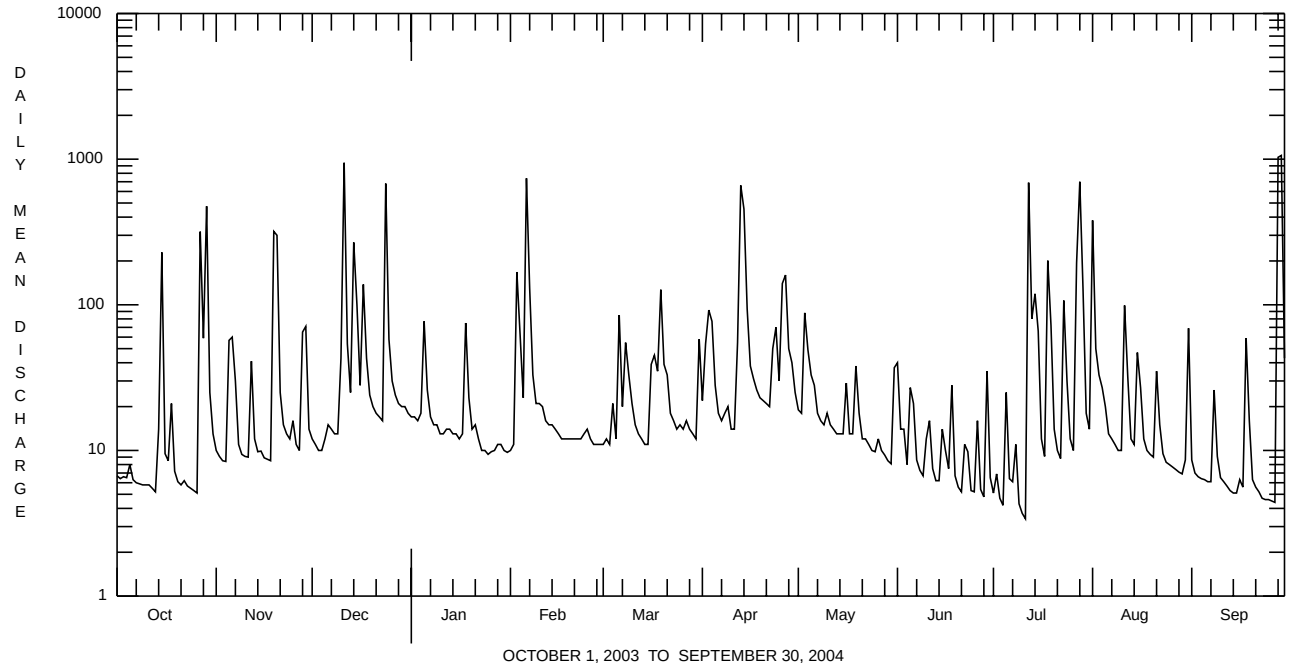
e Estimated.

POQUESSING CREEK BASIN

01465798 POQUESSING CREEK AT GRANT AVENUE, PHILADELPHIA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004	
ANNUAL TOTAL	14600.0		17426.2			
ANNUAL MEAN	40.0		47.6		32.5	
HIGHEST ANNUAL MEAN					52.3	1979
LOWEST ANNUAL MEAN					15.7	2002
HIGHEST DAILY MEAN	945	Dec 11	1060	Sep 29	2490	Sep 16 1999
LOWEST DAILY MEAN	2.9	Aug 25	3.4	Jul 11	0.21	Aug 3 1999
ANNUAL SEVEN-DAY MINIMUM	3.5	Aug 20	4.8	Sep 21	0.33	Aug 1 1999
MAXIMUM PEAK FLOW			**a**5430	Sep 28	**a**9400	Jul 28 1982
MAXIMUM PEAK STAGE			12.19	Sep 28	15.35	Jul 28 1982
10 PERCENT EXCEEDS	80		76		61	
50 PERCENT EXCEEDS	13		13		12	
90 PERCENT EXCEEDS	5.8		6.1		4.3	

a From rating curve extended above 550 ft^3/s on basis of slope-area measurement of peak flow.



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, and 0.8 mi upstream from Wooden Bridge Run in Philadelphia.

DRAINAGE AREA.--49.8 mi^2.

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 and crest-stage gage. Datum of gage is 21.27 ft above National Geodetic Vertical Datum of 1929.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 15	0445	1,780	6.34	Dec. 24	1030	2,800	7.59
Oct. 27	1745	1,720	6.26	Feb. 6	1730	3,580	8.41
Oct. 29	0930	2,010	6.64	Apr. 13	2115	2,840	7.64
Nov. 5	2345	2,240	6.94	July 12	1745	4,340	9.13
Nov. 20	0030	3,220	8.04	July 27	2215	4,030	8.85
Dec. 11	1515	7,620	11.73	Aug. 1	1415	3,020	7.83
Dec. 14	2315	2,140	6.81	Sept. 29	0300	*9,170	*12.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	68	70	87	e60	50	87	76	85	23	947	37
2	32	61	64	84	e65	50	109	74	46	54	120	32
3	30	58	61	82	e300	51	188	188	48	25	300	29
4	31	55	59	83	186	63	143	140	38	20	139	28
5	33	269	66	175	85	54	95	92	53	46	89	28
6	30	443	74	99	1310	142	76	88	52	23	72	27
7	29	153	66	78	410	74	73	73	39	24	66	28
8	29	81	64	73	131	82	75	69	35	38	61	66
9	28	70	62	e70	92	85	79	66	33	20	59	e55
10	27	66	105	e70	96	78	71	68	31	18	57	e40
11	27	63	3530	e65	100	62	68	63	38	17	107	27
12	26	131	260	e65	86	57	110	60	34	1370	103	26
13	26	89	145	e60	81	53	838	58	30	236	56	25
14	49	83	512	e60	72	53	486	57	30	184	52	24
15	524	82	520	e60	67	51	294	57	47	281	101	25
16	46	80	156	e70	62	76	129	93	37	52	64	29
17	39	83	425	e75	61	89	113	56	33	38	51	26
18	80	79	202	e120	60	79	103	53	56	383	48	230
19	38	476	135	e75	59	186	96	83	29	232	47	65
20	32	820	121	e60	59	129	91	69	25	64	44	34
21	32	118	109	e65	59	134	86	52	25	48	80	30
22	33	90	103	e60	58	85	82	50	32	44	64	27
23	31	80	98	e65	56	74	110	47	34	238	41	26
24	28	77	1220	e60	56	70	132	45	24	120	39	24
25	27	94	211	e55	57	69	78	43	44	51	38	24
26	28	70	133	e65	53	67	252	47	104	44	36	22
27	719	66	118	e60	51	67	259	54	26	616	36	23
28	220	135	107	e65	50	64	97	45	23	1050	35	1230
29	e1000	257	103	e55	50	60	84	39	74	105	33	2800
30	e110	77	98	e55	---	59	79	36	27	75	32	118
31	81	---	91	e60	---	136	---	63	---	99	101	---
TOTAL	3497	4374	9088	2276	3932	2449	4583	2104	1232	5638	3118	5205
MEAN	113	146	293	73.4	136	79.0	153	67.9	41.1	182	101	174
MAX	1000	820	3530	175	1310	186	838	188	104	1370	947	2800
MIN	26	55	59	55	50	50	68	36	23	17	32	22
CFSM	2.27	2.93	5.89	1.47	2.72	1.59	3.07	1.36	0.82	3.65	2.02	3.48
IN.	2.61	3.27	6.79	1.70	2.94	1.83	3.42	1.57	0.92	4.21	2.33	3.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

MEAN	59.4	75.4	98.7	96.5	96.9	121	117	99.5	89.0	85.9	70.6	76.2
MAX	174	300	311	334	252	273	338	194	270	257	163	276
(WY)	1997	1973	1997	1979	1979	1994	1983	1978	2001	1975	1967	1999
MIN	18.1	17.5	18.5	14.0	27.1	33.5	32.5	42.5	21.4	18.2	15.7	17.4
(WY)	2002	1966	1999	1981	2002	1985	1985	1995	1995	1999	1966	1970

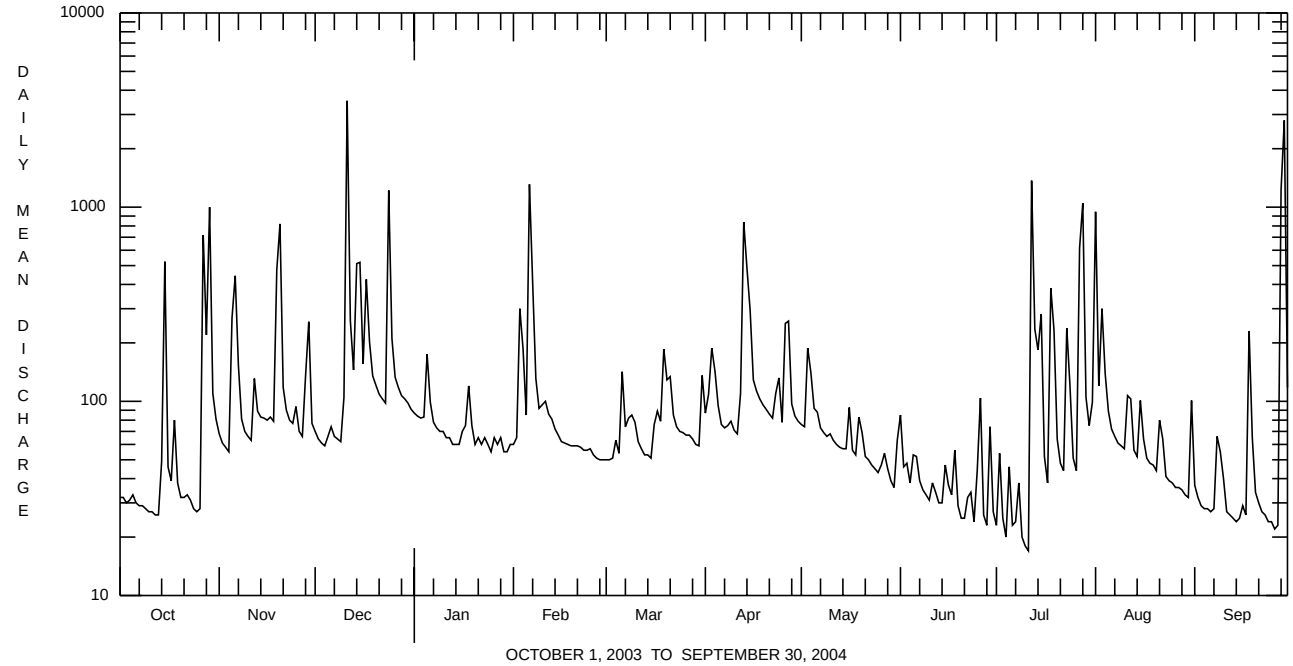
e Estimated.

PENNYPACK CREEK BASIN

01467048 PENNYPACK CREEK AT LOWER RHAWN STREET BRIDGE, PHILADELPHIA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004	
ANNUAL TOTAL	46015		47496			
ANNUAL MEAN	126		130		90.9	
HIGHEST ANNUAL MEAN					165	1973
LOWEST ANNUAL MEAN					42.7	2002
HIGHEST DAILY MEAN	3530	Dec 11	3530	Dec 11	**e**4900	Sep 16 1999
LOWEST DAILY MEAN	23	Aug 25,26	17	Jul 11	7.8	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	27	Oct 7	25	Sep 21	9.1	Aug 1 1999
MAXIMUM PEAK FLOW			**a**9170	Sep 29	**a**12400	Sep 16 1999
MAXIMUM PEAK STAGE			12.77	Sep 29	**b**14.77	Sep 16 1999
INSTANTANEOUS LOW FLOW			14	Jul 10-12	6.0	Oct 11 1966
ANNUAL RUNOFF (CFSM)	2.53		2.61		1.83	
ANNUAL RUNOFF (INCHES)	34.37		35.48		24.80	
10 PERCENT EXCEEDS	248		214		169	
50 PERCENT EXCEEDS	70		65		50	
90 PERCENT EXCEEDS	32		28		21	

a From rating curve extended above 3,900 ft^3/s on basis of slope-area measurement at gage height 13.15 ft.
b From high-water mark in gage shelter.
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, and 2.8 mi upstream from mouth in northeast Philadelphia.

DRAINAGE AREA.--30.4 mi^2.

PERIOD OF RECORD.--July 1982 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 16.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Satellite telemetry at station.

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

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 15	0000	3,460	6.49
Dec. 11	0845	4,880	7.74
Feb. 6	1330	3,370	6.41
July 12	1700	8,130	10.16
July 14	2145	3,660	6.68
July 27	2200	5,020	7.85
Aug. 1	0845	12,300	12.94
Aug. 3	1715	4,420	7.35
Sept. 28	1930	*13,900	*13.94

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	18	35	25	18	49	33	93	22	1450	13
2	11	19	16	34	21	21	92	32	22	12	42	12
3	12	18	15	33	283	20	74	147	19	11	332	11
4	13	16	16	35	52	30	162	47	14	11	65	11
5	14	135	19	90	27	20	36	43	28	36	37	11
6	12	49	21	34	876	108	31	37	24	12	28	11
7	12	39	18	31	92	24	30	36	16	25	26	11
8	12	18	17	30	38	40	32	31	15	24	24	39
9	12	16	16	29	32	32	33	30	14	11	22	18
10	12	16	93	26	33	24	28	39	14	11	20	12
11	11	16	1060	27	30	22	29	30	16	11	35	11
12	11	51	50	28	27	20	125	31	15	1660	20	10
13	11	17	39	27	26	19	463	28	14	42	18	10
14	137	15	337	27	25	19	155	27	15	194	21	11
15	285	16	71	26	24	19	76	27	159	40	54	12
16	13	16	40	27	23	44	44	61	24	15	27	14
17	14	16	171	29	22	35	41	26	23	16	16	12
18	28	16	45	101	22	29	39	23	21	181	15	254
19	11	280	38	31	22	92	38	57	13	42	15	25
20	11	181	37	25	22	36	38	22	13	21	14	16
21	12	27	35	23	21	34	37	19	13	17	80	14
22	14	22	34	22	20	28	36	18	27	16	16	13
23	13	21	33	20	20	27	162	17	22	116	14	14
24	12	23	655	21	21	27	65	16	12	25	13	14
25	13	31	55	20	21	27	34	17	73	16	13	18
26	16	19	44	23	18	26	218	20	23	15	12	17
27	451	19	41	22	18	29	77	16	12	405	12	17
28	68	115	38	23	17	25	38	16	12	247	13	2290
29	400	54	38	21	17	24	34	14	72	33	12	579
30	30	19	38	20	---	24	33	13	12	27	66	40
31	23	---	35	21	---	114	---	69	---	26	50	---
TOTAL	1705	1320	3183	961	1895	1057	2349	1042	850	3340	2582	3540
MEAN	55.0	44.0	103	31.0	65.3	34.1	78.3	33.6	28.3	108	83.3	118
MAX	451	280	1060	101	876	114	463	147	159	1660	1450	2290
MIN	11	15	15	20	17	18	28	13	12	11	12	10
CFSM	1.81	1.45	3.38	1.02	2.15	1.12	2.58	1.11	0.93	3.54	2.74	3.88
IN.	2.09	1.62	3.89	1.18	2.32	1.29	2.87	1.28	1.04	4.09	3.16	4.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

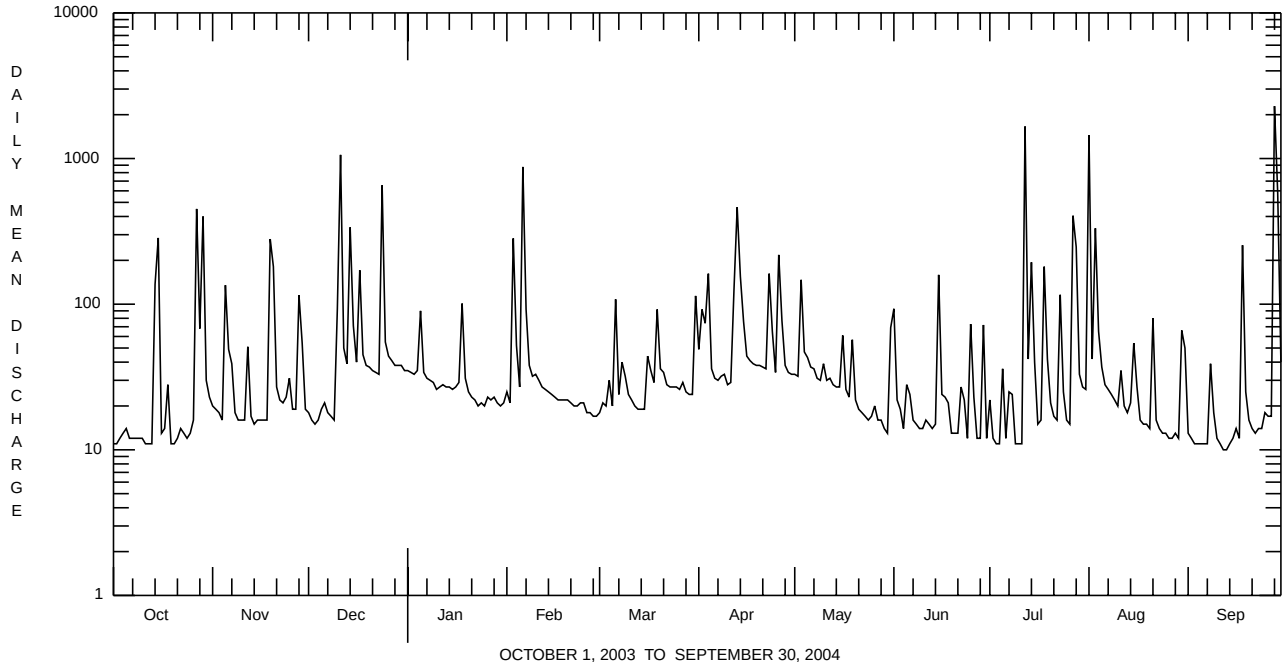
MEAN	27.8	33.4	39.5	34.3	35.8	50.1	47.3	48.0	43.1	50.2	40.6	47.9
MAX	86.5	81.7	145	61.8	80.4	91.4	143	98.4	111	116	83.3	143
(WY)	1997	1987	1997	1996	1988	1994	1983	1989	1989	1989	2004	1999
MIN	7.38	6.64	6.47	10.6	7.79	11.7	14.4	20.8	11.1	4.91	5.66	9.02
(WY)	2002	2002	1999	1985	2002	1985	2002	1986	1999	1999	1995	1998

FRANKFORD CREEK BASIN

01467087 FRANKFORD CREEK AT CASTOR AVENUE, PHILADELPHIA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	18727.5		23824			
ANNUAL MEAN	51.3		65.1		41.5	
HIGHEST ANNUAL MEAN					65.1	2004
LOWEST ANNUAL MEAN					17.9	2002
HIGHEST DAILY MEAN	1060	Dec 11	2290	Sep 28	3140	Sep 16 1999
LOWEST DAILY MEAN	7.7	Feb 16	10	Sep 12,13	0.39	Sep 25 2002
ANNUAL SEVEN-DAY MINIMUM	10	Feb 11	11	Sep 1	0.48	Sep 19 2002
MAXIMUM PEAK FLOW			**a**13900	Sep 28	**a**13900	Sep 28 2004
MAXIMUM PEAK STAGE			13.94	Sep 28	13.94	Sep 28 2004
INSTANTANEOUS LOW FLOW			9.4	Oct 14**b**	0.31	Sep 25 2002
ANNUAL RUNOFF (CFSM)	1.69		2.14		1.37	
ANNUAL RUNOFF (INCHES)	22.92		29.15		18.57	
10 PERCENT EXCEEDS	119		95		80	
50 PERCENT EXCEEDS	22		24		16	
90 PERCENT EXCEEDS	12		12		6.7	

a From rating curve extended above 8,000 ft^3/s on basis of slope-area measurement at gage height 9.97 ft.
b Also July 4, 5, 11, Sept. 13.



DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA

LOCATION.--Lat 39°57'14", long 75°08'16", Philadelphia County, Hydrologic Unit 02040202, on right bank at river end of pier 12, 150 ft upstream from Ben Franklin bridge, and at Philadelphia.

DRAINAGE AREA.--7,993 mi^2.

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: October 1961 to current year.

INSTRUMENTATION.--Water-quality monitor interfaced with a data collection platform.

REMARKS.--Water temperature, pH, and specific conductance records rated good. Dissolved oxygen record rated fair except for periods, Oct. 1-3, Nov. 12-20, Apr. 24 to May 3, and May 6-14, which are poor. Prior to July 1988, located on edge of pier 11 about 300 ft downstream of pier 12. Further information on this station is given in U.S. Geological Survey Water-Supply Paper 1809-0. Data collection discontinued during winter months. Other interruptions in the record were due to malfunctions of the pump or recording instrument.

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 TEMPERATURE: Maximum, 31.0°C, July 13-15, 1966; minimum, 0.0°C, many days during winters.
DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Dec. 14, 1962; minimum, 0.0 mg/L, on many days.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	154	143	146	118	108	112	170	162	165	---	---	---
2	156	149	152	116	110	112	---	---	---	---	---	---
3	156	144	151	122	111	118	---	---	---	---	---	---
4	153	142	148	130	117	125	---	---	---	---	---	---
5	151	143	146	137	124	131	---	---	---	---	---	---
6	151	145	148	148	132	141	---	---	---	---	---	---
7	157	148	152	156	143	149	---	---	---	---	---	---
8	164	152	158	161	150	156	---	---	---	---	---	---
9	170	156	163	168	156	161	---	---	---	---	---	---
10	175	162	168	172	160	166	---	---	---	---	---	---
11	179	168	173	174	166	169	---	---	---	---	---	---
12	185	173	178	177	168	171	---	---	---	---	---	---
13	186	178	182	173	167	170	---	---	---	---	---	---
14	192	182	185	180	169	172	---	---	---	---	---	---
15	187	178	183	185	174	178	---	---	---	---	---	---
16	187	178	182	189	179	183	---	---	---	---	---	---
17	196	185	189	192	185	188	---	---	---	---	---	---
18	201	193	197	194	189	191	---	---	---	---	---	---
19	205	198	202	197	190	194	---	---	---	---	---	---
20	208	201	205	198	179	187	---	---	---	---	---	---
21	209	200	206	189	181	186	---	---	---	---	---	---
22	209	190	201	186	168	176	---	---	---	---	---	---
23	207	181	194	173	138	160	---	---	---	---	---	---
24	202	178	188	155	126	140	---	---	---	---	---	---
25	198	178	187	133	126	130	---	---	---	---	---	---
26	195	180	186	139	127	131	---	---	---	---	---	---
27	196	181	189	146	132	137	---	---	---	---	---	---
28	188	177	181	154	138	143	---	---	---	---	---	---
29	188	163	178	159	149	153	---	---	---	---	---	---
30	163	129	146	166	153	159	---	---	---	---	---	---
31	129	117	122	---	---	---	---	---	---	---	---	---
MONTH	209	117	174	198	108	156	170	162	165	---	---	---

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	256	234	244	211	203	207
2	---	---	---	---	---	---	249	226	238	210	199	206
3	---	---	---	---	---	---	247	219	232	211	194	206
4	---	---	---	---	---	---	235	203	220	210	185	197
5	---	---	---	---	---	---	213	199	205	202	183	192
6	---	---	---	---	---	---	213	202	209	197	186	191
7	---	---	---	---	---	---	220	209	214	198	188	194
8	---	---	---	---	---	---	222	208	215	198	186	193
9	---	---	---	---	---	---	221	208	214	197	182	190
10	---	---	---	---	---	---	218	206	212	193	179	186
11	---	---	---	---	---	---	216	201	209	190	179	185
12	---	---	---	---	---	---	216	201	209	187	181	184
13	---	---	---	---	---	---	219	199	208	186	180	183
14	---	---	---	---	---	---	205	193	197	189	178	185
15	---	---	---	---	---	---	206	195	201	191	183	186
16	---	---	---	---	---	---	205	199	202	191	181	186
17	---	---	---	---	---	---	205	198	202	191	178	186
18	---	---	---	---	---	---	203	194	200	193	177	186
19	---	---	---	---	---	---	206	194	200	191	175	183
20	---	---	---	---	---	---	206	191	200	193	174	182
21	---	---	---	---	---	---	206	190	198	192	175	183
22	---	---	---	---	---	---	204	193	199	192	178	184
23	---	---	---	---	---	---	203	192	197	192	181	187
24	---	---	---	---	---	---	204	193	199	194	185	190
25	---	---	---	---	---	---	206	196	201	197	188	193
26	---	---	---	---	---	---	213	199	205	201	191	197
27	---	---	---	---	---	---	208	201	205	203	195	200
28	---	---	---	---	---	---	215	203	211	205	199	203
29	---	---	---	---	---	---	215	206	212	206	200	203
30	---	---	---	268	236	255	213	202	209	209	200	204
31	---	---	---	260	237	247	---	---	---	215	204	209
MONTH	---	---	---	268	236	251	256	190	209	215	174	192

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	214	209	211	261	244	251	210	167	189	172	159	165
2	218	212	214	263	248	256	194	175	184	172	163	168
3	221	214	217	266	250	259	192	181	186	187	167	172
4	224	209	217	270	253	262	191	180	187	194	172	182
5	222	208	216	270	254	263	192	169	183	189	178	184
6	223	204	214	271	255	263	188	172	180	190	182	186
7	222	201	212	272	256	264	189	173	181	192	180	188
8	226	203	213	274	259	267	191	175	183	196	185	191
9	226	206	213	273	259	266	192	180	186	198	185	192
10	222	205	213	276	258	268	196	182	188	198	170	184
11	225	205	215	279	260	269	200	186	193	190	172	180
12	223	206	214	279	241	262	202	194	197	199	178	187
13	225	206	214	265	221	237	203	194	199	205	182	195
14	226	208	215	233	218	223	206	186	198	203	186	196
15	224	202	215	226	193	211	217	170	202	202	181	195
16	224	204	212	222	192	203	211	121	168	201	168	189
17	228	209	216	213	194	202	175	114	139	198	168	183
18	231	213	220	210	195	203	152	113	124	200	157	182
19	233	214	222	206	198	202	131	111	119	163	105	145
20	232	214	222	206	198	202	130	117	123	---	---	---
21	233	216	224	207	198	203	141	124	129	---	---	---
22	234	218	227	209	198	204	141	125	132	102	93	98
23	235	223	229	210	199	205	135	127	130	111	101	106
24	238	224	231	209	202	206	142	129	137	119	108	114
25	241	226	233	215	205	210	149	135	143	126	114	120
26	242	229	236	219	210	214	153	142	150	132	121	127
27	242	231	237	220	213	217	156	148	153	140	126	133
28	245	233	239	219	207	213	162	153	157	144	132	139
29	249	236	242	215	206	210	168	156	163	147	136	141
30	254	238	247	---	---	---	164	154	161	145	133	139
31	---	---	---	219	188	204	172	155	164	---	---	---
MONTH	254	201	222	279	188	231	217	111	165	205	93	164

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	7.0	7.0	7.0	7.0	6.9	6.9	7.3	7.3	7.3	---	---	---
2	7.1	7.0	7.1	6.9	6.9	6.9	---	---	---	---	---	---
3	7.2	7.0	7.1	6.9	6.9	6.9	---	---	---	---	---	---
4	7.2	7.2	7.2	7.1	6.9	6.9	---	---	---	---	---	---
5	7.2	7.1	7.2	7.1	7.0	7.1	---	---	---	---	---	---
6	7.2	7.1	7.2	7.1	7.0	7.1	---	---	---	---	---	---
7	7.2	7.1	7.2	7.1	7.0	7.1	---	---	---	---	---	---
8	7.2	7.1	7.2	7.1	7.1	7.1	---	---	---	---	---	---
9	7.2	7.1	7.2	7.1	7.1	7.1	---	---	---	---	---	---
10	7.2	7.1	7.2	7.2	7.1	7.1	---	---	---	---	---	---
11	7.2	7.1	7.2	7.2	7.1	7.1	---	---	---	---	---	---
12	7.2	7.2	7.2	7.2	7.1	7.1	---	---	---	---	---	---
13	7.2	7.2	7.2	7.2	7.1	7.1	---	---	---	---	---	---
14	7.2	7.2	7.2	7.2	7.2	7.2	---	---	---	---	---	---
15	7.2	7.2	7.2	7.2	7.2	7.2	---	---	---	---	---	---
16	7.2	7.2	7.2	7.2	7.2	7.2	---	---	---	---	---	---
17	7.3	7.2	7.2	7.2	7.1	7.2	---	---	---	---	---	---
18	7.3	7.2	7.2	7.1	7.1	7.1	---	---	---	---	---	---
19	7.2	7.2	7.2	7.1	7.1	7.1	---	---	---	---	---	---
20	7.2	7.2	7.2	7.3	7.0	7.2	---	---	---	---	---	---
21	7.3	7.2	7.2	7.3	7.2	7.3	---	---	---	---	---	---
22	7.2	7.2	7.2	7.3	7.2	7.2	---	---	---	---	---	---
23	7.2	7.2	7.2	7.2	7.1	7.2	---	---	---	---	---	---
24	7.2	7.2	7.2	7.2	7.0	7.1	---	---	---	---	---	---
25	7.2	7.2	7.2	7.1	7.0	7.1	---	---	---	---	---	---
26	7.2	7.2	7.2	7.1	7.1	7.1	---	---	---	---	---	---
27	7.2	7.1	7.1	7.1	7.1	7.1	---	---	---	---	---	---
28	7.2	7.1	7.1	7.1	7.1	7.1	---	---	---	---	---	---
29	7.2	7.1	7.2	7.2	7.1	7.2	---	---	---	---	---	---
30	7.1	7.0	7.1	7.3	7.2	7.3	---	---	---	---	---	---
31	7.0	7.0	7.0	---	---	---	---	---	---	---	---	---
MAX	7.3	7.2	7.2	7.3	7.2	7.3	7.3	7.3	7.3	---	---	---
MIN	7.0	7.0	7.0	6.9	6.9	6.9	7.3	7.3	7.3	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	7.7	7.6	7.6	7.3	7.2	7.3
2	---	---	---	---	---	---	7.7	7.6	7.6	7.3	7.2	7.2
3	---	---	---	---	---	---	7.7	7.5	7.6	7.3	7.1	7.2
4	---	---	---	---	---	---	7.6	7.4	7.5	7.2	7.2	7.2
5	---	---	---	---	---	---	7.5	7.4	7.5	7.2	7.2	7.2
6	---	---	---	---	---	---	7.5	7.4	7.5	7.2	7.2	7.2
7	---	---	---	---	---	---	7.5	7.4	7.5	7.2	7.1	7.1
8	---	---	---	---	---	---	7.5	7.4	7.4	7.1	7.1	7.1
9	---	---	---	---	---	---	7.4	7.4	7.4	7.1	7.0	7.1
10	---	---	---	---	---	---	7.4	7.4	7.4	7.0	7.0	7.0
11	---	---	---	---	---	---	7.5	7.4	7.4	7.0	6.9	6.9
12	---	---	---	---	---	---	7.5	7.4	7.4	6.9	6.6	6.9
13	---	---	---	---	---	---	7.5	7.4	7.4	7.0	6.9	6.9
14	---	---	---	---	---	---	7.5	7.4	7.4	7.2	6.9	7.1
15	---	---	---	---	---	---	7.5	7.4	7.4	7.1	7.1	7.1
16	---	---	---	---	---	---	7.4	7.2	7.3	7.1	7.1	7.1
17	---	---	---	---	---	---	7.3	7.2	7.2	7.1	7.0	7.0
18	---	---	---	---	---	---	7.2	7.1	7.2	7.0	7.0	7.0
19	---	---	---	---	---	---	7.2	7.1	7.2	7.0	6.9	7.0
20	---	---	---	---	---	---	7.4	7.2	7.3	7.0	6.9	6.9
21	---	---	---	---	---	---	7.4	7.3	7.3	7.0	6.9	6.9
22	---	---	---	---	---	---	7.4	7.3	7.3	6.9	6.8	6.9
23	---	---	---	---	---	---	7.4	7.3	7.4	6.9	6.8	6.8
24	---	---	---	---	---	---	7.4	7.3	7.3	6.9	6.8	6.9
25	---	---	---	---	---	---	7.4	7.3	7.3	6.9	6.8	6.9
26	---	---	---	---	---	---	7.3	7.2	7.3	7.0	6.9	6.9
27	---	---	---	---	---	---	7.3	7.2	7.2	7.0	6.9	6.9
28	---	---	---	---	---	---	7.3	7.2	7.2	7.0	6.9	7.0
29	---	---	---	---	---	---	7.4	7.2	7.3	7.1	7.0	7.0
30	---	---	---	7.8	7.6	7.7	7.3	7.3	7.3	7.2	7.0	7.1
31	---	---	---	7.7	7.6	7.7	---	---	---	7.1	7.0	7.1
MAX	---	---	---	7.8	7.6	7.7	7.7	7.6	7.6	7.3	7.2	7.3
MIN	---	---	---	7.7	7.6	7.7	7.2	7.1	7.2	6.9	6.6	6.8

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	7.0	7.0	6.9	6.8	6.8	6.9	6.8	6.9	6.8	6.8	6.8
2	7.1	7.0	7.0	6.9	6.8	6.8	6.9	6.8	6.8	6.8	6.8	6.8
3	7.0	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.8	6.8	6.7	6.8
4	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.7	6.8	6.7	6.7
5	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.8	6.8	6.7	6.7
6	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.7	6.8
7	7.0	7.0	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.7	6.8
8	7.0	7.0	7.0	6.9	6.8	6.9	6.8	6.8	6.8	6.8	6.7	6.8
9	7.1	7.0	7.0	6.9	6.9	6.9	6.8	6.8	6.8	6.8	6.7	6.8
10	7.1	7.0	7.0	6.9	6.9	6.9	6.8	6.8	6.8	6.8	6.8	6.8
11	7.1	7.0	7.0	6.9	6.8	6.9	6.8	6.8	6.8	6.9	6.8	6.8
12	7.1	7.0	7.0	6.9	6.8	6.8	6.8	6.8	6.8	7.0	6.8	6.9
13	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.8	6.8	7.0	6.8	6.9
14	7.0	6.9	7.0	6.8	6.7	6.8	7.0	6.8	6.9	7.0	6.9	6.9
15	7.0	6.9	6.9	6.8	6.7	6.7	7.2	6.9	7.1	7.0	6.9	7.0
16	7.0	6.9	6.9	6.8	6.7	6.7	7.1	6.8	7.0	7.0	6.9	7.0
17	6.9	6.8	6.9	6.7	6.6	6.7	7.0	6.7	6.8	7.0	6.8	6.9
18	6.9	6.8	6.8	6.7	6.6	6.6	6.8	6.6	6.7	6.9	6.8	6.9
19	6.9	6.8	6.8	6.7	6.6	6.6	6.7	6.6	6.6	7.2	6.8	7.0
20	7.0	6.9	6.9	6.6	6.6	6.6	6.6	6.6	6.6	---	---	---
21	7.0	6.9	6.9	6.6	6.6	6.6	6.7	6.6	6.7	---	---	---
22	7.0	6.9	6.9	6.6	6.5	6.6	6.8	6.7	6.7	6.8	6.8	6.8
23	7.0	6.9	6.9	6.6	6.6	6.6	6.8	6.7	6.7	6.8	6.8	6.8
24	7.0	6.9	6.9	6.6	6.6	6.6	6.8	6.7	6.8	6.8	6.8	6.8
25	6.9	6.9	6.9	6.6	6.6	6.6	6.8	6.7	6.8	6.8	6.8	6.8
26	6.9	6.9	6.9	6.7	6.6	6.6	6.8	6.8	6.8	6.8	6.8	6.8
27	6.9	6.9	6.9	6.7	6.6	6.6	6.8	6.8	6.8	6.8	6.8	6.8
28	6.9	6.9	6.9	6.8	6.6	6.7	6.8	6.8	6.8	6.8	6.7	6.8
29	6.9	6.8	6.9	6.8	6.7	6.7	6.8	6.8	6.8	6.9	6.8	6.8
30	6.9	6.8	6.9	---	---	---	6.8	6.8	6.8	6.9	6.7	6.8
31	---	---	---	6.9	6.9	6.9	6.8	6.8	6.8	---	---	---
MAX	7.1	7.0	7.0	6.9	6.9	6.9	7.2	6.9	7.1	7.2	6.9	7.0
MIN	6.9	6.8	6.8	6.6	6.5	6.6	6.6	6.6	6.6	6.8	6.7	6.7

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	18.5	18.5	11.5	11.0	11.5	8.0	7.5	7.5	---	---	---
2	18.5	17.5	18.0	11.5	11.5	11.5	---	---	---	---	---	---
3	17.5	17.0	17.5	12.5	11.5	12.0	---	---	---	---	---	---
4	17.5	16.5	16.5	13.0	12.0	12.5	---	---	---	---	---	---
5	17.0	16.0	16.0	13.5	12.5	13.0	---	---	---	---	---	---
6	16.0	15.5	16.0	14.0	13.0	13.5	---	---	---	---	---	---
7	16.0	15.0	15.5	14.0	13.5	14.0	---	---	---	---	---	---
8	16.0	15.0	15.5	14.0	13.5	13.5	---	---	---	---	---	---
9	15.5	14.5	15.0	13.5	13.0	13.0	---	---	---	---	---	---
10	15.5	14.5	15.0	13.0	12.5	12.5	---	---	---	---	---	---
11	15.5	15.0	15.5	12.5	12.0	12.5	---	---	---	---	---	---
12	15.5	15.0	15.5	12.0	11.5	12.0	---	---	---	---	---	---
13	15.5	15.0	15.0	12.0	9.5	11.0	---	---	---	---	---	---
14	16.0	15.0	15.5	9.5	9.0	9.5	---	---	---	---	---	---
15	15.5	15.5	15.5	9.5	8.5	9.0	---	---	---	---	---	---
16	15.5	15.0	15.0	9.0	8.5	8.5	---	---	---	---	---	---
17	15.5	15.0	15.0	9.0	8.5	8.5	---	---	---	---	---	---
18	15.5	15.0	15.0	9.0	8.5	8.5	---	---	---	---	---	---
19	15.5	15.0	15.5	9.5	8.5	9.0	---	---	---	---	---	---
20	15.0	15.0	15.0	9.5	9.0	9.5	---	---	---	---	---	---
21	15.0	15.0	15.0	10.0	9.0	9.5	---	---	---	---	---	---
22	15.0	14.5	14.5	11.0	10.0	10.5	---	---	---	---	---	---
23	14.5	13.5	14.0	10.5	10.0	10.5	---	---	---	---	---	---
24	14.0	13.0	13.5	10.5	9.5	10.0	---	---	---	---	---	---
25	13.5	12.5	13.0	10.0	9.0	9.5	---	---	---	---	---	---
26	13.5	12.5	13.0	9.0	9.0	9.0	---	---	---	---	---	---
27	13.5	13.0	13.5	9.0	8.5	9.0	---	---	---	---	---	---
28	13.0	12.5	13.0	9.0	9.0	9.0	---	---	---	---	---	---
29	12.5	12.0	12.5	9.0	8.0	9.0	---	---	---	---	---	---
30	12.5	12.0	12.0	8.0	8.0	8.0	---	---	---	---	---	---
31	12.0	11.5	11.5	---	---	---	---	---	---	---	---	---
MONTH	19.0	11.5	14.9	14.0	8.0	10.6	8.0	7.5	7.5	---	---	---

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	9.5	8.5	9.0	16.0	15.5	16.0
2	---	---	---	---	---	---	10.0	9.0	9.5	16.5	16.0	16.0
3	---	---	---	---	---	---	10.0	9.5	10.0	16.5	16.0	16.0
4	---	---	---	---	---	---	10.0	9.5	10.0	16.0	16.0	16.0
5	---	---	---	---	---	---	9.5	9.0	9.5	16.5	16.0	16.0
6	---	---	---	---	---	---	9.0	8.5	9.0	17.0	16.0	16.5
7	---	---	---	---	---	---	9.5	9.0	9.0	17.5	16.5	17.0
8	---	---	---	---	---	---	9.5	9.0	9.0	17.5	17.0	17.0
9	---	---	---	---	---	---	9.5	9.0	9.5	17.5	17.0	17.0
10	---	---	---	---	---	---	10.0	9.5	9.5	17.5	17.0	17.5
11	---	---	---	---	---	---	9.5	9.5	9.5	18.0	17.5	18.0
12	---	---	---	---	---	---	9.5	9.5	9.5	19.0	18.0	18.5
13	---	---	---	---	---	---	10.0	9.5	9.5	19.5	18.5	19.0
14	---	---	---	---	---	---	10.5	10.0	10.5	20.5	19.5	19.5
15	---	---	---	---	---	---	11.0	10.5	10.5	21.5	20.0	20.5
16	---	---	---	---	---	---	11.0	10.5	10.5	22.0	20.5	21.5
17	---	---	---	---	---	---	11.5	10.5	11.0	22.5	21.5	22.0
18	---	---	---	---	---	---	12.0	11.0	11.5	22.5	21.5	22.0
19	---	---	---	---	---	---	13.0	12.0	12.5	22.5	22.0	22.5
20	---	---	---	---	---	---	13.5	12.5	13.0	22.5	22.0	22.5
21	---	---	---	---	---	---	14.0	13.0	13.5	22.5	22.5	22.5
22	---	---	---	---	---	---	15.0	13.5	14.0	23.0	22.5	22.5
23	---	---	---	---	---	---	15.5	14.5	15.0	23.5	22.5	23.0
24	---	---	---	---	---	---	16.5	15.0	15.5	23.5	23.0	23.5
25	---	---	---	---	---	---	16.5	15.5	16.0	24.0	23.5	23.5
26	---	---	---	---	---	---	16.5	15.5	16.0	23.5	23.5	23.5
27	---	---	---	---	---	---	17.0	16.0	16.5	23.5	23.5	23.5
28	---	---	---	---	---	---	16.5	16.0	16.5	23.5	23.5	23.5
29	---	---	---	---	---	---	16.5	15.5	16.0	23.5	23.0	23.0
30	---	---	---	8.5	8.0	8.5	16.5	15.0	16.0	23.5	23.0	23.0
31	---	---	---	9.0	8.5	8.5	---	---	---	23.0	22.5	23.0
MONTH	---	---	---	9.0	8.0	8.5	17.0	8.5	11.9	24.0	15.5	20.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	23.0	22.5	23.0	25.5	25.0	25.0	25.5	24.5	25.0	24.0	23.5	24.0
2	23.0	22.5	22.5	26.0	25.0	25.5	25.0	24.5	25.0	24.5	24.0	24.0
3	23.0	22.5	22.5	26.0	25.5	25.5	25.5	25.0	25.0	24.5	24.0	24.5
4	23.0	22.0	22.5	26.0	25.5	26.0	25.5	25.0	25.5	25.0	24.0	24.5
5	22.5	21.5	22.0	26.5	25.5	26.0	25.5	25.5	25.5	25.0	24.5	24.5
6	22.0	21.0	21.5	26.5	26.0	26.0	25.5	25.0	25.0	24.5	24.0	24.5
7	22.0	21.0	21.5	26.5	26.0	26.5	25.0	24.5	24.5	24.5	24.0	24.5
8	22.0	21.0	21.5	27.0	26.5	26.5	24.5	24.5	24.5	24.5	24.5	24.5
9	22.5	21.5	22.0	27.0	26.5	26.5	24.5	24.5	24.5	24.5	24.5	24.5
10	22.5	22.0	22.5	27.0	26.5	26.5	25.0	24.5	24.5	24.5	24.0	24.5
11	22.5	22.0	22.5	27.0	26.5	26.5	25.0	24.5	25.0	24.5	24.0	24.0
12	22.5	22.0	22.5	27.0	26.0	26.5	25.0	25.0	25.0	24.0	23.5	24.0
13	22.5	22.0	22.0	26.0	25.5	26.0	25.0	25.0	25.0	24.0	23.5	23.5
14	22.5	22.0	22.0	25.5	25.5	25.5	25.0	24.5	25.0	24.0	23.0	23.5
15	22.5	22.0	22.5	25.5	25.0	25.0	25.0	23.5	24.5	23.5	22.5	23.0
16	23.0	22.5	22.5	25.0	24.5	25.0	24.5	22.5	23.5	23.0	22.5	23.0
17	23.5	23.0	23.0	25.0	24.5	25.0	24.0	22.0	23.0	23.0	22.5	22.5
18	24.0	23.0	23.5	25.0	24.5	24.5	23.0	22.0	22.5	23.0	21.5	22.5
19	24.0	23.5	24.0	24.5	24.5	24.5	22.5	22.5	22.5	21.5	18.0	20.0
20	24.0	23.5	24.0	25.0	24.5	24.5	23.0	22.5	23.0	---	---	---
21	24.0	23.5	24.0	25.0	24.5	24.5	23.5	23.0	23.0	---	---	---
22	24.5	24.0	24.0	25.0	24.5	25.0	23.5	23.0	23.5	17.5	17.0	17.0
23	24.5	24.0	24.0	25.0	25.0	25.0	23.5	23.0	23.5	18.0	17.0	17.5
24	25.0	24.0	24.5	25.0	25.0	25.0	23.5	23.5	23.5	18.5	18.0	18.0
25	25.0	24.5	24.5	25.0	25.0	25.0	23.5	23.0	23.5	19.0	18.0	18.5
26	25.0	24.5	25.0	25.0	24.5	25.0	23.5	23.0	23.0	19.0	18.5	19.0
27	25.0	24.5	25.0	25.0	25.0	25.0	23.5	22.5	23.0	19.5	19.0	19.0
28	25.5	24.5	25.0	25.0	25.0	25.0	23.5	23.0	23.0	20.0	19.0	19.5
29	25.5	24.5	25.0	25.5	25.0	25.0	24.0	23.0	23.5	20.0	19.5	20.0
30	25.5	24.5	25.0	---	---	---	24.0	23.5	24.0	20.0	18.5	19.5
31	---	---	---	25.5	25.0	25.0	24.0	24.0	24.0	---	---	---
MONTH	25.5	21.0	23.2	27.0	24.5	25.4	25.5	22.0	24.0	25.0	17.0	22.1

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	7.5	5.1	6.7	9.6	9.4	9.5	10.9	10.7	10.8	---	---	---
2	7.9	7.3	7.5	9.7	9.4	9.6	---	---	---	---	---	---
3	8.0	7.3	7.7	9.5	9.3	9.4	---	---	---	---	---	---
4	8.2	7.7	7.9	9.6	9.1	9.3	---	---	---	---	---	---
5	8.4	7.8	8.1	9.5	9.3	9.4	---	---	---	---	---	---
6	8.5	8.1	8.3	9.3	9.0	9.1	---	---	---	---	---	---
7	8.6	8.1	8.3	9.0	8.7	8.9	---	---	---	---	---	---
8	8.8	8.1	8.5	9.0	8.8	8.9	---	---	---	---	---	---
9	8.8	8.2	8.5	9.1	8.8	9.0	---	---	---	---	---	---
10	8.9	8.3	8.6	9.3	8.9	9.1	---	---	---	---	---	---
11	8.9	8.4	8.7	9.4	9.0	9.2	---	---	---	---	---	---
12	9.0	8.5	8.7	9.5	8.9	9.2	---	---	---	---	---	---
13	9.0	8.6	8.8	10.2	9.1	9.6	---	---	---	---	---	---
14	9.0	8.5	8.7	10.5	10.1	10.3	---	---	---	---	---	---
15	8.9	8.5	8.7	10.5	10.1	10.4	---	---	---	---	---	---
16	8.9	8.6	8.8	10.5	10.1	10.3	---	---	---	---	---	---
17	8.8	8.4	8.7	10.4	10.1	10.3	---	---	---	---	---	---
18	8.6	8.4	8.5	10.3	10.0	10.2	---	---	---	---	---	---
19	8.5	8.3	8.4	10.2	9.7	10	---	---	---	---	---	---
20	8.4	8.1	8.2	10.3	9.4	9.9	---	---	---	---	---	---
21	8.4	8.0	8.2	10.2	10.0	10.1	---	---	---	---	---	---
22	8.5	8.1	8.3	10.1	9.4	9.6	---	---	---	---	---	---
23	8.7	8.1	8.4	9.9	9.4	9.7	---	---	---	---	---	---
24	8.9	8.3	8.6	10.1	9.7	9.9	---	---	---	---	---	---
25	8.9	8.4	8.7	10.4	9.9	10.1	---	---	---	---	---	---
26	9.0	8.5	8.7	10.4	10.1	10.3	---	---	---	---	---	---
27	8.9	8.3	8.5	10.5	10.2	10.3	---	---	---	---	---	---
28	9.2	8.5	8.8	10.4	10.0	10.3	---	---	---	---	---	---
29	9.3	8.7	9.1	10.7	10.0	10.3	---	---	---	---	---	---
30	9.0	8.7	8.9	10.9	10.7	10.8	---	---	---	---	---	---
31	9.5	8.9	9.2	---	---	---	---	---	---	---	---	---
MONTH	9.5	5.1	8.4	10.9	8.7	9.8	10.9	10.7	10.8	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	10.8	10.6	10.7	8.6	8.1	8.3
2	---	---	---	---	---	---	10.6	10.3	10.5	8.6	8.0	8.3
3	---	---	---	---	---	---	10.3	10.0	10.2	8.7	7.5	8.1
4	---	---	---	---	---	---	10.1	9.8	10	8.6	8.2	8.4
5	---	---	---	---	---	---	10.2	9.7	10	8.6	8.3	8.4
6	---	---	---	---	---	---	10.3	10.1	10.2	8.4	8.1	8.3
7	---	---	---	---	---	---	10.3	10.1	10.2	8.3	7.9	8.1
8	---	---	---	---	---	---	10.4	10.1	10.2	8.4	7.9	8.1
9	---	---	---	---	---	---	10.4	10.0	10.2	8.4	8.0	8.2
10	---	---	---	---	---	---	10.5	10.1	10.3	8.2	7.7	7.9
11	---	---	---	---	---	---	10.8	10.1	10.4	7.8	7.4	7.6
12	---	---	---	---	---	---	10.8	10.1	10.4	7.7	7.2	7.4
13	---	---	---	---	---	---	10.5	10.1	10.3	7.7	7.0	7.4
14	---	---	---	---	---	---	10.1	9.9	10.0	7.8	7.0	7.5
15	---	---	---	---	---	---	10.0	9.5	9.9	7.8	7.5	7.6
16	---	---	---	---	---	---	9.8	9.5	9.7	7.5	7.2	7.3
17	---	---	---	---	---	---	9.6	9.1	9.4	7.2	6.9	7.0
18	---	---	---	---	---	---	9.4	9.0	9.2	6.9	6.6	6.7
19	---	---	---	---	---	---	9.3	8.8	9.1	6.6	6.1	6.3
20	---	---	---	---	---	---	9.5	8.8	9.1	6.4	5.5	5.9
21	---	---	---	---	---	---	9.5	8.9	9.2	6.4	5.5	5.8
22	---	---	---	---	---	---	9.4	8.9	9.2	5.7	5.2	5.5
23	---	---	---	---	---	---	9.4	9.0	9.2	5.6	5.0	5.3
24	---	---	---	---	---	---	9.2	8.8	9.0	5.7	5.1	5.4
25	---	---	---	---	---	---	8.9	8.6	8.8	6.4	5.4	6.0
26	---	---	---	---	---	---	8.7	8.1	8.4	6.5	5.9	6.1
27	---	---	---	---	---	---	8.2	7.9	8.0	6.5	5.6	6.1
28	---	---	---	---	---	---	8.6	7.8	8.2	6.7	5.6	6.2
29	---	---	---	---	---	---	8.9	7.9	8.4	7.6	6.1	6.8
30	---	---	---	11.4	10.8	11.1	8.7	8.0	8.4	7.7	6.5	7.1
31	---	---	---	11.1	10.7	10.9	---	---	---	7.2	6.3	6.8
MONTH	---	---	---	11.4	10.7	11.0	10.8	7.8	9.6	8.7	5.0	7.1

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	6.3	5.7	6.1	4.2	3.6	3.9	7.1	5.9	6.5	5.9	5.5	5.7
2	6.0	5.2	5.6	4.2	3.7	3.9	6.7	5.7	6.1	6.0	5.5	5.8
3	6.0	5.2	5.5	4.3	3.7	4.0	6.3	5.1	5.6	5.9	5.4	5.6
4	6.1	5.1	5.5	4.6	3.8	4.2	5.9	4.7	5.2	5.7	5.2	5.4
5	6.2	5.7	5.9	4.8	4.2	4.4	5.9	4.5	5.1	5.6	5.1	5.3
6	6.1	5.4	5.7	4.8	4.1	4.4	5.6	4.7	5.1	5.7	5.2	5.4
7	6.3	5.2	5.8	5.1	4.4	4.7	5.4	4.5	4.9	5.5	4.8	5.2
8	6.5	5.5	6.0	4.9	4.1	4.6	5.4	4.6	5.0	5.3	4.6	4.9
9	6.7	5.7	6.2	5.4	4.5	4.9	5.3	4.5	4.9	5.5	4.6	5.0
10	7.2	5.9	6.4	5.5	4.7	5.0	5.3	4.4	4.8	5.8	4.9	5.4
11	7.0	5.8	6.4	5.6	4.7	5.1	5.3	4.4	4.8	6.3	5.2	5.9
12	7.1	5.7	6.3	5.5	4.7	5.0	5.0	4.3	4.6	6.4	5.6	6.0
13	7.4	5.7	6.4	5.1	4.2	4.6	4.8	4.2	4.5	6.2	5.7	6.0
14	7.0	5.7	6.3	---	---	---	5.7	4.1	5.0	6.3	5.7	6.0
15	6.3	5.4	5.9	---	---	---	6.2	5.3	5.8	6.2	5.7	6.0
16	5.8	4.9	5.3	4.9	4.4	4.6	6.2	5.7	6.0	6.2	5.6	5.9
17	4.9	4.3	4.6	4.7	4.1	4.4	6.1	5.7	5.9	6.2	5.4	5.8
18	4.8	3.7	4.2	4.5	3.9	4.2	6.1	5.6	5.8	6.2	5.4	5.7
19	5.0	3.6	4.2	---	---	---	5.9	5.5	5.7	7.0	6.2	6.6
20	5.3	4.1	4.5	---	---	---	5.8	5.3	5.5	---	---	---
21	5.3	4.3	4.7	---	---	---	5.7	4.8	5.4	---	---	---
22	5.6	4.4	4.8	---	---	---	5.8	5.0	5.4	7.7	7.5	7.6
23	5.3	4.3	4.7	---	---	---	5.8	5.3	5.6	7.8	7.6	7.7
24	5.1	4.2	4.6	---	---	---	6.0	5.3	5.6	7.7	7.5	7.6
25	4.9	4.2	4.5	5.1	3.8	4.3	6.1	5.5	5.8	7.6	7.3	7.5
26	4.6	3.8	4.1	5.3	4.0	4.5	6.2	5.6	5.8	7.5	7.2	7.4
27	4.3	3.7	4.0	5.2	4.1	4.6	6.1	5.7	5.9	7.3	7.1	7.2
28	4.2	3.6	3.9	6.4	3.9	5.1	6.3	5.6	6.0	7.2	6.7	7.0
29	4.0	3.3	3.6	6.0	4.8	5.5	6.2	5.8	6.0	7.1	6.7	6.9
30	4.1	3.2	3.7	---	---	---	6.8	5.7	6.0	7.0	6.3	6.6
31	---	---	---	6.9	5.7	6.4	6.0	5.6	5.7	---	---	---
MONTH	7.4	3.2	5.2	6.9	3.6	4.7	7.1	4.1	5.5	7.8	4.6	6.2

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 on SR 2011 at Landingville, 0.1 mi upstream from Mahannon Creek, and 5.0 mi downstream from West Branch Schuylkill River.

DRAINAGE AREA.--133 mi^2.

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 and crest-stage gage. 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 those for estimated daily discharges and those greater than 1,000 ft^3/s, which are fair. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1972 reached a stage of 17.36 ft, discharge, about 14,000 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1700	1,850	6.95	Aug. 13	0500	3,560	10.94
Oct. 29	1030	2,100	7.37	Aug. 21	0600	1,480	6.58
Dec. 11	1330	3,350	9.90	Sept. 18	1300	*6,000	*13.85
July 12	1500	3,160	10.24	Sept. 28	1900	1,790	7.30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	381	771	592	396	e140	193	281	319	254	152	473	191
2	351	653	508	372	e135	215	302	370	220	144	345	177
3	323	572	447	368	173	279	262	826	205	138	313	168
4	342	503	413	474	192	315	252	573	185	134	324	159
5	314	508	399	674	156	328	235	516	353	152	357	152
6	280	504	391	587	336	404	223	459	520	133	272	148
7	257	446	352	531	382	387	215	458	367	128	242	139
8	240	398	324	486	273	399	227	394	316	125	222	180
9	224	368	295	447	223	363	233	359	287	117	202	240
10	214	349	336	394	210	335	209	338	263	113	183	189
11	199	337	2280	e320	202	317	205	309	262	111	173	150
12	192	356	1740	e330	192	306	226	289	232	1770	651	139
13	187	327	1120	344	187	288	545	292	210	968	2240	133
14	195	289	901	318	185	277	880	288	201	711	1080	126
15	604	280	781	e280	177	261	664	347	256	630	752	124
16	329	268	650	e240	167	259	538	413	318	470	579	123
17	296	251	690	e250	159	258	462	311	270	383	476	125
18	301	231	627	e260	155	251	405	319	342	377	420	3820
19	274	387	550	250	159	266	367	292	251	351	378	1770
20	253	647	498	232	167	272	335	277	221	291	377	1090
21	244	498	452	218	198	326	320	263	206	253	946	825
22	238	459	417	211	202	316	296	248	283	229	520	661
23	225	420	408	198	189	299	312	231	254	418	393	560
24	212	416	830	190	191	290	281	231	203	341	336	492
25	204	460	865	e175	180	289	267	208	190	274	300	439
26	198	378	742	e180	173	286	475	249	195	251	274	396
27	1030	358	644	e170	164	284	417	324	175	290	258	360
28	1090	526	570	e160	175	273	380	275	167	307	278	940
29	1580	817	509	e150	185	260	351	222	198	280	262	1000
30	1270	671	492	e140	---	251	334	208	160	238	249	698
31	956	---	437	e135	---	249	---	237	---	229	218	---
TOTAL	13003	13448	20260	9480	5627	9096	10499	10445	7564	10508	14093	15714
MEAN	419	448	654	306	194	293	350	337	252	339	455	524
MAX	1580	817	2280	674	382	404	880	826	520	1770	2240	3820
MIN	187	231	295	135	135	193	205	208	160	111	173	123
CFSM	3.15	3.37	4.91	2.30	1.46	2.21	2.63	2.53	1.90	2.55	3.42	3.94
IN.	3.64	3.76	5.67	2.65	1.57	2.54	2.94	2.92	2.12	2.94	3.94	4.40

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

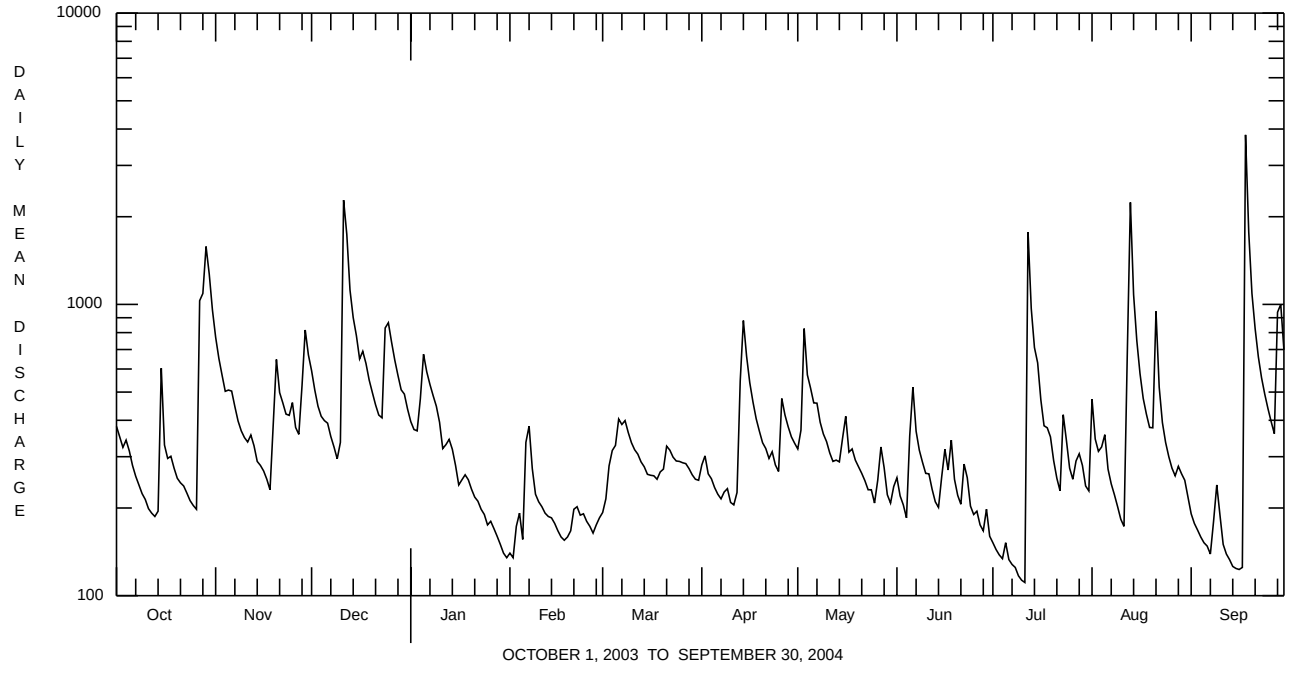
MEAN	181	261	346	327	313	439	426	352	247	175	145	167
MAX	760	569	918	887	620	929	1079	811	1002	471	455	524
(WY)	1977	1952	1997	1979	1981	1977	1993	1989	2003	1984	2004	2004
MIN	28.5	52.5	59.7	41.2	113	164	157	127	77.1	54.2	51.4	55.6
(WY)	1964	1965	1999	1981	2002	1985	1985	1965	1965	1965	2002	1964

e Estimated.

01468500 SCHUYLKILL RIVER AT LANDINGVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	170328		139737			
ANNUAL MEAN	467		382		279	
HIGHEST ANNUAL MEAN					441	1952
LOWEST ANNUAL MEAN					122	1965
HIGHEST DAILY MEAN	2900	Jun 1	3820	Sep 18	4660	Apr 16 1983
LOWEST DAILY MEAN	**e**105	Feb 17	111	Jul 11	21	Nov 4 1963
ANNUAL SEVEN-DAY MINIMUM	**a**116	Feb 14	126	Jul 5	23	Oct 25 1963
MAXIMUM PEAK FLOW			**b**6000	Sep 18	**bc**8570	Nov 25 1950
MAXIMUM PEAK STAGE			13.85	Sep 18	13.85	Sep 18 2004
INSTANTANEOUS LOW FLOW			108	Jul 11,12	19	Oct 30 1963
ANNUAL RUNOFF (CFSM)	3.51		2.87		2.10	
ANNUAL RUNOFF (INCHES)	47.64		39.08		28.52	
10 PERCENT EXCEEDS	852		655		552	
50 PERCENT EXCEEDS	363		290		196	
90 PERCENT EXCEEDS	171		167		75	

a Computed using estimated daily discharges.
b From rating curve extended above 5,000 ft^3/s.
c Gage height, 13.29 ft.
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 along State Highway 309, 0.6 mi upstream from Tamaqua, and 0.8 mi upstream from Panther Creek.

DRAINAGE AREA.--42.9 mi^2.

PERIOD OF RECORD.--October 1919 to current year. 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.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Still Creek Reservoir (station 01469200) 6.5 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion and change in contents of Still Creek Reservoir provided by the Borough of Tamaqua.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	270	249	122	40	67	92	90	80	51	142	75
2	114	218	213	112	39	98	100	100	70	47	132	71
3	97	193	181	107	45	137	87	192	66	44	117	64
4	84	180	160	131	55	145	82	131	61	42	116	59
5	80	151	149	217	47	150	76	112	86	46	123	61
6	69	146	143	192	63	200	69	106	162	48	103	59
7	63	134	128	170	86	212	67	101	139	42	93	57
8	59	115	112	154	68	211	69	89	124	39	87	60
9	55	104	94	142	55	183	74	96	111	36	81	94
10	53	99	96	119	50	158	66	110	118	34	76	83
11	50	96	698	111	48	142	63	113	123	33	74	59
12	47	98	640	113	44	130	64	105	99	220	148	51
13	44	93	566	108	43	116	146	100	88	218	771	47
14	44	85	461	98	41	107	323	99	83	140	450	44
15	160	78	357	92	40	101	270	113	88	120	298	43
16	100	76	231	80	e34	100	221	194	116	103	232	42
17	87	72	199	83	38	100	177	130	109	94	196	44
18	87	69	179	80	e33	92	150	120	152	96	163	1490
19	82	93	148	75	35	93	160	111	128	102	142	1090
20	76	176	130	69	35	88	152	100	110	86	133	791
21	73	113	116	64	40	104	147	98	98	76	215	449
22	71	106	109	61	49	102	145	97	110	71	153	245
23	66	115	108	53	48	94	159	89	101	167	127	187
24	62	115	293	54	51	93	144	83	86	141	118	153
25	59	124	384	50	48	99	139	77	77	110	110	135
26	58	115	310	51	43	100	170	92	73	101	101	119
27	302	110	248	51	41	100	136	102	68	110	93	103
28	409	151	203	57	42	97	96	96	63	120	89	192
29	522	289	171	49	53	92	93	75	72	104	84	243
30	465	279	158	44	---	89	90	69	59	91	81	175
31	346	---	138	41	---	87	---	73	---	87	79	---
TOTAL	4005	4063	7372	2950	1354	3687	3827	3263	2920	2819	4927	6385
MEAN	129	135	238	95.2	46.7	119	128	105	97.3	90.9	159	213
MAX	522	289	698	217	86	212	323	194	162	220	771	1490
MIN	44	69	94	41	33	67	63	69	59	33	74	42
(†)	4.6	4.8	4.8	4.7	4.7	4.8	4.9	5.0	5.0	4.8	5.3	5.3

† Diversion from Still Creek Reservoir, equivalent in cubic feet per second.
e Estimated.

SCHUYLKILL RIVER BASIN

01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.6	81.4	105	89.6	93.3	142	141	107	68.2	50.8	41.7	46.3
MAX	317	242	321	338	242	365	475	315	430	394	226	259
(WY)	1977	1952	1997	1996	1951	1936	1993	1989	1972	1947	1933	1933
MIN	5.82	7.81	12.2	8.57	26.6	42.5	46.6	21.1	14.6	8.87	6.25	6.46
(WY)	1964	1942	1981	1981	1934	1985	1985	1941	1941	1965	1944	1964

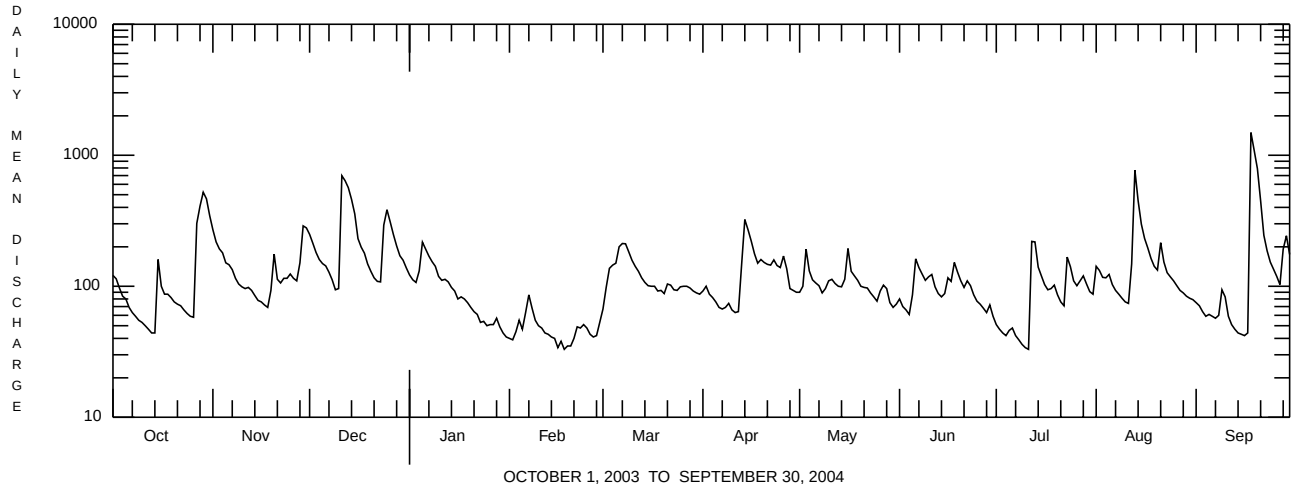
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1933 - 2004	
ANNUAL TOTAL	51874		47572			
ANNUAL MEAN	142		130		84.6	
HIGHEST ANNUAL MEAN					155	1952
LOWEST ANNUAL MEAN					33.8	1965
HIGHEST DAILY MEAN	840	Jun 21	1490	Sep 18	2790	Aug 24 1933
LOWEST DAILY MEAN	31	Feb 16	**e**33	Feb 18**a**	2.9	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	**b**35	Feb 10	**b**36	Feb 15	3.5	Aug 27 1966
MAXIMUM PEAK FLOW			2370	Sep 18	**c**7790	Aug 18 1955
MAXIMUM PEAK STAGE			6.78	Sep 18	11.10	Aug 18 1955
INSTANTANEOUS LOW FLOW					2.6	Sep 2 1966
10 PERCENT EXCEEDS	299		216		177	
50 PERCENT EXCEEDS	94		100		52	
90 PERCENT EXCEEDS	44		48		14	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1932, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.0	96.5	101	78.7	103	188	143	112	74.4	57.0	33.7	37.7
MAX	227	308	241	266	344	410	227	208	209	185	81.5	152
(WY)	1928	1927	1928	1924	1925	1920	1928	1924	1922	1928	1927	1924
MIN	6.67	6.74	7.99	13.3	25.7	88.5	72.6	32.8	27.3	14.5	10.3	6.66
(WY)	1931	1931	1931	1931	1931	1931	1926	1926	1921	1923	1923	1932

SUMMARY STATISTICS	WATER YEARS 1920 - 1932	
ANNUAL TOTAL ANNUAL MEAN	91.5	
HIGHEST ANNUAL MEAN	145	1928
LOWEST ANNUAL MEAN	42.3	1931
HIGHEST DAILY MEAN	3600	Sep 30 1924
LOWEST DAILY MEAN	3.0	Dec 23 1930
ANNUAL SEVEN DAY MINIMUM	3.8	Dec 14 1930
MAXIMUM PEAK FLOW	5000	Sep 30 1924
INSTANTANEOUS LOW FLOW	1.8	Dec 18 1931
ANNUAL RUNOFF (CFSM)	2.13	
ANNUAL RUNOFF (INCHES)	28.97	
10 PERCENT EXCEEDS	201	
50 PERCENT EXCEEDS	54	
90 PERCENT EXCEEDS	12	

a Also July 11 (not estimated).
b Computed using estimated daily discharges.
c From rating curve extended above 3,200 ft^3/s on basis of contracted-opening measurement of peak flow.
e Estimated.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°31'21", long 75°59'55", Berks County, Hydrologic Unit 02040203, on right bank 50 ft upstream from bridge on Township Route 558 at Berne, 0.5 mi upstream from Mill Creek, and 6.5 mi downstream from Little Schuylkill River.

DRAINAGE AREA.--355 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1947 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 310.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation at low flow by mine pumpage and by Still Creek Reservoir (station 01469200) about 25 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 29	1600	5,220	8.43
Dec. 11	1730	12,700	11.45
July 12	1900	7,420	9.43
Aug. 13	1030	17,200	12.89
Aug. 21	1100	6,520	9.04
Sept. 18	1600	*24,900	*15.05
Sept. 29	0000	5,660	8.64

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	931	2090	1790	1050	e480	560	662	819	613	362	897	569
2	861	1710	1490	961	e485	598	752	813	516	346	814	523
3	775	1460	1260	924	e515	823	664	2080	477	326	690	491
4	772	1280	1120	1030	e575	897	636	1570	426	312	644	461
5	746	1170	1040	1710	e640	939	599	1340	545	327	816	443
6	646	1220	1030	e1620	e900	1110	558	1190	1700	329	618	431
7	583	1100	922	e1440	1610	1140	539	1130	1240	300	551	413
8	547	945	831	e1200	979	1150	526	980	993	310	511	457
9	520	855	737	e1000	728	1070	595	874	839	280	475	639
10	495	810	737	e850	655	967	517	826	741	264	440	581
11	465	783	6910	e800	638	895	493	777	787	257	425	441
12	441	838	5750	e780	579	853	493	715	663	3240	858	398
13	417	808	3460	e760	549	779	1060	686	576	2770	11200	380
14	409	710	2710	e730	531	730	2520	634	540	1560	4110	358
15	1400	662	2340	e700	492	702	1960	925	583	1600	2460	347
16	897	628	1850	e670	435	683	1540	1030	806	1110	1780	346
17	737	607	1850	e650	425	696	1290	797	607	915	1420	346
18	748	566	1860	e630	421	666	1120	753	1010	884	1200	14100
19	659	681	1580	e620	419	701	995	697	739	999	1050	7550
20	602	1700	1390	e610	455	702	932	650	635	772	955	3800
21	577	1340	1220	e600	536	893	866	613	563	670	4130	2620
22	566	1160	1110	e590	639	914	805	586	633	600	2410	1830
23	535	1060	1060	e580	577	851	831	552	716	770	1610	1470
24	499	996	2320	e570	562	807	768	515	536	1060	1250	1240
25	467	1200	3110	e610	525	783	705	510	480	714	1040	1070
26	451	985	2420	e580	481	768	1120	544	477	633	907	956
27	1890	931	1960	e560	454	754	1240	763	433	642	806	848
28	3340	1210	1650	e550	459	721	1030	690	399	776	746	2100
29	3990	2550	1430	e540	498	668	945	535	459	664	742	3900
30	3710	2120	1330	e520	---	640	875	474	396	573	673	2340
31	2680	---	1180	e500	---	625	---	472	---	537	680	---
TOTAL	32356	34175	59447	24935	17242	25085	27636	25540	20128	24902	46908	51448
MEAN	1044	1139	1918	804	595	809	921	824	671	803	1513	1715
MAX	3990	2550	6910	1710	1610	1150	2520	2080	1700	3240	11200	14100
MIN	409	566	737	500	419	560	493	472	396	257	425	346
CFSM	2.94	3.21	5.40	2.27	1.67	2.28	2.59	2.32	1.89	2.26	4.26	4.83
IN.	3.39	3.58	6.23	2.61	1.81	2.63	2.90	2.68	2.11	2.61	4.92	5.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2004, BY WATER YEAR (WY)

MEAN	432	693	938	814	869	1181	1120	869	598	385	364	388
MAX	1896	1631	2932	2547	1735	2525	3319	2689	3410	1240	1594	1715
(WY)	1977	1971	1997	1979	1981	1994	1993	1989	1972	1984	1955	2004
MIN	75.7	120	125	88.4	274	462	424	314	148	104	105	94.6
(WY)	1964	1965	1981	1981	2002	1985	1985	1999	1965	1999	2002	1964

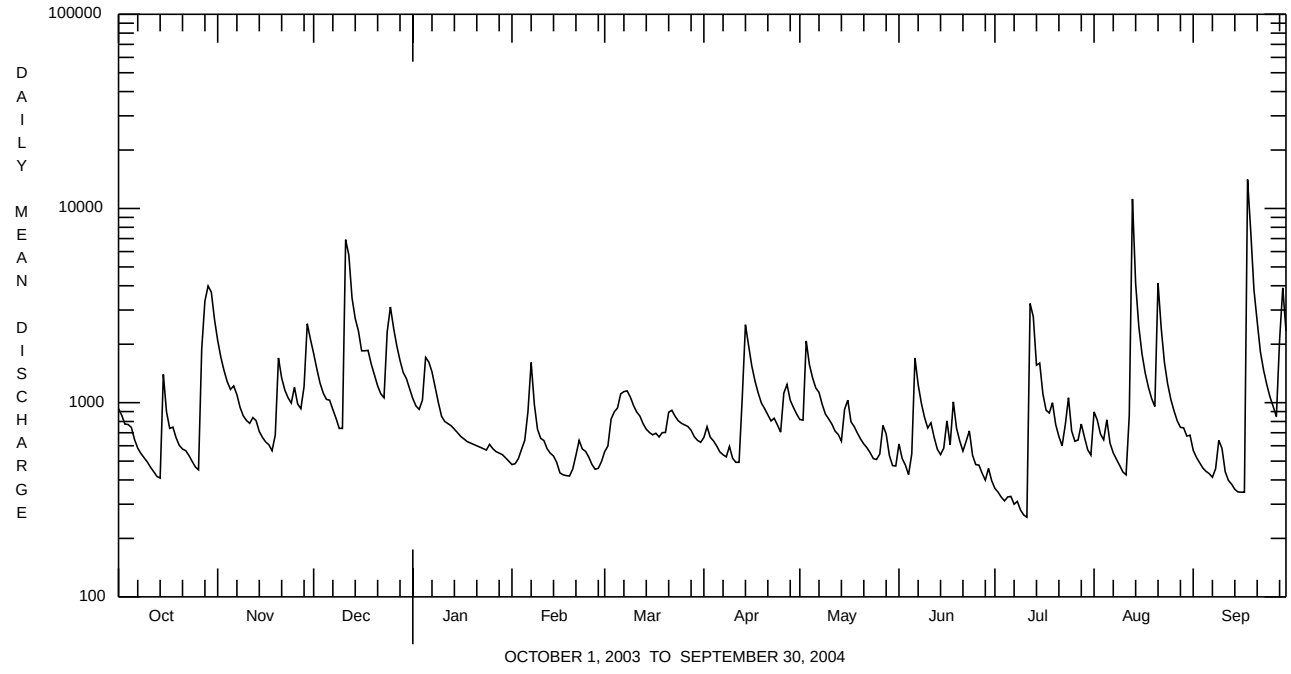
e Estimated.

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1947 - 2004	
ANNUAL TOTAL	438121		389802			
ANNUAL MEAN	1200		1065		720	
HIGHEST ANNUAL MEAN					1182	1952
LOWEST ANNUAL MEAN					321	1965
HIGHEST DAILY MEAN	8820	Jun 21	14100	Sep 18	26000	Jun 23 1972
LOWEST DAILY MEAN	**e**280	Feb 17	257	Jul 11	40	Sep 2 1949
ANNUAL SEVEN-DAY MINIMUM	**a**307	Feb 12	295	Jul 5	52	Aug 30 1999
MAXIMUM PEAK FLOW			**b**24900	Sep 18	**b**42800	Jun 22 1972
MAXIMUM PEAK STAGE			15.05	Sep 18	**c**19.00	Jun 22 1972
INSTANTANEOUS LOW FLOW			254	Jul 11,12	31	Sep 2 1949
ANNUAL RUNOFF (CFSM)	3.38		3.00		2.03	
ANNUAL RUNOFF (INCHES)	45.91		40.85		27.56	
10 PERCENT EXCEEDS	2360		1850		1490	
50 PERCENT EXCEEDS	856		750		458	
90 PERCENT EXCEEDS	389		455		159	

a Computed using estimated daily discharges.
b From rating curve extended above 20,800 ft^3/s.
c From floodmark in gage shelter.
e Estimated.



01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Some values for "*dissolved*" parameters exceed values for the corresponding "*total*" parameter. These results are within the limits of analytical precision and methods. Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)
OCT 2003													
02...	1030	1028	9813	862	10.5	7.4	6.8	252	249	12.3	97	20.7	20.7
DEC													
08...	1200	1028	9813	832	14.5	7.7	7.4	257	270	1.9	100	19.3	19.6
FEB 2004													
05...	0915	1028	9813	E640	13.8	7.8	7.3	392	387	.0	140	27.9	28.7
APR													
05...	1000	1028	9813	609	11.5	7.3	7.6	277	269	5.7	100	21.2	20.9
JUN													
22...	1145	1028	9813	554	8.5	7.5	6.8	265	249	19.6	92	18.8	19.1
AUG													
10...	0900	1028	9813	439	8.0	7.5	6.8	322	322	19.7	120	23.7	24.2

Date	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)
OCT 2003													
02...	11.2	11.1	21	.00	80.7	206	2	.020	1.02	<.040	.01	.025	1.1
DEC													
08...	12.4	12.6	18	.00	80.0	246	<2	.050	.93	<.040	.01	.012	1.2
FEB 2004													
05...	16.6	17.1	29	.00	106	270	12	.230	.99	<.040	.02	.023	1.5
APR													
05...	12.6	12.5	21	17	75.6	224	6	.040	.97	<.040	--	--	1.1
JUN													
22...	11.0	10.7	23	11	74.6	192	4	<.020	1.09	<.040	.01	.035	1.2
AUG													
10...	14.3	14.5	29	.80	94.0	254	<2	<.020	.87	<.040	<.01	.012	.99

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover-able, µg/L (01067)
OCT 2003													
02...	.6	10	80	<4	<4	<20	250	<1.0	<1.0	360	380	10	10
DEC													
08...	1.6	20	80	<4	<4	30	260	<1.0	<1.0	540	560	10	20
FEB 2004													
05...	1.9	20	120	<4	<4	60	390	<1.0	<1.0	740	750	20	20
APR													
05...	.9	20	80	<4	<4	60	300	<1.0	<1.0	370	390	10	10
JUN													
22...	.9	20	160	<4	9	30	350	<1.0	1.0	120	240	7	8
AUG													
10...	1.1	10	70	<4	<4	50	220	<1.0	<1.0	110	170	5	6

Date	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003		
02...	20	40
DEC		
08...	30	40
FEB 2004		
05...	50	50
APR		
05...	20	20
JUN		
22...	7	20
AUG		
10...	<5	8

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/04/03
Benthic macroinvertebrate	Count
Nematoda (NEMATODES)	3
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	3
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	17
Acentrella	9
Plauditus	34
Caenidae	
Caenis	2
Heptageniidae	1
Stenonema	2
Trichoptera (CADDISFLIES)	
Glossosomatidae	
Protoptila	2
Hydropsychidae	
Cheumatopsyche	17
Hydropsyche	45
Hydroptilidae	
Dibusa	2
Lepidoptera (MOTHS AND BUTTERFLIES)	
Pyralididae	
Petrophila	3
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	6
Oulimnius	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	7
Simuliidae (BLACK FLIES)	
Simulium	2
Total Organisms	156
Total Taxa	17

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 Mill Road bridge at Kricks Mill, 0.4 mi upstream from Mill Creek, and 3.5 mi west of Bernville.

DRAINAGE AREA.--66.5 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR PA-96-1: 1975-83(P), 1988(P), 1990(P), 1993-94(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 311.26 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation datum).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of about 9.5 ft, from information by local resident, discharge about 6,000 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1700	1,130	5.91	Sept. 18	1500	2,150	7.52
Aug. 13	0830	*2,740	*8.11	Sept. 29	0200	962	5.48

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	173	169	164	105	120	127	115	97	79	275	134
2	104	158	154	163	105	122	128	115	86	103	181	128
3	100	147	143	160	117	121	113	163	88	75	149	125
4	108	139	135	165	134	119	130	122	81	76	139	122
5	107	137	135	235	120	117	126	117	112	73	135	119
6	102	140	135	192	338	145	114	114	180	71	127	117
7	97	139	126	170	596	134	114	111	120	74	123	115
8	93	132	121	161	324	134	115	104	108	82	117	115
9	88	122	119	159	204	123	114	105	97	71	110	120
10	85	125	126	149	200	119	107	107	90	68	106	114
11	90	124	673	145	208	115	108	102	107	68	104	109
12	90	127	409	144	181	112	111	99	105	275	160	107
13	87	120	310	144	174	114	243	97	91	160	1160	105
14	89	114	277	138	168	110	276	95	86	228	381	103
15	205	113	307	136	150	110	183	95	92	317	285	102
16	115	111	254	e165	140	113	158	99	88	161	237	101
17	112	110	329	128	134	113	145	93	91	135	209	101
18	117	107	307	131	132	115	136	91	103	133	191	1150
19	108	129	263	126	142	133	129	92	91	127	178	478
20	104	243	239	122	159	133	123	93	88	114	168	311
21	101	155	217	119	163	136	119	90	85	113	366	253
22	101	144	206	118	155	121	115	88	88	103	231	221
23	100	134	192	115	143	127	114	87	91	185	200	202
24	98	129	275	114	140	124	115	85	83	225	187	187
25	96	142	232	112	133	122	113	83	81	133	175	177
26	96	125	201	110	126	120	181	94	80	119	166	169
27	193	121	191	110	123	119	163	171	78	144	160	163
28	197	184	182	110	121	115	129	100	76	167	153	311
29	356	289	176	108	120	110	120	88	81	125	148	580
30	242	185	173	109	---	108	115	87	77	112	144	361
31	195	---	165	e142	---	108	---	90	---	116	139	---
TOTAL	3886	4318	6941	4364	5055	3732	4084	3192	2821	4032	6604	6500
MEAN	125	144	224	141	174	120	136	103	94.0	130	213	217
MAX	356	289	673	235	596	145	276	171	180	317	1160	1150
MIN	85	107	119	108	105	108	107	83	76	68	104	101
CFSM	1.89	2.16	3.37	2.12	2.62	1.81	2.05	1.55	1.41	1.96	3.20	3.26
IN.	2.17	2.42	3.88	2.44	2.83	2.09	2.28	1.79	1.58	2.26	3.69	3.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	80.3	94.0	116	129	128	165	146	111	104	87.4	70.4	71.9
MAX	250	181	288	385	264	468	367	277	284	216	213	217
(WY)	1977	1997	1997	1979	1979	1994	1993	1989	2003	1984	2004	2004
MIN	35.1	31.4	29.1	26.5	27.4	51.7	58.8	59.5	41.4	32.1	27.5	29.7
(WY)	2002	2002	2002	2002	2002	2002	1985	1999	1999	1999	2002	2002

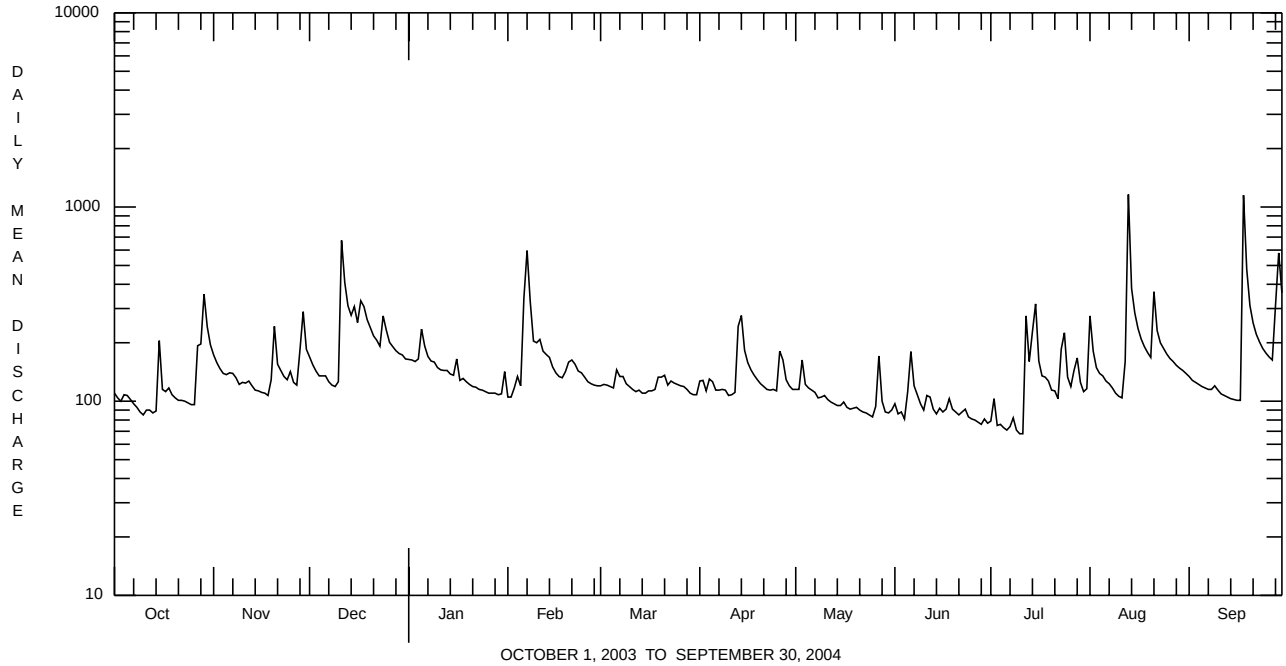
e Estimated.

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	59743		55529			
ANNUAL MEAN	164		152		108	
HIGHEST ANNUAL MEAN					164	1994
LOWEST ANNUAL MEAN					42.7	2002
HIGHEST DAILY MEAN	1750	Jun 21	1160	Aug 13	2140	Jan 26 1978
LOWEST DAILY MEAN	60	Sep 8-10	68	Jul 10,11	15	Sep 8 2002
ANNUAL SEVEN-DAY MINIMUM	62	Sep 6	72	Jul 5	16	Sep 7 2002
MAXIMUM PEAK FLOW			**a**2740	Aug 13	**a**7140	Jan 24 1979
MAXIMUM PEAK STAGE			8.11	Aug 13	10.16	Jan 24 1979
INSTANTANEOUS LOW FLOW			63	Jul 11	14	Sep 8 2002
ANNUAL RUNOFF (CFSM)	2.46		2.28		1.62	
ANNUAL RUNOFF (INCHES)	33.42		31.06		22.00	
10 PERCENT EXCEEDS	290		233		181	
50 PERCENT EXCEEDS	130		123		84	
90 PERCENT EXCEEDS	78		90		41	

a From rating curve extended above 2,600 ft^3/s on basis of contracted-opening measurement at 3,900 ft^3/s, gage height 8.01 ft.



SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water years 1978 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977. Temperature probe interfaced with a data collection platform since 1986 water year.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 28.5°C, July 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 22.0°C, July 5, 6; minimum, 0.0°C, Jan. 16, 25, 31, Feb. 1.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.0	13.0	13.5	14.0	11.0	12.5	8.0	7.0	7.5	6.5	5.5	6.0
2	13.0	11.5	12.0	14.5	13.0	13.5	7.0	4.5	6.0	7.5	6.5	7.0
3	12.0	10.0	11.0	14.5	13.0	14.0	5.0	4.0	4.5	9.5	7.5	8.5
4	12.0	11.0	11.5	14.5	13.0	14.0	5.5	4.0	5.0	9.5	8.5	9.0
5	12.0	10.5	11.0	14.5	13.0	13.5	6.0	4.0	5.5	8.5	7.0	7.5
6	11.5	10.0	11.0	13.5	13.0	13.0	4.5	3.0	4.0	7.0	4.0	6.0
7	12.0	10.0	11.0	13.0	12.0	12.5	4.5	3.5	4.0	4.0	2.5	3.0
8	13.5	12.0	12.5	12.0	8.5	10.0	5.0	3.0	4.0	4.0	2.0	3.0
9	14.0	13.0	13.5	8.5	6.5	7.5	6.0	4.0	5.0	4.0	2.5	4.0
10	14.5	13.5	14.0	8.0	6.0	7.0	6.5	5.5	6.0	2.5	1.0	1.5
11	15.0	13.5	14.5	9.0	7.0	8.0	8.5	6.5	7.5	3.5	1.0	2.0
12	14.5	13.0	14.0	11.0	9.0	10.0	7.0	6.5	6.5	5.5	3.5	4.5
13	14.5	13.5	14.0	11.5	7.0	10.0	6.5	5.5	6.0	6.0	4.5	5.5
14	14.0	13.0	13.5	7.5	5.5	6.5	6.5	4.5	5.5	4.5	2.5	3.0
15	13.5	12.5	13.5	8.5	7.0	8.0	6.0	5.0	5.5	2.5	1.5	2.0
16	12.5	10.5	11.5	9.0	8.0	8.5	6.5	5.0	6.0	1.5	0.0	0.5
17	12.0	11.5	12.0	10.5	9.0	9.5	6.5	5.0	6.0	2.5	0.5	1.5
18	12.0	10.5	11.5	10.0	9.5	9.5	5.5	4.5	5.0	3.5	2.5	3.0
19	12.5	11.5	12.0	13.0	10.0	11.5	6.5	5.5	6.0	3.5	2.0	2.5
20	12.0	10.0	11.0	12.5	9.5	11.0	6.5	5.5	6.0	2.5	2.0	2.5
21	13.5	11.5	12.5	10.0	8.0	9.5	5.5	5.0	5.5	2.5	1.0	2.0
22	13.5	11.0	12.5	10.0	9.0	9.5	7.0	4.5	5.5	3.5	2.0	3.0
23	11.0	8.5	9.5	10.0	8.5	9.5	8.0	7.0	7.5	3.0	0.5	1.0
24	9.0	7.5	8.5	11.0	9.0	10.0	9.5	8.0	9.0	2.0	0.5	1.5
25	11.0	8.0	9.0	10.5	7.5	8.5	8.5	6.0	6.5	1.5	0.0	0.5
26	13.5	11.0	12.5	8.0	6.5	7.0	6.0	5.0	5.5	1.5	0.5	1.0
27	14.0	12.5	13.5	9.0	7.0	8.0	6.5	5.0	6.0	1.5	1.0	1.0
28	12.5	10.5	11.5	10.5	9.0	10.0	6.5	5.0	6.0	2.5	1.0	1.5
29	12.0	11.0	11.5	10.5	7.0	8.0	7.0	5.5	6.0	2.0	1.0	1.5
30	12.0	10.0	11.0	8.0	6.5	7.5	7.0	6.5	6.5	2.0	1.0	1.5
31	12.5	10.5	11.5	---	---	---	7.0	5.5	6.0	1.5	0.0	0.5
MONTH	15.0	7.5	12.0	14.5	5.5	9.9	9.5	3.0	5.9	9.5	0.0	3.1

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

	FEBRUARY			MARCH			APRIL			MAY		
1	2.0	0.0	1.0	8.5	6.5	7.5	9.5	9.0	9.0	18.0	15.0	16.5
2	2.5	0.5	2.0	10.0	7.5	8.5	9.0	8.5	9.0	18.0	16.0	17.0
3	3.5	2.0	2.5	10.0	8.0	9.0	9.0	8.5	8.5	17.5	12.5	14.5
4	4.5	3.0	4.0	9.5	8.5	9.0	9.0	7.0	8.0	14.5	10.5	12.5
5	4.5	2.5	3.5	9.5	9.0	9.0	8.5	5.0	7.0	14.0	11.5	13.0
6	3.5	1.0	2.5	10.5	9.0	9.5	10.0	5.5	7.5	16.0	12.0	14.0
7	4.0	1.0	2.5	10.0	8.0	9.5	13.0	9.0	11.0	16.5	14.5	15.5
8	4.0	2.0	3.0	10.0	8.0	8.5	12.5	9.0	10.0	16.5	14.0	15.0
9	5.5	2.5	4.0	8.5	6.5	7.5	12.0	8.5	10.0	16.5	13.0	15.0
10	6.5	4.5	5.5	8.0	6.5	7.5	12.5	9.0	11.0	19.0	15.5	17.0
11	6.0	4.0	5.0	9.0	5.5	7.5	12.0	9.0	10.0	19.0	17.0	18.5
12	6.0	4.0	5.0	9.0	6.5	7.5	9.0	8.5	9.0	19.5	17.0	18.5
13	6.0	4.5	5.5	7.5	4.5	6.0	9.0	8.0	8.0	20.0	18.0	19.0
14	5.5	4.0	5.0	7.0	5.0	6.0	10.0	9.0	9.5	20.5	18.0	19.0
15	5.0	4.0	4.5	9.5	6.5	8.0	12.5	8.0	10.0	20.0	17.5	19.0
16	4.0	2.0	3.5	9.0	3.5	6.0	13.0	8.5	11.0	20.0	18.0	19.0
17	5.0	3.0	4.0	7.0	3.5	5.0	15.0	10.0	12.5	19.0	17.0	18.0
18	6.0	4.0	5.0	9.0	6.0	7.5	16.5	12.5	14.5	19.0	17.5	18.5
19	7.0	4.5	6.0	8.5	6.0	7.0	17.0	13.5	15.5	19.0	16.5	17.5
20	7.0	5.0	6.0	9.5	5.0	7.5	17.0	14.0	15.5	16.5	15.5	16.0
21	7.0	6.0	6.5	9.5	7.5	8.5	16.0	13.5	15.0	17.5	16.0	16.5
22	6.5	5.0	6.0	7.5	5.0	6.5	16.0	14.0	15.0	20.0	17.5	18.5
23	7.0	5.0	6.0	8.0	4.5	6.5	15.0	13.5	14.5	21.0	19.0	20.0
24	7.0	5.0	6.0	9.5	6.0	8.0	16.5	13.0	15.0	21.0	20.0	20.5
25	6.0	3.5	5.0	9.5	9.0	9.5	16.0	11.5	13.0	21.0	19.5	20.0
26	6.0	4.0	5.0	13.0	9.0	11.0	11.5	10.5	11.0	20.5	18.5	19.0
27	7.0	4.5	6.0	13.0	12.0	12.5	14.0	10.5	12.0	19.0	17.5	18.5
28	7.5	5.0	6.5	14.0	10.5	12.5	13.0	9.5	12.0	19.0	18.0	18.5
29	8.5	5.5	7.0	13.0	10.0	12.0	16.0	11.0	13.5	18.5	16.5	17.0
30	---	---	---	11.5	9.0	9.5	17.0	13.5	15.5	17.0	15.0	16.0
31	---	---	---	9.5	8.5	9.0	---	---	---	17.5	15.0	16.0
MONTH	8.5	0.0	4.6	14.0	3.5	8.4	17.0	5.0	11.4	21.0	10.5	17.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.0	14.5	15.5	19.5	18.0	19.0	21.0	19.0	20.0	18.5	16.0	17.5
2	18.0	16.0	17.0	21.0	18.0	19.5	20.5	18.0	19.5	18.5	16.0	17.5
3	18.5	16.5	18.0	21.0	19.5	20.5	20.5	17.5	19.0	18.0	16.0	17.5
4	18.5	17.0	17.5	20.5	19.5	20.0	20.5	17.5	19.0	18.5	16.0	17.5
5	17.5	14.0	16.0	22.0	20.0	21.0	20.0	17.5	18.5	18.5	16.5	17.0
6	15.0	14.0	14.0	22.0	20.5	21.5	18.5	15.5	16.5	18.0	15.0	16.5
7	18.0	14.0	15.5	21.5	20.0	20.5	16.5	15.0	15.5	18.5	17.0	18.0
8	19.5	16.5	18.0	21.5	19.5	20.5	18.0	14.0	16.0	18.5	17.0	17.5
9	21.0	18.0	19.5	21.0	19.5	20.0	19.0	16.0	17.5	20.0	17.5	18.5
10	21.0	19.0	20.0	20.5	18.0	19.5	19.5	17.0	18.5	19.0	17.0	18.0
11	19.0	16.0	17.5	21.5	19.5	20.5	19.5	17.5	18.5	18.5	16.5	17.5
12	18.0	14.5	16.0	21.5	19.5	20.5	19.5	17.5	18.5	18.0	16.0	17.0
13	18.0	16.0	16.5	19.5	18.0	18.5	19.5	18.0	19.0	18.5	16.0	17.5
14	17.5	15.5	16.0	19.0	17.5	18.0	18.0	16.0	17.0	18.5	16.5	17.5
15	20.0	17.5	18.5	18.5	17.0	18.0	18.0	16.0	16.5	17.5	16.0	17.0
16	20.0	19.0	19.5	18.5	16.5	17.5	18.0	15.5	17.0	17.5	16.5	17.0
17	20.0	19.5	20.0	19.0	17.0	18.0	18.0	15.5	17.0	17.5	16.0	16.5
18	21.0	18.5	20.0	19.0	17.0	17.5	18.0	16.0	17.0	18.0	17.0	17.5
19	21.0	19.0	20.0	18.0	16.5	17.0	18.0	16.5	17.5	17.0	14.0	15.5
20	19.0	16.5	17.5	20.0	17.0	18.0	19.5	16.5	18.0	15.5	13.0	14.5
21	19.0	16.5	17.5	20.0	17.5	19.0	19.5	18.0	18.5	16.0	14.0	15.0
22	19.0	18.0	18.5	20.5	18.0	19.5	18.5	15.5	17.0	17.0	14.0	15.5
23	20.0	17.0	18.5	20.5	18.5	19.5	18.5	15.0	17.0	17.5	15.0	16.0
24	21.0	19.0	20.0	20.5	18.5	19.5	18.5	16.5	17.5	17.5	15.5	16.5
25	20.5	19.5	20.0	19.5	17.0	18.0	18.5	17.0	17.5	17.0	15.0	16.0
26	20.5	19.0	19.5	18.5	16.5	17.5	18.5	16.0	17.5	17.0	15.5	16.0
27	19.5	17.0	18.5	18.5	17.0	17.5	19.0	17.0	18.0	16.5	15.0	16.0
28	18.5	17.5	18.0	19.0	17.5	18.5	19.5	17.0	18.5	17.5	16.0	16.5
29	19.0	17.0	18.0	19.5	17.0	18.5	20.0	17.5	19.0	17.5	16.0	16.5
30	20.0	17.5	18.5	20.0	17.5	18.5	20.0	18.0	18.5	16.0	15.0	15.5
31	---	---	---	20.5	18.5	19.5	18.5	17.5	18.0	---	---	---
MONTH	21.0	14.0	18.0	22.0	16.5	19.1	21.0	14.0	17.8	20.0	13.0	16.8
YEAR	22.0	0.0	12.0									

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)
JUL 2004							
19...	0943	1028	1028	121	62	.0	--
19...	0944	1028	1028	--	60	.5	16.4
19...	0945	1028	1028	--	56	.5	16.4
19...	0946	1028	1028	--	50	.5	16.4
19...	0947	1028	1028	--	46	.5	16.4
19...	0948	1028	1028	--	44	.5	16.4
19...	0949	1028	1028	--	40	.5	16.4
19...	0950	1028	1028	--	36	.5	16.4
19...	0951	1028	1028	--	30	.5	16.4
19...	0952	1028	1028	--	26	.5	16.4
19...	0953	1028	1028	--	20	.5	16.4
19...	0954	1028	1028	--	16	.5	16.4
19...	0955	1028	1028	--	10	.5	16.4
19...	0956	1028	1028	--	4	.5	16.4
19...	0957	1028	1028	--	0	.0	--
AUG							
24...	0841	1028	1028	183	62	.0	--
24...	0842	1028	1028	--	58	1.1	16.7
24...	0845	1028	1028	--	51	1.1	16.2
24...	0850	1028	1028	--	45	1.1	16.2
24...	0854	1028	1028	--	41	1.2	16.2
24...	0900	1028	1028	--	35	1.3	16.2
24...	0904	1028	1028	--	30	1.2	16.2
24...	0908	1028	1028	--	25	1.2	16.2
24...	0912	1028	1028	--	20	1.3	16.2
24...	0915	1028	1028	--	16	1.3	16.2
24...	0920	1028	1028	--	10	1.5	16.2
24...	0926	1028	1028	--	6	1.5	16.2
24...	0929	1028	1028	--	2	1.0	16.3
24...	0930	1028	1028	--	0	.0	--

SCHUYLKILL RIVER BASIN

01470853 FURNACE CREEK AT ROBESONIA, PA

LOCATION.--Lat 40°20'24", long 76°08'37", Berks County, Hydrologic Unit 02040202, on left bank 500 ft upstream from Furnace Street in Robesonia.

DRAINAGE AREA.--4.18 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

REVISED RECORDS.--WDR PA-87-1: 1986 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 527.20 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 27, 1986, 760 ft downstream at different datum.

REMARKS.--Records poor. Flow slightly regulated by Furnace Creek Reservoir 0.6 mi upstream, until drained in early 2002. Reservoir now acts as a retention basin and releases water through an unregulated 10 in. outlet pipe. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Aug. 13	0315	*281	*2.96

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	21	15	16	e7.0	8.7	10	9.9	5.0	3.3	16	7.0
2	3.4	16	14	16	e5.5	9.8	9.9	9.9	4.9	3.1	18	6.5
3	3.0	13	12	15	e7.5	9.5	8.9	14	4.3	3.1	17	6.0
4	3.2	12	12	16	e8.5	9.5	11	11	3.6	2.8	16	6.0
5	3.5	13	12	19	e6.0	9.0	9.7	9.6	5.9	2.5	14	5.8
6	3.5	13	12	18	e10	12	8.6	9.1	12	2.5	10	5.7
7	3.1	13	12	16	17	11	8.3	8.6	8.7	4.2	8.3	5.5
8	2.8	12	11	15	18	11	8.4	8.2	4.8	5.3	7.6	5.5
9	2.9	11	11	15	17	9.2	8.6	7.9	4.1	3.1	7.0	6.4
10	3.0	11	12	e14	16	8.8	7.6	9.2	3.9	2.9	6.6	6.0
11	3.0	11	22	e13	12	8.5	7.3	7.7	6.2	2.6	6.9	5.5
12	3.0	13	26	e12	8.9	8.2	8.2	7.1	5.4	6.9	10	5.2
13	2.9	12	24	e12	8.5	7.6	15	7.0	4.1	12	72	4.8
14	3.0	14	23	e11	8.2	7.3	18	7.6	4.0	9.7	33	4.7
15	11	13	22	e11	7.7	7.3	17	8.1	5.0	14	30	4.7
16	5.9	12	20	e10	e7.5	7.5	15	8.7	4.3	12	29	4.7
17	4.8	12	20	e10	e7.0	7.7	12	7.5	4.3	5.4	27	4.8
18	5.4	12	21	e10	e6.5	7.6	11	7.3	5.0	6.2	25	23
19	4.2	13	20	e9.5	e7.0	8.8	10	7.3	4.6	7.0	23	25
20	3.8	15	20	e9.5	e7.5	9.4	9.4	6.6	3.4	4.8	20	24
21	3.8	14	20	e9.0	e8.0	13	9.6	6.0	3.2	4.3	20	23
22	3.8	12	20	e9.0	e8.5	11	9.1	5.7	3.2	3.9	21	21
23	3.6	11	18	e18	e8.0	9.3	9.3	4.8	3.2	7.4	16	19
24	3.6	10	19	e13	e7.5	9.0	10	4.4	3.1	14	10	12
25	3.5	11	20	e12	e7.5	8.9	8.7	4.5	2.7	13	9.4	8.0
26	3.4	10	20	e12	7.4	8.6	14	4.7	2.8	9.9	8.8	7.2
27	10	10	20	e11	7.3	8.6	17	5.0	2.8	8.8	8.3	6.7
28	13	12	18	e11	7.3	8.0	16	5.0	2.8	14	8.0	12
29	17	16	17	e10	7.9	7.5	13	4.6	3.1	14	7.7	21
30	23	15	17	e10	---	7.3	10	3.7	3.2	12	7.4	21
31	23	---	16	e9.0	---	7.5	---	4.4	---	8.7	7.7	---
TOTAL	186.8	383	546	392.0	262.7	277.1	330.6	225.1	133.6	223.4	520.7	317.7
MEAN	6.03	12.8	17.6	12.6	9.06	8.94	11.0	7.26	4.45	7.21	16.8	10.6
MAX	23	21	26	19	18	13	18	14	12	14	72	25
MIN	2.8	10	11	9.0	5.5	7.3	7.3	3.7	2.7	2.5	6.6	4.7
CFSM	1.44	3.05	4.21	3.03	2.17	2.14	2.64	1.74	1.07	1.72	4.02	2.53
IN.	1.66	3.41	4.86	3.49	2.34	2.47	2.94	2.00	1.19	1.99	4.63	2.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	3.31	5.65	7.97	7.11	8.24	11.7	11.7	9.12	6.01	4.38	3.47	3.29
MAX	7.31	12.8	22.0	14.3	15.2	26.7	31.8	24.7	16.7	11.7	16.8	10.6
(WY)	1997	2004	1997	1996	1996	1994	1993	1989	2003	1984	2004	2004
MIN	0.94	1.68	2.06	2.34	1.80	2.72	3.32	4.29	2.10	1.36	0.85	0.63
(WY)	1989	2001	2002	1983	2002	2002	1985	1997	1985	1983	1983	1983

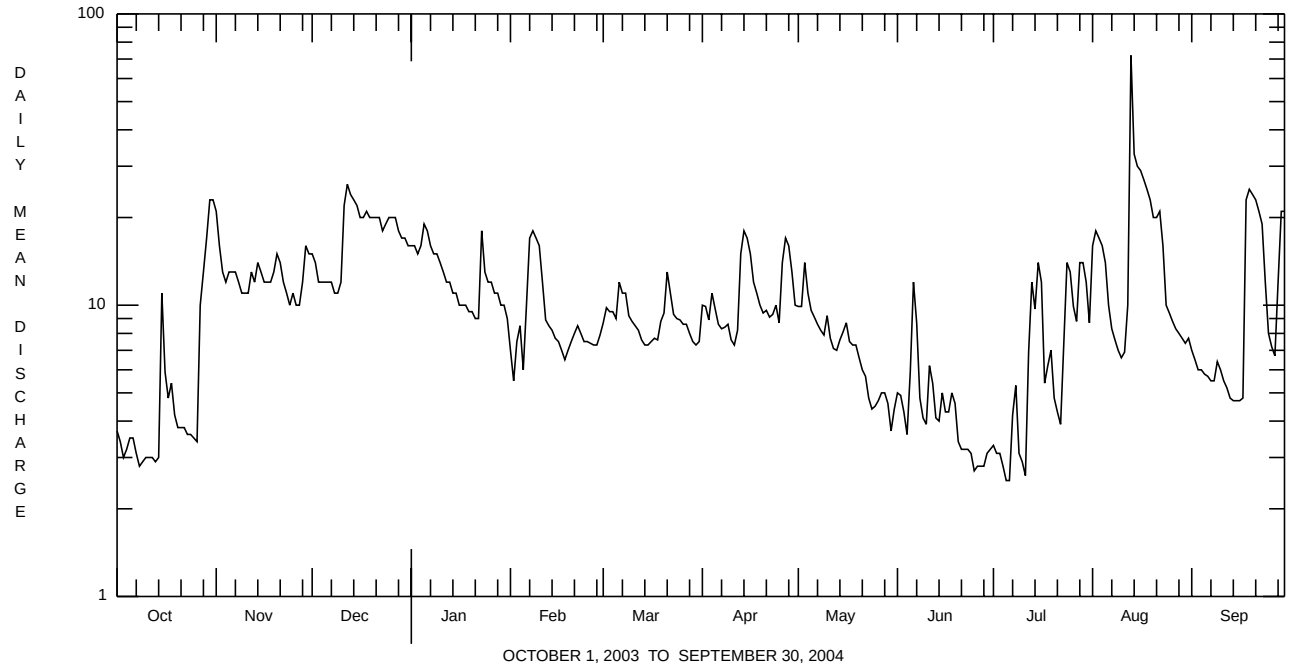
e Estimated.

SCHUYLKILL RIVER BASIN

01470853 FURNACE CREEK AT ROBESONIA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	3683.0		3798.7			
ANNUAL MEAN	10.1		10.4		6.82	
HIGHEST ANNUAL MEAN					10.5	1994
LOWEST ANNUAL MEAN					2.76	2002
HIGHEST DAILY MEAN	30	Jun 21-23	72	Aug 13	139	Dec 5 1993
LOWEST DAILY MEAN	1.9	Sep 10-12	2.5	Jul 5,6	0.11	Sep 11 1983
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 7	2.9	Jun 23	0.19	Sep 16 1985
MAXIMUM PEAK FLOW			281	Aug 13	**a**718	Dec 17 2000
MAXIMUM PEAK STAGE			2.96	Aug 13	**b**4.72	Jan 19 1996
ANNUAL RUNOFF (CFSM)	2.41		2.48		1.63	
ANNUAL RUNOFF (INCHES)	32.78		33.81		22.18	
10 PERCENT EXCEEDS	20		19		14	
50 PERCENT EXCEEDS	8.8		9.0		4.7	
90 PERCENT EXCEEDS	3.1		3.6		1.4	

a From rating curve extended above 308 ft^3/s on basis of slope-area measurement of peak flow at gage height 3.11 ft.
b From peak indicator; ice jam.



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 1.0 mi upstream from Rebers Bridge and Plum Creek, 1.0 mi east of Blue Marsh, 3.0 mi north of Sinking Spring, and 5.5 mi northeast of Reading.

DRAINAGE AREA.--175 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR PA-72-1: 1969-71 (M).

GAGE.--Water-stage recorder. Datum of gage is 230.06 ft above National Geodetic Vertical Datum of 1929 (Western Berks Water Authority datum). Prior to Nov. 25, 1974, water-stage recorder at site 0.3 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since April 1979 by Blue Marsh Lake (station 01470870) 0.8 mi upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	766	678	446	195	313	130	352	171	123	515	312
2	297	760	962	413	164	464	130	351	120	140	775	241
3	245	505	837	361	205	387	132	576	121	156	636	459
4	196	256	600	362	389	251	133	501	110	156	385	500
5	195	236	362	495	498	254	134	286	104	156	374	258
6	195	238	280	628	500	255	118	247	349	134	386	220
7	195	261	280	510	517	257	105	265	545	117	354	207
8	195	293	280	402	527	374	105	267	417	117	354	154
9	195	293	342	399	776	449	105	267	268	117	297	115
10	172	293	385	402	935	446	107	267	189	117	217	115
11	156	291	372	401	927	431	107	267	147	117	193	115
12	156	291	697	341	917	399	109	238	148	113	795	115
13	156	321	1360	275	701	399	109	209	148	665	679	115
14	181	279	1800	254	506	398	544	202	250	899	2930	102
15	578	232	1770	254	503	311	735	201	282	1030	2970	93
16	649	232	1610	254	499	251	532	201	320	921	1830	118
17	359	232	1200	254	295	281	484	201	382	781	881	357
18	280	232	1010	254	175	304	480	195	380	773	502	276
19	279	233	767	254	176	357	421	201	252	480	552	827
20	278	600	604	254	256	395	372	201	131	219	425	2080
21	218	586	606	233	309	395	368	201	118	172	775	2040
22	178	406	603	254	310	575	368	200	109	174	1460	1820
23	180	406	569	237	347	514	317	199	131	215	896	964
24	180	370	586	226	475	391	283	153	149	244	477	475
25	180	433	608	226	526	305	282	109	133	437	339	362
26	180	368	610	237	353	204	346	104	119	699	301	361
27	366	290	608	218	225	204	596	395	119	813	300	361
28	686	293	608	195	225	207	600	368	119	559	301	424
29	872	296	474	195	226	208	354	249	121	622	303	808
30	1150	298	387	195	---	208	354	247	123	398	304	1230
31	1020	---	423	195	---	164	---	248	---	340	344	---
TOTAL	10464	10590	22278	9624	12657	10351	8960	7968	6075	12004	21850	15624
MEAN	338	353	719	310	436	334	299	257	202	387	705	521
MAX	1150	766	1800	628	935	575	735	576	545	1030	2970	2080
MIN	156	232	280	195	164	164	105	104	104	113	193	93

SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	211	231	346	339	343	446	326	294	254	190	143	161
MAX	612	484	986	1151	596	1365	1016	1058	863	543	705	521
(WY)	1980	1997	1997	1979	1979	1994	1993	1989	2003	1984	2004	2004
MIN	51.4	61.7	61.3	84.5	75.2	106	49.8	123	69.9	64.9	55.4	54.0
(WY)	1996	2002	1999	2002	2002	2002	1985	1999	1979	2002	1981	1983

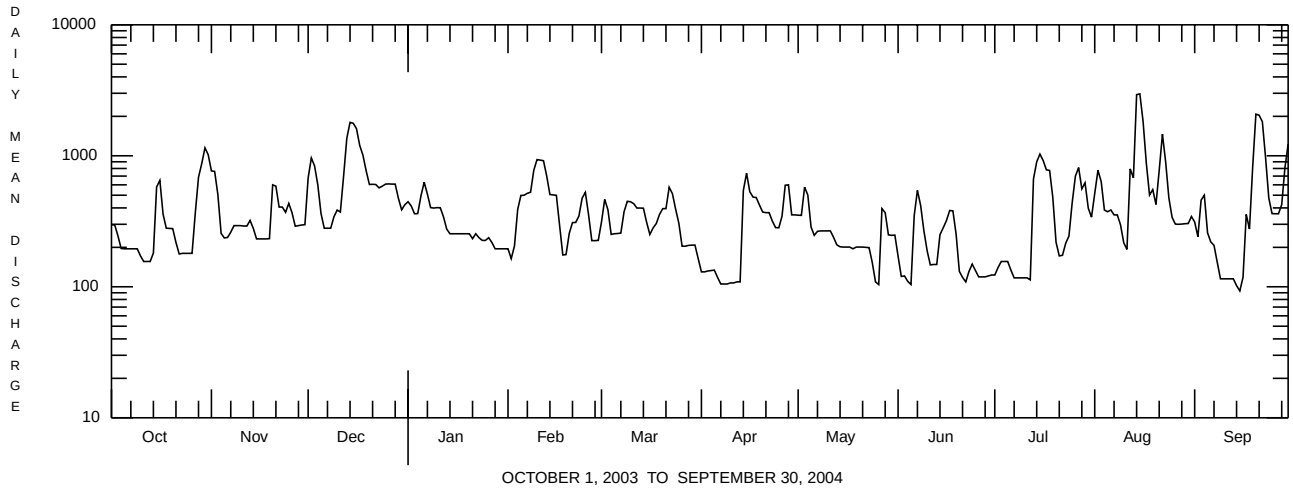
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1979 - 2004	
ANNUAL TOTAL	154642		148445			
ANNUAL MEAN	424		406		274	
HIGHEST ANNUAL MEAN					435	1994
LOWEST ANNUAL MEAN					111	2002
HIGHEST DAILY MEAN	2300	Jun 26	2970	Aug 15	3950	Apr 18 1983
LOWEST DAILY MEAN	72	Jun 21	93	Sep 15	25	Oct 7 1995
ANNUAL SEVEN-DAY MINIMUM	82	Sep 8	107	Apr 7	26	Oct 6 1995
MAXIMUM PEAK FLOW			3140	Aug 14	**a**4060	Dec 6 1993
MAXIMUM PEAK STAGE			7.42	Aug 14	8.02	Jun 26 2000
10 PERCENT EXCEEDS	869		774		544	
50 PERCENT EXCEEDS	291		298		177	
90 PERCENT EXCEEDS	136		128		63	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1978, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	180	236	333	333	373	423	363	261	285	233	175	150
MAX	701	464	827	761	790	832	706	423	1244	523	350	536
(WY)	1977	1976	1978	1978	1971	1978	1970	1973	1972	1969	1969	1975
MIN	56.2	58.3	69.9	100	146	163	144	89.2	60.4	45.0	31.9	43.4
(WY)	1967	1966	1966	1966	1969	1969	1966	1965	1965	1966	1966	1966

SUMMARY STATISTICS	WATER YEARS 1965 - 1978	
ANNUAL MEAN	283	
HIGHEST ANNUAL MEAN	416	1978
LOWEST ANNUAL MEAN	122	1966
HIGHEST DAILY MEAN	11000	Jun 23 1972
LOWEST DAILY MEAN	23	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	25	Sep 7 1966
MAXIMUM PEAK FLOW	**a**16100	Jun 22 1972
MAXIMUM PEAK STAGE	**b**18.70	Jun 22 1972
ANNUAL RUNOFF (CFSM)	1.62	
ANNUAL RUNOFF (INCHES)	22.00	
10 PERCENT EXCEEDS	551	
50 PERCENT EXCEEDS	178	
90 PERCENT EXCEEDS	69	

a From rating curve extended above 3,540 ft^3/s on basis of runoff comparison with downstream station.
b From floodmark.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to 1980.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water years 1969 to current year.
SUSPENDED-SEDIMENT DISCHARGE.--May 1973 to May 1976.

INSTRUMENTATION.--Temperature recorder since October 1968. Temperature probe interfaced with a data collection platform since 1986 water year.

REMARKS.--Water temperature records rated good except for Oct. 1 to Jan. 21, which are fair. Temperature records collected at streamgage. Water-quality samples and suspended sediment samples collected at Rebers Bridge 1.0 mi downstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 34.0°C, Oct. 2, 1968; minimum, 0.0°C, on several days during December 1970, January and March 1971, and February 1979.
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,400 mg/L, June 22, 1973; minimum daily mean, 2 mg/L on many days.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 8,570 tons, Jan. 27, 1976; minimum daily, 0.45 tons, July 13.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 22.5°C, July 14, 24, Sept. 7; minimum, 1.0°C, Jan. 18, 20, 21.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	19.0	18.5	18.5	13.0	12.5	12.5	8.5	8.0	8.5	3.5	3.5	3.5
2	18.5	18.0	18.5	13.0	11.5	12.5	8.0	7.5	8.0	3.5	3.5	3.5
3	18.0	17.5	18.0	12.5	11.5	12.0	7.5	7.0	7.5	4.0	3.5	4.0
4	17.5	17.0	17.0	12.5	11.5	12.0	7.0	7.0	7.0	4.0	4.0	4.0
5	17.0	16.0	16.5	12.5	11.5	12.0	7.0	6.5	6.5	4.0	4.0	4.0
6	16.0	15.5	16.0	12.5	12.0	12.5	6.5	5.0	5.5	4.0	3.5	3.5
7	16.0	15.0	15.5	13.5	12.0	12.5	6.0	5.0	5.5	3.5	3.0	3.0
8	15.5	15.0	15.0	13.5	12.0	12.5	5.5	5.0	5.5	3.0	2.5	2.5
9	15.5	14.5	15.0	13.0	12.0	12.5	5.5	5.0	5.0	2.5	2.0	2.5
10	15.0	14.5	14.5	12.5	12.0	12.0	5.0	5.0	5.0	2.0	1.5	2.0
11	15.0	14.5	15.0	12.0	11.5	12.0	5.5	4.5	5.0	2.0	2.0	2.0
12	15.5	14.5	15.0	11.5	11.0	11.5	5.0	4.5	4.5	2.5	2.0	2.5
13	15.5	14.5	15.0	12.0	11.0	11.5	4.5	3.5	4.0	2.5	2.0	2.5
14	15.5	14.5	15.0	11.0	10.0	10.0	3.5	3.0	3.5	2.5	2.0	2.0
15	16.5	15.0	16.0	10.0	9.5	10.0	3.0	3.0	3.0	2.0	1.5	2.0
16	16.0	15.0	15.5	10.0	9.5	10.0	3.5	3.0	3.5	1.5	1.5	1.5
17	15.5	15.0	15.5	10.0	9.5	10.0	3.5	3.5	3.5	1.5	1.5	1.5
18	15.5	15.0	15.0	9.5	9.0	9.5	3.5	3.0	3.5	1.5	1.0	1.5
19	15.0	14.0	14.5	10.0	8.5	9.0	3.0	3.0	3.0	1.5	1.5	1.5
20	14.5	14.0	14.5	10.0	9.5	9.5	3.0	3.0	3.0	1.5	1.0	1.5
21	14.5	14.0	14.0	10.0	9.5	9.5	3.0	2.5	2.5	2.0	1.0	1.5
22	14.0	13.0	13.5	10.0	9.5	9.5	3.0	2.5	3.0	2.0	2.0	2.0
23	14.0	13.0	13.5	9.5	9.5	9.5	3.0	3.0	3.0	2.0	1.5	2.0
24	13.5	13.0	13.5	9.5	9.5	9.5	3.5	3.0	3.0	2.0	2.0	2.0
25	13.5	13.0	13.0	10.0	9.5	9.5	3.5	3.0	3.0	2.0	2.0	2.0
26	13.5	12.5	13.0	9.5	9.0	9.5	3.0	3.0	3.0	2.0	2.0	2.0
27	13.0	12.5	12.5	9.5	9.0	9.0	3.5	3.0	3.0	2.0	2.0	2.0
28	13.0	12.5	12.5	9.0	9.0	9.0	3.0	3.0	3.0	2.5	2.0	2.0
29	13.0	12.5	13.0	9.0	8.5	9.0	3.5	3.0	3.5	2.5	2.0	2.0
30	13.0	12.5	13.0	8.5	8.5	8.5	3.5	3.0	3.5	2.5	2.0	2.0
31	13.0	12.5	12.5	---	---	---	3.5	3.0	3.5	2.5	2.0	2.0
MONTH	19.0	12.5	14.8	13.5	8.5	10.6	8.5	2.5	4.3	4.0	1.0	2.3

SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	2.5	2.0	2.0	4.0	3.5	4.0	8.0	7.0	7.5	14.5	13.0	13.5
2	2.5	2.0	2.0	4.5	3.5	4.0	8.0	7.0	7.5	15.0	13.0	14.0
3	2.0	2.0	2.0	5.0	4.0	4.5	8.5	8.0	8.5	14.5	13.0	13.5
4	2.5	2.0	2.0	5.0	4.5	4.5	9.0	8.0	8.5	15.0	12.5	14.0
5	2.5	2.0	2.5	5.0	4.5	4.5	8.5	7.5	8.0	15.0	14.0	14.5
6	2.5	2.5	2.5	6.0	4.5	5.0	9.0	7.5	8.0	15.5	14.0	14.5
7	2.5	2.0	2.5	6.0	5.5	5.5	9.5	7.5	8.5	15.5	14.5	15.0
8	2.5	2.0	2.5	6.5	5.5	6.0	9.0	8.0	8.5	15.5	14.5	15.0
9	2.5	2.0	2.0	6.0	5.5	5.5	10.5	8.5	9.0	15.5	14.5	15.0
10	2.0	2.0	2.0	6.0	5.5	5.5	10.5	8.5	9.5	16.5	15.0	15.5
11	2.0	2.0	2.0	6.5	5.5	6.0	9.5	9.0	9.0	16.5	15.5	16.0
12	2.0	2.0	2.0	6.5	6.0	6.0	9.5	8.0	9.0	17.0	16.0	16.5
13	2.0	2.0	2.0	6.0	5.5	6.0	9.0	8.0	8.5	17.5	16.0	16.5
14	2.0	2.0	2.0	6.0	5.5	6.0	9.5	9.0	9.0	18.0	16.0	16.5
15	2.5	2.0	2.0	6.5	6.0	6.0	9.5	9.0	9.0	18.5	16.0	17.5
16	2.5	2.0	2.5	6.5	5.5	6.0	10.0	9.0	9.5	18.5	16.5	17.5
17	2.5	2.5	2.5	6.0	5.5	6.0	11.0	9.5	10.0	18.0	16.5	17.5
18	3.0	2.5	2.5	6.5	5.5	6.0	11.0	9.5	10.0	20.0	16.5	18.0
19	3.5	2.5	3.0	6.5	6.0	6.0	12.5	10.0	11.0	18.5	17.5	18.0
20	3.0	2.5	3.0	6.5	6.0	6.0	12.5	10.5	12.0	18.0	17.5	17.5
21	3.5	3.0	3.0	6.5	6.0	6.5	12.0	10.5	11.5	18.5	17.5	18.0
22	3.5	3.0	3.0	6.5	6.0	6.0	13.0	10.5	12.0	19.0	17.5	18.5
23	3.5	3.0	3.5	6.5	6.0	6.0	13.0	12.0	12.5	20.0	18.0	18.5
24	3.5	3.0	3.5	6.5	6.0	6.5	14.0	12.0	13.0	21.0	18.5	19.5
25	3.5	3.0	3.5	7.0	6.5	6.5	13.5	12.0	12.5	20.5	18.5	19.5
26	4.0	3.5	3.5	7.5	6.5	6.5	13.0	12.0	12.5	20.5	17.5	19.0
27	4.0	3.5	3.5	8.5	7.0	7.5	13.0	12.0	12.5	19.5	16.5	18.0
28	4.0	3.0	3.5	8.0	6.5	7.0	14.0	12.0	13.0	20.0	17.5	19.0
29	4.0	3.5	4.0	8.0	6.5	7.5	13.5	12.5	13.0	20.0	19.0	19.5
30	---	---	---	8.0	7.0	7.5	14.5	12.5	13.5	19.5	18.5	19.0
31	---	---	---	8.0	7.5	7.5	---	---	---	19.0	18.5	18.5
MONTH	4.0	2.0	2.6	8.5	3.5	5.9	14.5	7.0	10.2	21.0	12.5	16.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	20.5	18.5	19.0	20.5	19.5	19.5	22.0	21.0	21.5	20.5	20.0	20.0
2	20.5	18.5	19.5	20.5	19.5	20.0	22.0	21.5	21.5	20.5	20.0	20.0
3	20.0	18.5	19.5	20.5	19.5	20.0	22.0	21.0	21.5	20.5	20.0	20.5
4	20.0	18.5	19.0	21.0	19.5	20.0	21.5	20.0	21.0	21.0	20.0	20.5
5	19.0	18.0	18.5	21.5	19.5	20.5	22.0	20.5	21.0	20.5	19.5	20.0
6	19.0	17.0	18.0	21.5	20.0	20.5	21.5	21.0	21.0	20.5	19.5	20.0
7	18.0	17.0	17.5	21.5	20.0	20.5	21.5	20.5	21.0	22.5	20.0	20.0
8	19.5	17.5	18.5	21.5	20.0	20.5	21.5	20.5	21.0	20.5	20.0	20.0
9	20.0	18.5	19.0	21.5	20.0	20.5	21.0	20.0	20.5	21.0	20.0	20.0
10	20.0	19.0	19.5	22.0	20.0	20.5	21.0	20.0	20.5	21.5	20.0	20.5
11	19.5	19.0	19.0	22.0	20.0	21.0	21.0	20.0	20.0	21.0	20.0	20.5
12	20.0	19.0	19.5	20.5	19.0	20.0	22.0	20.0	21.0	21.0	20.0	20.5
13	19.5	18.5	19.0	20.5	19.0	20.0	22.0	20.5	21.5	21.0	20.0	20.5
14	19.0	18.5	19.0	22.5	20.0	20.5	22.0	21.5	21.5	20.5	19.5	20.0
15	19.5	18.5	19.0	21.0	20.5	21.0	21.5	20.5	21.0	20.5	19.5	20.0
16	19.5	18.5	19.5	21.5	20.5	21.0	21.0	20.0	20.5	20.5	20.0	20.0
17	20.0	19.5	19.5	21.0	20.5	21.0	20.5	19.5	20.0	20.5	20.0	20.0
18	21.0	19.5	20.0	21.0	20.5	21.0	20.0	19.5	19.5	20.5	19.5	20.0
19	22.0	20.0	20.5	21.5	20.5	21.0	20.0	19.5	20.0	21.0	19.0	20.0
20	21.5	19.5	20.5	21.5	20.5	21.0	20.0	19.5	19.5	20.5	19.5	20.0
21	21.5	19.5	20.5	21.5	20.5	20.5	21.0	19.0	20.0	19.5	19.0	19.0
22	21.5	19.5	20.5	21.5	20.5	21.0	21.0	20.0	20.5	19.0	18.5	18.5
23	21.0	18.5	19.5	22.0	20.5	21.0	20.5	20.0	20.0	18.5	18.0	18.0
24	20.0	18.5	19.0	22.5	20.5	21.5	20.0	19.5	20.0	18.5	18.0	18.0
25	20.0	18.5	19.5	21.5	21.0	21.0	20.0	19.5	19.5	19.0	18.0	18.5
26	20.0	18.5	19.5	21.5	21.0	21.0	20.0	19.5	19.5	18.5	18.0	18.5
27	21.0	19.0	19.5	21.5	20.5	21.0	20.0	19.5	20.0	18.5	18.0	18.5
28	20.5	19.0	19.5	21.5	20.0	21.0	20.0	19.5	20.0	18.5	18.0	18.0
29	21.0	19.0	20.0	22.0	21.0	21.5	20.5	19.5	20.0	18.5	18.0	18.0
30	21.0	19.0	20.0	21.5	20.5	21.0	20.5	19.5	20.0	18.5	18.0	18.0
31	---	---	---	22.0	20.5	21.0	20.5	20.0	20.0	---	---	---
MONTH	22.0	17.0	19.4	22.5	19.0	20.7	22.0	19.0	20.5	22.5	18.0	19.5
YEAR	22.5	1.0	12.3									

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
JUL 2004							
19...	0830	1028	1028	--	.0	--	103
19...	0832	1028	1028	--	.5	20.6	100
19...	0834	1028	1028	--	.5	20.7	96
19...	0836	1028	1028	--	.5	20.7	88
19...	0838	1028	1028	--	.5	20.7	76
19...	0840	1028	1028	--	.5	20.7	68
19...	0842	1028	1028	--	.5	20.7	60
19...	0845	1028	1028	--	.5	20.7	52
19...	0846	1028	1028	--	.5	20.7	44
19...	0847	1028	1028	--	.5	20.7	36
19...	0848	1028	1028	--	.5	20.7	28
19...	0849	1028	1028	--	.5	20.7	16
19...	0850	1028	1028	--	.5	20.7	8
19...	0851	1028	1028	--	.5	20.6	0
19...	0852	1028	1028	771	.0	--	0
AUG							
24...	1327	1028	1028	--	--	--	112
24...	1334	1028	1028	--	1.2	19.8	99
24...	1337	1028	1028	--	1.3	19.8	94
24...	1340	1028	1028	--	1.3	19.8	89
24...	1343	1028	1028	--	1.3	19.8	81
24...	1348	1028	1028	--	1.5	19.8	74
24...	1351	1028	1028	--	1.4	19.8	69
24...	1353	1028	1028	--	1.5	19.8	64
24...	1356	1028	1028	--	1.4	19.8	59
24...	1359	1028	1028	--	1.4	19.9	50
24...	1402	1028	1028	--	1.3	20.0	42
24...	1404	1028	1028	--	1.3	20.1	34
24...	1406	1028	1028	--	1.2	20.2	26
24...	1414	1028	1028	--	.7	20.5	16
24...	1430	1028	1028	--	.7	20.7	8
24...	1431	1028	1028	406	.0	--	0

SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°22'08", long 75°58'46", Berks County, Hydrologic Unit 02040203, on right bank 15 ft upstream from covered bridge on Township Route 921, 1.0 mi downstream from Cacoosing Creek, 2.5 mi upstream from mouth, and 3.5 mi northwest of town square in Reading.

DRAINAGE AREA.--211 mi^2.

WATER-DISCHARGE RECORDS

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

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since April 1979 by Blue Marsh Lake (station 01470870) 3.9 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	804	686	523	234	368	193	427	231	151	695	375
2	321	790	946	491	208	532	194	425	160	166	903	298
3	281	577	848	432	260	472	190	665	159	179	759	479
4	237	325	649	441	441	320	197	604	147	179	504	560
5	234	304	432	597	551	317	190	367	161	179	479	314
6	231	307	338	719	842	338	170	308	430	161	474	270
7	231	323	332	606	863	329	153	324	625	145	426	255
8	231	350	328	485	709	446	156	322	496	145	417	278
9	229	348	377	478	874	532	159	319	318	141	360	193
10	210	343	438	466	1040	526	155	320	242	139	278	181
11	197	343	801	463	1020	510	154	313	199	139	259	176
12	196	351	832	411	1000	466	161	287	194	413	850	173
13	194	369	1340	341	817	464	224	254	191	689	1430	172
14	217	334	1790	310	610	458	609	245	281	1170	3230	156
15	612	282	1800	309	600	377	849	245	354	1290	3240	143
16	686	281	1620	303	590	308	636	252	403	1010	1790	167
17	414	279	1380	305	392	333	576	245	445	853	944	383
18	327	279	1140	313	245	364	565	234	445	884	582	1220
19	317	309	919	306	248	439	499	242	319	612	629	983
20	317	659	733	302	324	494	434	241	176	310	511	2120
21	267	657	713	279	394	509	427	240	160	247	841	2030
22	228	473	703	298	392	666	425	240	161	241	1400	1800
23	228	465	669	279	420	627	380	238	172	402	949	1040
24	227	429	738	266	556	480	338	197	187	565	569	580
25	229	484	726	263	611	397	332	144	180	559	425	446
26	233	430	716	273	442	269	489	152	161	788	372	442
27	490	343	706	263	284	267	694	446	154	1090	368	438
28	759	400	697	239	284	264	716	438	152	785	364	720
29	1000	448	574	236	284	261	439	287	159	784	360	1100
30	1140	410	472	235	---	260	434	284	152	534	361	1340
31	1040	---	497	234	---	224	---	291	---	453	410	---
TOTAL	11850	12496	24940	11466	15535	12617	11138	9596	7614	15403	25179	18832
MEAN	382	417	805	370	536	407	371	310	254	497	812	628
MAX	1140	804	1800	719	1040	666	849	665	625	1290	3240	2120
MIN	194	279	328	234	208	224	153	144	147	139	259	143

SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	245	282	409	362	391	515	400	357	307	224	174	188
MAX	651	589	1220	1069	663	1604	1191	1226	968	661	812	628
(WY)	1997	1997	1997	1996	1986	1994	1983	1989	2003	1984	2004	2004
MIN	78.3	67.6	80.1	99.8	94.5	134	64.2	155	98.8	80.2	63.1	63.0
(WY)	1996	2002	1999	1981	2002	2002	1985	1999	1999	2002	1981	1983

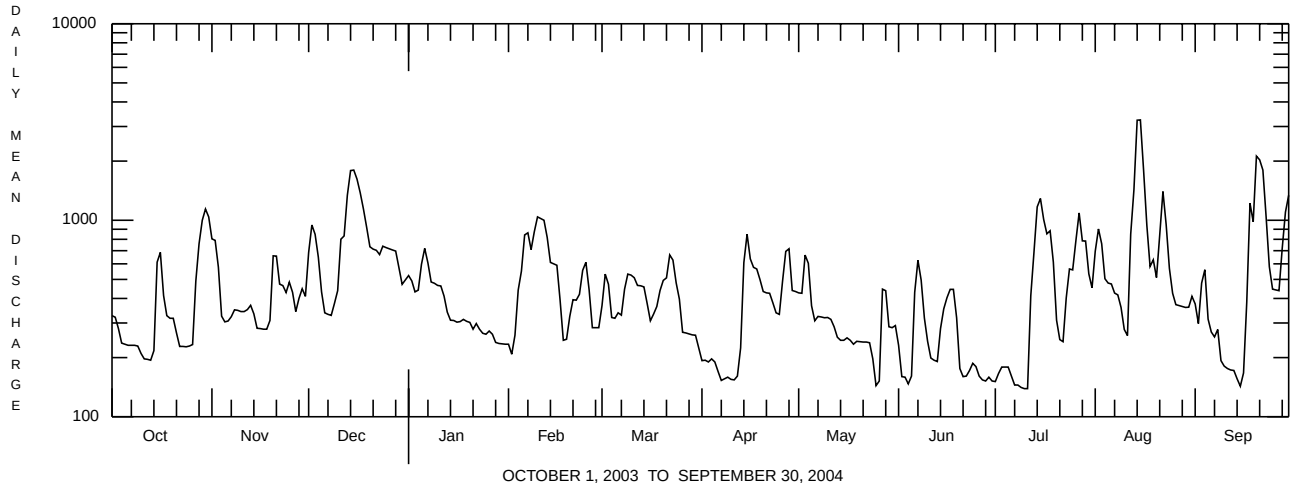
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1980 - 2004	
ANNUAL TOTAL	178488		176666			
ANNUAL MEAN	489		483		321	
HIGHEST ANNUAL MEAN					531	1984
LOWEST ANNUAL MEAN					133	2002
HIGHEST DAILY MEAN	2330	Jun 24	3240	Aug 15	3950	Apr 18 1983
LOWEST DAILY MEAN	104	Sep 12	139	Jul 10,11	27	Sep 24 1991
ANNUAL SEVEN-DAY MINIMUM	115	Sep 8	150	Jul 5	35	Sep 19 1995
MAXIMUM PEAK FLOW			3530	Aug 14	**a**4060	Dec 6 1993
MAXIMUM PEAK STAGE			5.22	Aug 14	5.81	Dec 6 1993
10 PERCENT EXCEEDS	942		866		634	
50 PERCENT EXCEEDS	348		370		216	
90 PERCENT EXCEEDS	185		178		81	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1979, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	259	360	405	444	522	451	318	263	210	178	192
MAX	689	490	829	1193	917	914	806	712	1434	645	481	588
(WY)	1977	1973	1978	1979	1971	1978	1970	1953	1972	1969	1955	1975
MIN	55.8	67.5	84.4	124	178	202	170	116	72.8	57.5	41.9	54.8
(WY)	1964	1966	1966	1966	1969	1969	1966	1965	1965	1966	1966	1957

SUMMARY STATISTICS	WATER YEARS 1951 - 1979	
ANNUAL MEAN	314	
HIGHEST ANNUAL MEAN	491	1952
LOWEST ANNUAL MEAN	144	1966
HIGHEST DAILY MEAN	12000	Jun 23 1972
LOWEST DAILY MEAN	33	Sep 1 1966
ANNUAL SEVEN-DAY MINIMUM	35	Aug 28 1966
MAXIMUM PEAK FLOW	**a**17000	Jun 23 1972
MAXIMUM PEAK STAGE	**b**15.65	Jun 23 1972
INSTANTANEOUS LOW FLOW	23	Dec 1 1964
ANNUAL RUNOFF (CFSM)	1.49	
ANNUAL RUNOFF (INCHES)	20.23	
10 PERCENT EXCEEDS	613	
50 PERCENT EXCEEDS	211	
90 PERCENT EXCEEDS	86	

a From rating curve extended above 3,600 ft^3/s on basis of contracted-opening measurement of peak flow.
b From floodmark in gage shelter.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
02...	1330	1028	9813	322	9.8	8.1	8.1	359	358	17.5	170	46.5	13.1
DEC													
08...	1030	1028	9813	327	12.4	8.0	8.1	400	402	3.9	180	50.1	13.0
FEB 2004													
05...	1145	1028	9813	550	14.2	8.3	8.2	441	432	2.4	200	58.0	13.5
APR													
05...	1230	1028	9813	190	10.0	8.5	8.4	395	382	6.9	170	45.2	13.1
JUN													
22...	1000	1028	9813	146	7.5	7.8	8.0	422	399	18.8	170	46.9	13.2
AUG													
10...	1145	1028	9813	259	8.6	7.7	8.0	399	403	19.5	170	47.9	12.3

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
02...	121	22.0	304	<2	.030	4.96	.060	.04	.061	5.4	2.9	<200	<10
DEC													
08...	129	22.1	314	6	<.020	5.92	<.040	.04	.053	6.4	2.2	<200	<10
FEB 2004													
05...	135	23.9	316	10	<.020	7.92	<.040	.03	.037	8.3	1.6	<200	<10
APR													
05...	116	22.0	290	2	<.020	5.36	.040	.04	.052	5.9	2.5	<200	<10
JUN													
22...	130	22.9	274	4	.020	5.11	.060	.07	.079	5.5	2.4	<200	30
AUG													
10...	128	19.8	298	<2	.030	4.75	.120	.03	.037	5.0	2.5	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
02...	70	<1.0	30	<50	<10
DEC					
08...	80	<1.0	20	<50	<10
FEB 2004					
05...	60	<1.0	20	<50	<10
APR					
05...	80	<1.0	30	<50	<10
JUN					
22...	100	<1.0	40	<50	100
AUG					
10...	80	<1.0	40	<50	<10

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/04/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	7
Nematoda (NEMATODES)	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	3
Hydrobiidae	
Amnicola	1
Physidae	
Physa	11
Planorbidae	
Planorbella	1
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
Corbicula fluminea	6
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbricina	2
Tubificida	
Naididae	4
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	3
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	1
Baetis	5
Plauditus	17
Ephemerellidae	
Serratella	2
Heptageniidae	
Stenacron	1
Tricorythidae	
Tricorythodes	3
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	38
Hydropsyche	9
Hydroptilidae	
Hydroptila	1
Leucotrichia	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Stenelmis	1

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	09/04/03
Benthic macroinvertebrate	Count
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	31
Simuliidae (BLACK FLIES)	
Simulium	3
Tipulidae (CRANE FLIES)	
Antocha	2
Total Organisms	154
Total Taxa	24

SCHUYLKILL RIVER BASIN

01471510 SCHUYLKILL RIVER AT READING, PA

LOCATION.--Lat 40°20'05", long 75°56'12", Berks County, Hydrologic Unit 02040203, on left bank 200 ft downstream from bridge on Penn Street at Reading, and 1.0 mi downstream from Tulpehocken Creek.

DRAINAGE AREA.--880 mi^2.

PERIOD OF RECORD.--May 1914 to September 1915, October 1919 to September 1930, and July 1977 to current year. Prior to October 1914 monthly discharge only, published in WSP 1302. Diversion by Schuylkill Navigation Canal included during the navigation seasons of 1914-15.

REVISED RECORD.--WDR PA-78-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 185.50 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Railroad datum). May 7, 1914, to Sept. 30, 1930, and July 6, 1979, to Dec. 5, 1980, nonrecording gage. June 30, 1977, to July 5, 1979, water-stage recorder at site 1,500 ft downstream on right bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Lake (station 01470870) since April 1979, and to some extent by Lake Ontelaunee. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972, reached a stage of about 31.3 ft at site 1,500 ft downstream, from floodmarks, discharge, about 90,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2140	4370	3920	2430	994	1460	1420	1890	1310	798	2760	1650
2	2010	3720	3680	2250	961	1650	1560	1830	1160	796	2930	1460
3	1810	3120	3170	2120	1110	1860	1460	3450	1060	770	2370	1530
4	1710	2540	2690	2180	1730	1820	1420	3090	945	738	1990	1610
5	1750	2310	2350	3260	1760	1890	1340	2530	1060	722	2200	1300
6	1550	2420	2240	3470	2990	2090	1230	2250	2730	740	1850	1220
7	1430	2270	2030	3080	6060	2240	1170	2130	2600	723	1630	1170
8	1360	2050	1880	2730	3810	2260	1180	2000	2120	728	1540	1270
9	1300	1880	1810	2560	2890	2260	1320	1790	1700	679	1430	1480
10	1240	1800	1860	2170	2790	2110	1190	1720	1480	625	1270	1380
11	1150	1760	8750	e1790	2800	1970	1120	1640	1490	601	1250	1150
12	1100	1890	11500	e1880	2570	1870	1170	1530	1350	3630	1850	1030
13	1060	1870	7190	1950	2290	1760	2050	1430	1210	5910	14100	989
14	1110	1690	6190	e1640	2000	1660	3910	1360	1220	4090	9460	938
15	2840	1530	5800	e1340	1890	1570	3900	1580	1430	4120	6750	895
16	2570	1470	4920	e1100	1710	1490	3140	1770	1780	3030	4670	928
17	1950	1430	4890	e1180	1510	1550	2730	1600	1590	2490	3400	1140
18	1790	1390	5180	e1280	1340	1540	2470	1440	1860	2520	2640	15100
19	1640	1590	4360	e1340	1280	1710	2220	1400	1560	2740	2470	15600
20	1530	3540	3650	e1270	1370	1790	2030	1350	1240	2000	2200	7870
21	1410	3320	3210	e1220	1540	2120	1930	1270	1100	1670	6330	5870
22	1330	2760	2940	e1180	1800	2410	1840	1240	1150	1520	6390	4620
23	1270	2510	2760	1230	1700	2300	1810	1180	1390	1870	4250	3370
24	1200	2310	3950	1180	1760	2040	1710	1090	1150	3430	3120	2550
25	1140	2600	5770	1130	1760	1890	1590	1010	1210	2420	2550	2130
26	1110	2290	4760	1150	1520	1720	2280	1100	1090	2310	2230	1940
27	2630	2030	4030	1130	1310	1650	3030	1840	970	3090	2040	1770
28	6260	2420	3530	1130	1270	1600	2600	1650	876	3300	1890	3610
29	7010	4840	3090	1110	1310	1500	2140	1320	954	2780	1840	10800
30	7530	4350	2780	1050	---	1440	1990	1160	890	2200	1710	6470
31	5660	---	2620	1010	---	1400	---	1170	---	1930	1900	---
TOTAL	69590	74070	127500	53540	57825	56620	58950	51810	41675	64970	103010	102840
MEAN	2245	2469	4113	1727	1994	1826	1965	1671	1389	2096	3323	3428
MAX	7530	4840	11500	3470	6060	2410	3910	3450	2730	5910	14100	15600
MIN	1060	1390	1810	1010	961	1400	1120	1010	876	601	1250	895

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	1098	1471	2078	1888	1897	2641	2385	1953	1460	994	820	921
MAX	3390	2791	5763	5682	3358	6484	6472	5493	5203	2907	3323	3428
(WY)	1980	1997	1997	1979	1984	1994	1983	1989	2003	1984	2004	2004
MIN	322	352	278	265	609	824	606	724	415	330	257	273
(WY)	1981	2002	1981	1981	2002	1985	1985	1999	1999	1999	2002	1983

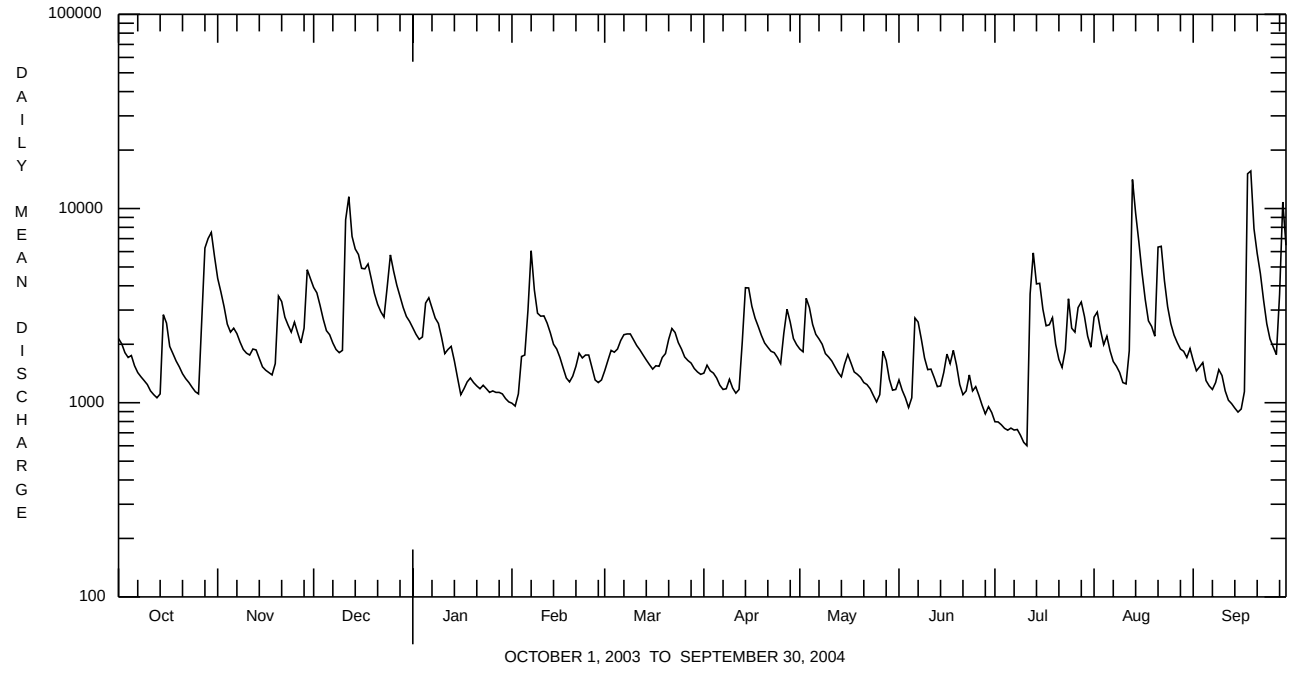
e Estimated.

SCHUYLKILL RIVER BASIN

01471510 SCHUYLKILL RIVER AT READING, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	961533		862400			
ANNUAL MEAN	2634		2356		1636	
HIGHEST ANNUAL MEAN					2559	1984
LOWEST ANNUAL MEAN					803	2002
HIGHEST DAILY MEAN	14400	Jun 21	15600	Sep 19	24700	Jan 25 1979
LOWEST DAILY MEAN	664	Feb 16	601	Jul 11	180	Oct 1 1980
ANNUAL SEVEN-DAY MINIMUM	771	Feb 12	688	Jul 5	224	Dec 24 1980
MAXIMUM PEAK FLOW			29700	Sep 18	**a**37500	Jan 25 1979
MAXIMUM PEAK STAGE			16.24	Sep 18	**b**17.50	Apr 16 1983
10 PERCENT EXCEEDS	5140		4050		3330	
50 PERCENT EXCEEDS	2060		1810		1110	
90 PERCENT EXCEEDS	929		1110		402	

a From rating curve extended above 31,000 ft^3/s, gage height 17.36 ft, at site 150 ft downstream.
b Discharge, 33,100 ft^3/s, from rating curve extended above 31,000 ft^3/s.



SCHUYLKILL RIVER BASIN

01471875 MANATAWNY CREEK NEAR SPANGSVILLE, PA

LOCATION.--Lat 40°20'22", long 75°44'33", Berks County, Hydrologic Unit 02040203, on left bank 200 ft north of powerline across stream, 1.2 mi south of Spangsville, and 1.3 mi north of SR 562 and Earlville.

DRAINAGE AREA.--56.9 mi^2.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and those greater than 1,560 ft^3/s, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1630	1,770	6.48	July 15	0130	1,790	6.51
Feb. 6	2000	1,740	6.45	July 27	2330	2,180	6.95
June 16	0430	1,320	5.89	Sept. 18	1515	2,710	7.50
July 12	1830	*3,890	*8.53	Sept. 29	0130	1,440	6.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	149	141	123	e70	107	101	95	77	47	374	77
2	115	141	128	122	e75	113	100	96	57	46	181	70
3	107	134	117	121	e90	107	103	132	61	44	150	68
4	120	127	113	131	e100	106	111	122	50	42	140	66
5	114	130	119	241	e105	101	98	98	98	42	190	65
6	100	142	124	154	e700	149	86	91	221	42	128	66
7	94	136	115	120	583	115	84	88	83	43	117	63
8	92	111	108	111	192	111	88	82	64	58	110	70
9	89	103	106	105	141	116	108	79	57	43	105	96
10	88	100	148	e95	149	105	87	78	53	40	101	76
11	87	102	1120	e90	141	98	83	75	61	39	102	65
12	83	140	274	e95	126	93	93	72	57	1610	104	62
13	81	117	191	e90	121	87	245	69	50	442	198	61
14	81	102	199	e85	116	85	173	68	50	457	115	59
15	291	98	262	e80	107	85	134	70	66	596	104	60
16	109	95	186	e80	95	91	110	99	410	194	97	65
17	108	93	558	e85	93	94	104	71	84	156	91	64
18	126	92	263	e90	96	100	99	68	76	248	88	1270
19	101	216	200	e95	103	135	95	70	63	232	87	193
20	92	394	179	e90	111	141	91	71	56	147	84	118
21	91	149	161	e85	130	183	91	67	52	126	136	103
22	98	128	156	e80	123	132	88	65	55	115	108	93
23	93	117	154	e80	111	109	91	60	58	116	86	85
24	86	115	301	e75	111	106	95	58	50	127	81	81
25	84	151	202	e75	103	107	87	55	73	106	78	79
26	85	115	158	e80	98	103	306	67	103	101	75	77
27	573	107	147	e75	97	104	174	221	56	683	74	74
28	274	301	139	e75	97	98	119	69	50	811	73	301
29	469	337	135	e70	103	91	106	57	64	221	70	482
30	203	157	135	e70	---	89	99	52	50	175	84	163
31	163	---	128	e65	---	98	---	58	---	154	118	---
TOTAL	4419	4399	6467	3033	4287	3359	3449	2523	2405	7303	3649	4272
MEAN	143	147	209	97.8	148	108	115	81.4	80.2	236	118	142
MAX	573	394	1120	241	700	183	306	221	410	1610	374	1270
MIN	81	92	106	65	70	85	83	52	50	39	70	59
CFSM	2.51	2.58	3.67	1.72	2.60	1.90	2.02	1.43	1.41	4.14	2.07	2.50
IN.	2.89	2.88	4.23	1.98	2.80	2.20	2.25	1.65	1.57	4.77	2.39	2.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	66.2	77.0	110	101	102	154	124	95.6	85.7	72.0	49.0	62.1
MAX	143	154	326	201	148	353	201	162	221	236	118	184
(WY)	2004	1997	1997	1996	2004	1994	1996	2002	2003	2004	2004	2003
MIN	27.4	28.4	21.1	42.0	35.8	54.6	69.4	50.8	26.3	14.6	13.6	18.9
(WY)	1998	2002	1999	2002	2002	2002	2002	1999	1999	1999	1999	1995

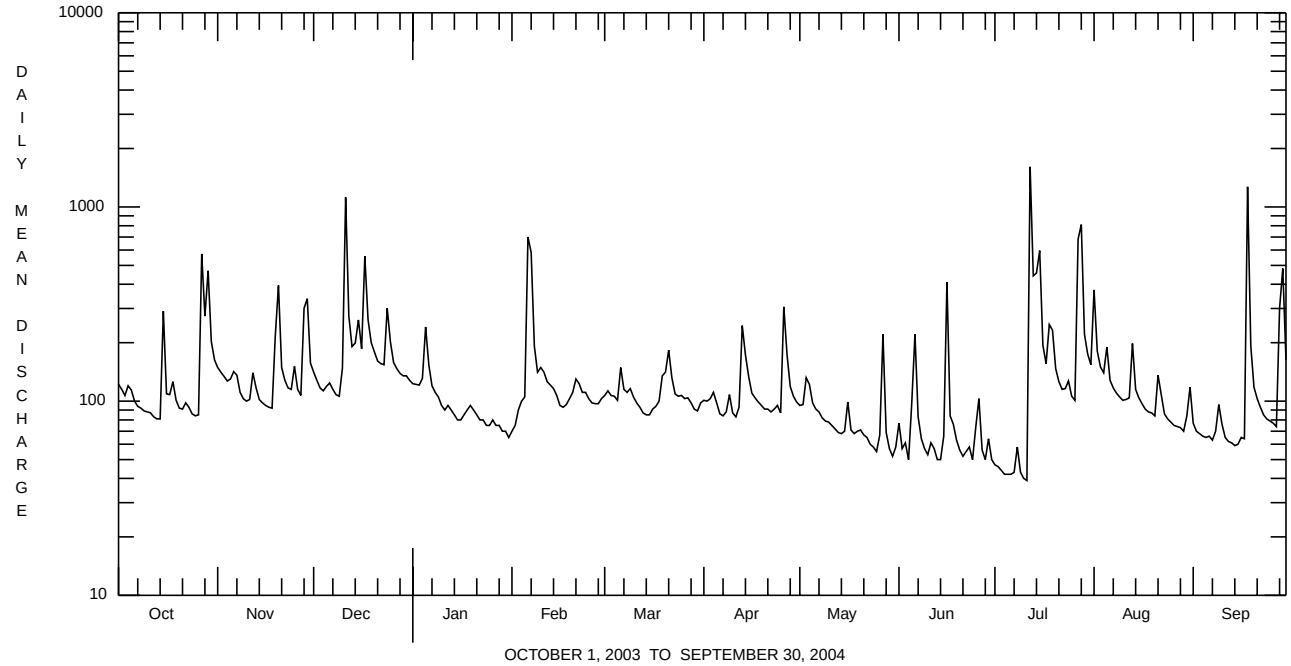
e Estimated.

SCHUYLKILL RIVER BASIN

01471875 MANATAWNY CREEK NEAR SPANGSVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL TOTAL	52691		49565			
ANNUAL MEAN	144		135		91.6	
HIGHEST ANNUAL MEAN					135	2004
LOWEST ANNUAL MEAN					49.6	2002
HIGHEST DAILY MEAN	1120	Jun 21	1610	Jul 12	1620	Oct 19 1996
LOWEST DAILY MEAN	**e**41	Feb 16	39	Jul 11	8.8	Aug 3 1999
ANNUAL SEVEN-DAY MINIMUM	**a**46	Feb 12	44	Jul 1	9.5	Aug 1 1999
MAXIMUM PEAK FLOW			**b**3890	Jul 12	**b**3890	Jul 12 2004
MAXIMUM PEAK STAGE			8.53	Jul 12	8.53	Jul 12 2004
INSTANTANEOUS LOW FLOW			37	Jul 11,12	7.5	Jan 17 2000
ANNUAL RUNOFF (CFSM)	2.54		2.38		1.61	
ANNUAL RUNOFF (INCHES)	34.45		32.40		21.88	
10 PERCENT EXCEEDS	261		202		169	
50 PERCENT EXCEEDS	113		100		62	
90 PERCENT EXCEEDS	63		61		25	

a Computed using estimated daily discharges.
b From rating curve extended above 1,560 ft^3/s.
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 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 mi southwest of Boyertown.

DRAINAGE AREA.--85.5 mi^2.

PERIOD OF RECORD.--August 1974 to September 2004. (discontinued)

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972 reached a stage of 17.1 ft from floodmarks, discharge, about 9,600 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1245	1,830	5.65	July 27	1915	4,030	8.52
Feb. 6	2030	2,320	6.39	Aug. 1	0800	2,350	6.44
July 12	2200	*5,370	*9.76	Sept. 18	1900	3,070	7.41
July 14	2130	2,350	6.44				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	224	215	167	e130	129	125	134	109	59	887	100
2	166	201	189	163	e150	137	127	130	79	57	379	85
3	151	187	168	161	e180	137	133	180	80	54	280	79
4	161	174	158	169	e300	135	154	177	66	51	250	77
5	159	199	167	343	e350	127	139	133	108	50	318	74
6	135	216	175	243	e1000	206	110	122	310	53	211	74
7	125	203	158	e170	e900	166	103	113	127	52	179	72
8	120	164	147	e150	330	159	103	108	93	76	160	76
9	116	147	142	e140	221	156	133	101	80	54	144	113
10	114	141	205	e130	232	133	105	100	74	48	136	92
11	111	139	1380	e120	222	120	97	94	81	45	134	74
12	105	188	481	e130	192	114	112	88	82	2070	145	70
13	101	167	310	e120	182	103	350	84	66	974	409	67
14	102	142	327	e110	167	99	278	81	65	663	182	65
15	395	134	446	e110	145	99	215	82	90	968	143	65
16	151	129	303	e100	130	113	160	126	399	340	129	71
17	144	127	769	e100	127	133	142	97	120	250	117	72
18	172	125	472	e120	118	144	131	86	104	334	111	1580
19	134	240	336	e140	125	222	122	92	85	420	108	389
20	118	617	290	e130	139	226	114	90	73	232	105	180
21	114	244	254	e130	162	280	111	80	66	182	165	138
22	120	197	238	e130	167	204	107	78	76	154	156	120
23	116	173	231	e120	143	150	110	69	83	147	106	109
24	103	165	404	e120	159	140	116	64	64	174	98	101
25	100	213	333	e130	133	136	104	61	61	136	93	97
26	98	163	242	e130	122	131	504	71	156	127	88	93
27	718	148	219	e150	118	129	341	290	76	1160	86	88
28	513	335	203	e140	116	122	200	106	63	1480	85	307
29	693	525	195	e130	121	110	162	81	83	458	81	751
30	355	251	193	e130	---	105	146	69	65	321	121	267
31	259	---	176	e120	---	119	---	79	---	261	211	---
TOTAL	6150	6278	9526	4446	6581	4484	4854	3266	3084	11450	5817	5546
MEAN	198	209	307	143	227	145	162	105	103	369	188	185
MAX	718	617	1380	343	1000	280	504	290	399	2070	887	1580
MIN	98	125	142	100	116	99	97	61	61	45	81	65
CFSM	2.32	2.45	3.59	1.68	2.65	1.69	1.89	1.23	1.20	4.32	2.19	2.16
IN.	2.68	2.73	4.14	1.93	2.86	1.95	2.11	1.42	1.34	4.98	2.53	2.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	84.6	110	152	164	172	205	190	152	111	94.6	64.8	80.6
MAX	245	231	511	499	356	470	450	390	349	369	188	289
(WY)	1997	1997	1997	1979	1984	1994	1993	1989	2003	2004	2004	2003
MIN	30.8	32.6	32.2	28.0	46.9	69.6	53.6	67.4	36.1	18.2	21.6	27.1
(WY)	2002	2002	1999	1981	2002	1981	1985	1987	1999	1999	1981	1983

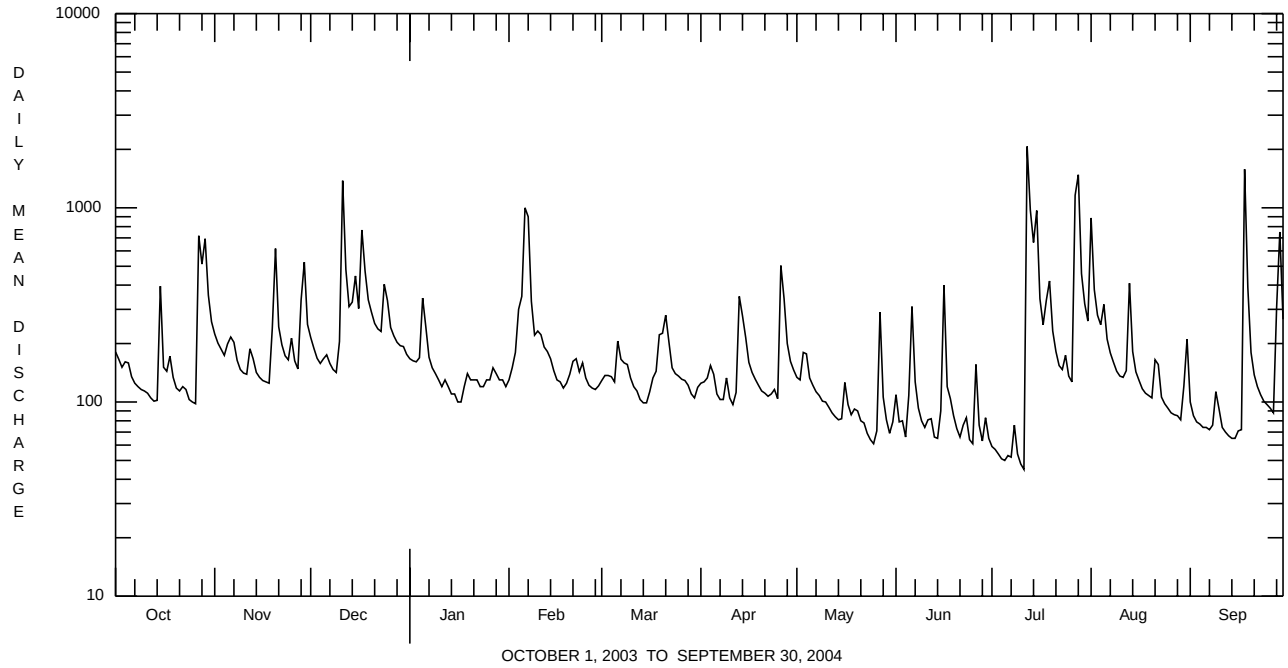
e Estimated.

SCHUYLKILL RIVER BASIN

01471980 MANATAWNY CREEK NEAR POTTSTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	74646		71482			
ANNUAL MEAN	205		195		131	
HIGHEST ANNUAL MEAN					230	1984
LOWEST ANNUAL MEAN					63.4	1981
HIGHEST DAILY MEAN	1920	Jun 21	2070	Jul 12	3010	Jul 7 1984
LOWEST DAILY MEAN	43	Jul 17	45	Jul 11	11	Aug 3 1999
ANNUAL SEVEN-DAY MINIMUM	65	Aug 24	54	Jul 1	12	Aug 1 1999
MAXIMUM PEAK FLOW			**a**5370	Jul 12	**a**7550	Sep 9 1987
MAXIMUM PEAK STAGE			9.76	Jul 12	11.46	Sep 9 1987
INSTANTANEOUS LOW FLOW			44	Jul 11,12	9.1	Aug 3 1999
ANNUAL RUNOFF (CFSM)	2.39		2.28		1.54	
ANNUAL RUNOFF (INCHES)	32.48		31.10		20.90	
10 PERCENT EXCEEDS	370		337		246	
50 PERCENT EXCEEDS	151		134		85	
90 PERCENT EXCEEDS	74		76		34	

a From rating curve extended above 2,780 ft^3/s.



SCHUYLKILL RIVER BASIN

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°14'30", long 75°39'07", Montgomery County, Hydrologic Unit 02040203, on right bank 75 ft upstream from bridge on Hanover Street in Pottstown, and 0.3 mi downstream from Manatawny Creek.

DRAINAGE AREA.--1,147 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 117.86 ft above National Geodetic Vertical Datum of 1929. October 1927 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 except those for estimated daily discharges, which are poor. Flow regulated by Blue Marsh Lake (station 01470870) since April 1979, by Still Creek Reservoir (station 01469200) since February 1933, and by Lake Ontelaunee. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to October 1926, 21.0 ft, Feb. 28, 1902, from floodmarks, discharge, about 53,900 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2560	5200	4550	2950	e1180	1720	1700	2310	1550	896	7110	1920
2	2400	4380	4390	2770	e1200	1920	1830	2200	1320	861	4770	1640
3	2210	3800	3840	2580	1460	2170	1860	3410	1200	843	3730	1520
4	2060	3050	3270	2570	2350	2160	1890	3930	1080	788	3000	1810
5	2120	2850	2890	3850	2270	2200	1760	3020	1190	770	3190	1460
6	1900	3030	2730	4270	5180	2500	1550	2650	3240	785	2670	1330
7	1740	2840	2520	3720	9130	2720	1450	2420	3120	769	2270	1290
8	1650	2500	2310	3210	5360	2620	1440	2370	2490	934	2080	1410
9	1570	2260	2180	3020	3570	2690	1600	2100	1950	756	1940	1720
10	1520	2130	2330	e2500	3450	2500	1500	2050	1680	679	1750	1560
11	1430	2070	9810	e2000	3430	2330	1390	1920	1620	639	1630	1340
12	1360	2250	15200	e2100	3080	2170	1390	1800	1580	7810	1820	1180
13	1300	2260	8880	e2200	2840	2050	2740	1650	1350	9990	12200	1110
14	1280	2070	7540	e1850	2400	1950	4170	1560	1250	6140	12000	1070
15	3240	1860	7600	e1550	2240	1880	4850	1640	1610	8140	7960	1010
16	3340	1790	6120	e1300	2030	1750	3790	1970	2700	4320	5770	1030
17	2410	1740	7140	e1400	1870	1840	3220	1970	1960	3300	4200	1110
18	2240	1690	6790	e1450	1600	1860	2890	1660	1980	3440	3040	11700
19	2010	2120	5680	e1500	1590	2280	2620	1690	1910	4210	2820	21500
20	1830	4880	4690	e1400	1690	2440	2350	1590	1410	2830	2590	9690
21	1720	4300	4110	e1350	1920	2740	2220	1440	1230	2240	4930	6980
22	1620	3410	3720	e1300	2190	2860	2130	1390	1190	1970	7940	5540
23	1570	3050	3490	e1350	2100	2840	2070	1320	1650	2020	5160	4230
24	1460	2800	4360	e1300	2100	2440	2090	1230	1320	4570	3640	3210
25	1390	3030	6830	e1320	2170	2300	1870	1110	1140	3010	2910	2660
26	1350	2880	5770	e1340	1990	2070	3660	1120	1850	2740	2450	2440
27	3770	2440	4880	e1360	1670	1980	4250	2220	1140	7000	2230	2240
28	7550	3070	4260	e1380	1600	1920	3400	2010	992	11500	2060	3320
29	8510	5980	3800	e1300	1620	1790	2720	1540	1080	5080	1970	13300
30	9150	5350	3370	e1250	---	1700	2460	1290	1030	3640	2020	8240
31	6910	---	3180	e1150	---	1700	---	1270	---	2940	2440	---
TOTAL	85170	91080	158230	62590	75280	68090	72860	59850	48812	105610	124290	118560
MEAN	2747	3036	5104	2019	2596	2196	2429	1931	1627	3407	4009	3952
MAX	9150	5980	15200	4270	9130	2860	4850	3930	3240	11500	12200	21500
MIN	1280	1690	2180	1150	1180	1700	1390	1110	992	639	1630	1010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

MEAN	1161	1674	2208	2182	2422	3180	2907	2261	1621	1275	1072	1125
MAX	3870	3897	7359	7383	5117	8948	7820	7220	7634	3940	5290	3952
(WY)	1977	1951	1997	1979	1971	1936	1983	1989	1972	1984	1933	2004
MIN	258	309	419	316	540	1101	875	729	462	302	301	256
(WY)	1931	1931	1931	1981	1934	1981	1985	1965	1965	1966	1966	1932

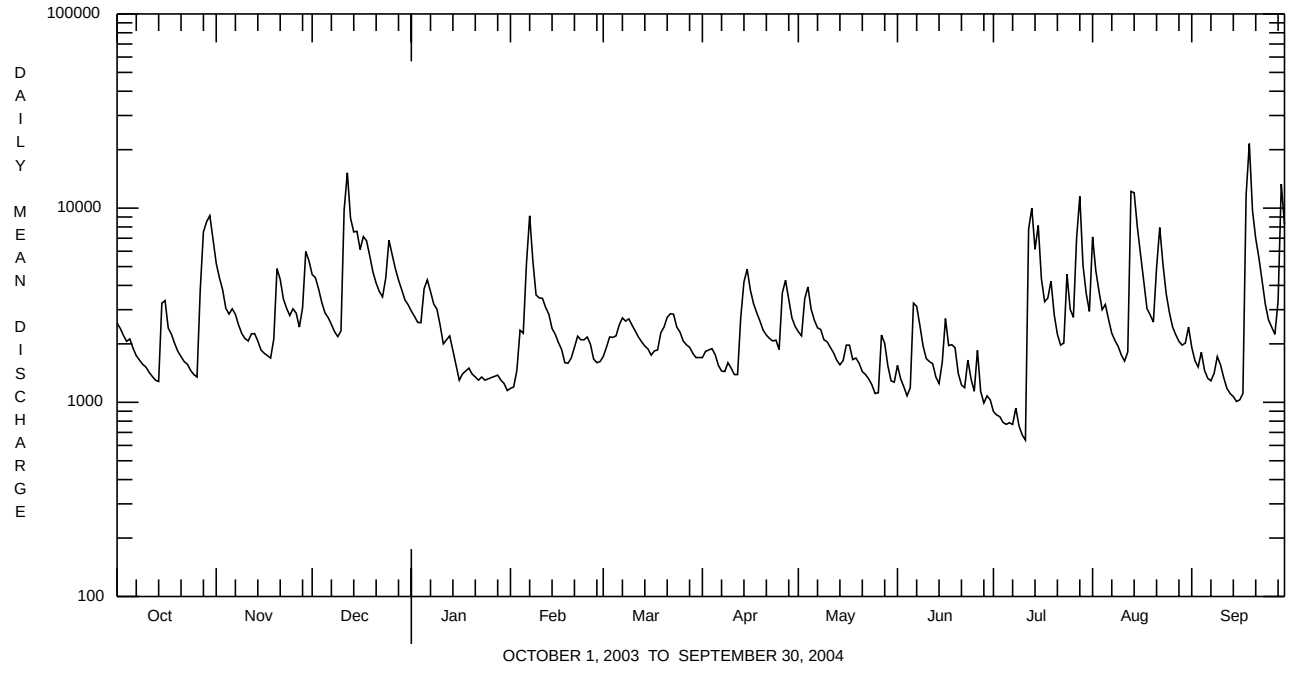
e Estimated.

SCHUYLKILL RIVER BASIN

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1928 - 2004	
ANNUAL TOTAL	1177450		1070422			
ANNUAL MEAN	3226		2925		1921	
HIGHEST ANNUAL MEAN					3211	1984
LOWEST ANNUAL MEAN					843	1965
HIGHEST DAILY MEAN	19700	Jun 21	21500	Sep 19	71200	Jun 23 1972
LOWEST DAILY MEAN	**e**600	Feb 17	639	Jul 11	175	Sep 19 1932
ANNUAL SEVEN-DAY MINIMUM	**a**714	Feb 13	762	Jul 5	210	Sep 19 1932
MAXIMUM PEAK FLOW			27800	Sep 19	**b**95900	Jun 23 1972
MAXIMUM PEAK STAGE			14.59	Sep 19	**c**29.97	Jun 23 1972
10 PERCENT EXCEEDS	6310		5410		3870	
50 PERCENT EXCEEDS	2500		2180		1310	
90 PERCENT EXCEEDS	1120		1280		477	

a Computed using estimated daily discharges.
b From rating curve extended above 50,400 ft^3/s.
c From floodmark.
e Estimated.



SCHUYLKILL RIVER BASIN

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
02...	1445	1028	9813	2390	11.5	7.7	7.6	306	312	14.7	120	31.7	10.9
DEC													
02...	1000	1028	9813	4420	11.9	7.8	7.8	268	275	6.3	110	28.9	9.1
FEB 2004													
19...	1140	1028	9813	1580	14.4	7.9	7.9	382	378	3.9	140	35.6	13.4
APR													
28...	0940	1028	9813	3430	10.2	7.8	7.7	298	297	12.2	110	30.2	8.6
JUN													
16...	1140	1028	9813	2730	7.2	7.4	7.4	241	278	21.8	91	22.3	8.7
AUG													
12...	0900	1028	9813	1650	7.8	7.6	7.7	377	369	21.4	140	35.6	12.5

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Fluoride, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)
OCT 2003													
02...	72	<.2	41.3	214	4	.030	3.11	<.040	.05	.077	--	2.4	<200
DEC													
02...	67	<.2	31.0	194	<2	.060	3.47	<.040	.04	.066	3.9	1.9	220
FEB 2004													
19...	81	<.2	46.8	268	<2	.220	3.69	.040	.08	.088	4.3	1.9	<200
APR													
28...	66	<.2	33.9	222	14	.080	2.70	.050	.04	.085	3.3	2.7	340
JUN													
16...	53	<.2	27.4	228	134	.100	2.13	.050	.09	.298	3.3	5.4	4300
AUG													
12...	87	<.2	44.4	268	4	<.020	2.98	<.040	.08	.101	3.2	2.8	200

Date	Copper, water, unfltrd recover-able, µg/L (01042)	Cyanide amenable to chlorination wat unf mg/L (00722)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)	Phenolic compounds, water, unfltrd µg/L (32730)	Gross alpha radioac water unfltrd pCi/L (01519)	Gross beta radioac water unfltrd pCi/L (85817)	Tritium water unfltrd pCi/L (07000)
OCT 2003											
02...	<10	<1.00	240	<1.0	60	<50	<10	<5	.40	3	20
DEC											
02...	<10	<1.00	360	<1.0	90	<50	10	<5	.33	2	22
FEB 2004											
19...	<10	<1.00	220	<1.0	160	<50	20	<5	.05	2	63
APR											
28...	<10	<1.00	580	2.0	120	<50	10	8	--	2	--
JUN											
16...	10	<1.00	5970	10	320	<50	100	<5	.78	4	40
AUG											
12...	<10	<1.00	300	1.0	60	<50	80	<5	.71	2	106

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/09/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	3
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	4
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	3
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	22
Baetis	17
Ephemerellidae	1
Heptageniidae	
Stenonema	4
Plecoptera (STONEFLIES)	
Perlidae	
Agnetina	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	20
Hydropsyche	28
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Stenelmis	52
Psephenidae (WATER PENNIES)	
Psephenus	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	12
Empididae (DANCE FLIES)	
Hemerodromia	1
Simuliidae (BLACK FLIES)	
Simulium	10
Total Organisms	180
Total Taxa	15

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 upstream from Vincent Dam, and 0.3 mi south of Linfield.

DRAINAGE AREA.--1,189 mi^2.

PERIOD OF RECORD.--Water years 1986 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1986 to September 1990.
WATER TEMPERATURE: September 1989 to current year.
DISSOLVED OXYGEN: January 1986 to September 1990; March 1997 to current year.

INSTRUMENTATION.--Water-quality monitor January 1986 to September 1990, March 1997 to current year. In situ water temperature probe since October 1990. Probes interfaced with a data collection platform.

REMARKS.--Water temperature records rated good. Dissolved oxygen records rated fair. Dissolved oxygen collection discontinued October through March. Other interruptions in the record were due to pump intake sedimentation and instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 752 microsiemens, Sept. 15, 1989; minimum, 118 microsiemens, Sept. 15, 1987.
WATER TEMPERATURE: Maximum, 33.5°C, July 6, 1999; minimum, 0.0°C, many days during winters.
DISSOLVED OXYGEN: Maximum, 19.6 mg/L, Mar. 24, 1988; minimum, 0.8 mg/L, July 26, 1986.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 28.5°C, July 5, 6; minimum, 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	16.0	15.0	15.5	12.5	11.5	12.0	7.5	6.5	7.0	5.0	4.5	4.5
2	15.0	14.0	14.5	13.5	12.0	13.0	6.5	5.5	6.0	5.5	4.5	5.0
3	14.0	12.5	13.5	14.5	13.0	13.5	5.5	4.5	4.5	6.5	5.5	6.0
4	13.5	12.5	13.0	15.0	13.5	14.5	4.5	3.5	4.0	7.5	6.5	7.0
5	13.0	11.5	12.5	14.5	14.5	14.5	4.0	3.0	4.0	7.0	6.5	7.0
6	13.0	11.5	12.5	14.5	14.0	14.0	3.0	2.5	3.0	6.5	4.5	5.5
7	13.0	11.5	12.5	14.0	13.0	14.0	3.0	2.0	2.5	4.5	2.0	3.0
8	14.0	12.5	13.0	13.0	10.5	12.0	2.5	2.0	2.5	2.0	1.5	1.5
9	15.0	13.5	14.5	10.5	8.5	9.5	3.0	2.0	2.5	2.0	1.0	1.5
10	15.0	14.0	14.5	8.5	7.0	8.0	5.0	3.0	4.0	1.0	0.0	0.0
11	16.5	14.5	15.0	8.0	7.0	7.5	7.0	5.0	6.0	0.0	0.0	0.0
12	16.5	15.0	16.0	9.5	8.0	8.5	6.5	5.5	6.0	1.5	0.0	0.5
13	17.0	15.0	16.0	10.0	8.0	9.5	5.5	4.5	5.0	2.5	1.5	2.0
14	16.0	14.5	15.0	8.0	6.5	7.5	4.5	4.0	4.5	2.0	1.0	1.0
15	15.5	14.0	15.0	8.0	7.0	7.5	4.5	4.0	4.0	1.0	0.0	0.0
16	14.0	13.0	14.0	8.5	7.5	8.0	4.0	4.0	4.0	0.0	0.0	0.0
17	14.0	13.0	13.5	9.5	8.5	9.0	5.0	4.0	4.5	0.0	0.0	0.0
18	13.5	12.5	13.0	9.0	8.5	9.0	4.5	4.0	4.0	0.5	0.0	0.0
19	13.0	12.0	12.5	12.0	9.0	10.5	4.0	4.0	4.0	1.0	0.0	0.5
20	13.0	11.5	12.5	12.0	10.5	11.5	4.0	3.5	4.0	1.0	0.0	0.0
21	13.5	12.0	13.0	10.5	9.0	9.5	4.0	3.5	3.5	0.5	0.0	0.0
22	13.5	12.0	13.0	10.0	9.0	9.5	4.0	3.0	3.5	1.0	0.0	0.5
23	12.0	10.0	11.0	9.5	8.5	9.0	5.5	4.0	4.5	0.5	0.0	0.0
24	10.5	9.0	9.5	10.0	9.0	9.5	6.5	5.0	6.0	0.0	0.0	0.0
25	10.5	8.5	9.5	10.0	8.0	9.0	6.5	5.0	5.5	0.0	0.0	0.0
26	13.0	10.5	11.5	8.0	7.0	7.5	5.0	4.5	4.5	0.0	0.0	0.0
27	14.5	13.0	13.5	8.0	7.0	7.5	4.5	4.0	4.5	0.0	0.0	0.0
28	13.5	12.0	12.5	9.5	8.0	8.5	4.5	4.0	4.5	0.5	0.0	0.0
29	12.0	11.5	12.0	9.5	7.5	8.5	4.5	4.0	4.0	0.5	0.0	0.0
30	11.5	11.0	11.5	7.5	7.0	7.5	5.0	4.5	4.5	0.5	0.0	0.0
31	11.5	11.0	11.5	---	---	---	5.5	4.5	5.0	0.5	0.0	0.0
MONTH	17.0	8.5	13.1	15.0	6.5	10.0	7.5	2.0	4.4	7.5	0.0	1.5

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.0	7.5	5.5	6.5	10.5	9.5	9.5	18.5	16.0	17.5
2	0.5	0.0	0.0	8.0	6.5	7.0	10.0	9.0	9.5	19.0	17.5	18.5
3	1.0	0.0	0.5	8.5	7.0	8.0	10.0	9.0	9.5	19.0	15.5	17.0
4	2.0	0.5	1.0	8.5	8.0	8.0	9.5	7.5	8.5	15.5	14.0	15.0
5	2.0	1.0	1.5	8.5	7.5	8.0	8.5	6.0	7.0	15.0	13.5	14.5
6	1.5	0.5	1.5	8.5	8.0	8.0	9.0	6.0	7.5	16.5	13.5	15.0
7	2.0	1.0	1.5	9.5	7.5	8.5	11.5	8.5	10.0	17.5	15.5	16.5
8	2.0	1.5	2.0	9.0	8.0	8.5	11.0	10.0	10.5	17.5	16.0	17.0
9	2.5	1.0	1.5	8.0	7.0	7.5	12.5	9.5	11.0	18.0	15.5	17.0
10	3.5	2.5	3.0	7.0	6.0	6.5	13.0	10.0	11.5	20.0	17.0	18.5
11	3.5	3.0	3.5	7.5	5.5	6.5	12.0	10.0	11.0	22.0	19.0	20.5
12	3.5	2.5	3.0	8.0	6.5	7.5	10.5	9.5	10.0	22.5	20.0	21.5
13	3.5	2.5	3.0	7.0	5.5	6.5	9.5	9.0	9.0	23.5	21.0	22.5
14	4.0	3.0	3.5	6.5	5.5	6.0	9.5	9.5	9.5	23.0	21.5	22.5
15	3.5	2.5	3.0	8.0	6.0	7.0	11.0	9.0	10.0	24.0	21.5	23.0
16	2.5	1.5	2.0	8.0	4.5	6.0	12.0	9.5	10.5	23.5	22.0	22.5
17	2.5	1.0	2.0	5.0	4.0	4.5	13.5	10.5	12.0	23.0	21.0	22.0
18	3.5	2.0	2.5	7.0	4.5	5.5	15.5	12.5	14.0	22.5	21.0	21.5
19	4.5	3.0	3.5	6.5	5.5	6.0	17.0	14.0	15.5	21.5	20.5	21.0
20	5.0	3.5	4.5	7.5	5.0	6.5	18.0	15.5	17.0	21.0	19.5	20.5
21	6.0	5.0	5.5	8.0	7.0	7.5	17.5	15.5	16.5	21.0	19.5	20.0
22	6.0	4.5	5.0	7.5	5.5	6.5	18.0	16.0	17.0	23.5	20.0	21.5
23	5.5	4.0	5.0	7.0	5.0	6.0	18.0	16.5	17.5	25.0	22.0	23.5
24	5.5	4.0	5.0	8.0	5.5	7.0	18.0	15.5	17.0	26.5	23.5	25.0
25	4.5	3.0	4.0	8.5	7.5	8.0	17.0	14.5	15.5	26.5	23.5	25.0
26	4.5	3.0	4.0	11.0	8.0	9.5	14.5	12.5	13.5	25.5	22.0	23.5
27	5.5	3.5	4.5	11.5	10.5	11.0	14.0	12.0	13.0	22.0	21.0	21.5
28	6.0	4.0	5.0	13.0	11.0	12.0	14.0	12.5	13.5	22.5	21.0	22.0
29	7.0	4.5	5.5	13.0	11.0	12.0	15.5	12.5	14.0	22.0	20.0	21.0
30	---	---	---	12.0	10.0	10.5	17.5	14.5	16.0	21.5	19.0	20.5
31	---	---	---	10.0	9.5	9.5	---	---	---	20.5	18.5	19.5
MONTH	7.0	0.0	3.0	13.0	4.0	7.7	18.0	6.0	12.2	26.5	13.5	20.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	20.5	18.0	19.0	25.0	22.5	23.5	23.5	22.0	22.5	23.0	21.0	22.0
2	22.0	18.5	20.5	26.5	22.5	24.5	23.5	22.0	22.5	23.0	21.0	22.0
3	23.0	20.0	21.5	27.0	24.0	25.5	24.0	22.0	23.0	23.0	21.0	22.0
4	22.5	20.0	21.5	27.0	24.0	25.5	24.5	22.5	23.5	22.5	21.0	22.0
5	21.5	18.0	19.5	28.5	25.0	26.5	24.0	22.5	23.0	22.0	20.5	21.5
6	18.0	16.5	17.0	28.5	25.0	26.5	22.5	20.5	21.5	21.5	19.5	20.5
7	19.5	16.5	18.0	28.0	25.0	26.5	20.5	19.5	20.0	23.0	20.5	21.5
8	21.5	18.5	20.0	27.5	25.0	26.0	21.0	18.5	19.5	22.5	21.5	22.0
9	23.5	20.5	22.0	26.5	24.5	25.5	22.5	19.5	21.0	23.0	21.5	22.0
10	24.0	22.5	23.5	27.0	23.0	25.0	23.5	21.0	22.0	23.5	21.0	22.0
11	23.0	20.0	21.5	28.0	24.0	26.0	23.5	22.0	22.5	22.5	21.0	22.0
12	22.0	19.0	20.5	26.5	20.5	23.5	23.0	21.5	22.5	22.5	20.5	21.5
13	21.0	19.5	20.0	21.5	20.5	21.0	22.5	20.0	21.0	23.0	20.5	22.0
14	21.0	19.0	20.0	21.5	20.0	21.0	20.0	19.5	19.5	22.5	21.0	21.5
15	22.5	20.5	21.5	20.5	19.5	20.0	20.5	19.5	20.0	21.0	20.0	20.5
16	23.0	21.5	22.5	20.5	19.5	20.0	20.5	20.0	20.0	21.5	20.5	21.0
17	24.0	22.5	23.5	22.5	20.0	21.0	21.0	19.5	20.5	21.0	20.5	21.0
18	25.5	22.5	24.0	22.0	20.0	21.0	21.5	20.0	21.0	21.0	18.0	20.0
19	24.5	23.5	24.0	21.0	19.5	20.0	22.0	20.5	21.0	18.0	16.5	17.5
20	24.0	21.5	23.0	23.0	20.5	21.5	23.0	20.5	21.5	17.0	16.0	16.5
21	23.5	20.5	22.5	24.0	21.5	22.5	22.5	20.5	21.5	17.5	16.5	17.0
22	22.5	21.5	22.0	24.5	22.5	23.5	20.5	19.5	20.0	18.0	16.5	17.5
23	24.0	21.0	22.5	24.0	23.0	23.5	20.5	19.5	20.0	18.5	17.5	18.0
24	25.0	22.0	23.5	23.0	21.5	22.0	21.0	19.5	20.5	19.5	18.0	19.0
25	25.0	23.0	24.0	22.0	21.5	21.5	22.0	20.0	21.0	19.5	18.0	19.0
26	24.0	22.5	23.0	23.0	20.5	21.5	22.0	20.0	21.0	19.5	18.5	19.0
27	24.5	21.0	22.5	22.0	21.0	21.5	22.5	20.5	21.5	19.5	18.0	19.0
28	23.5	21.0	22.5	21.0	20.5	21.0	23.5	21.5	22.5	19.5	18.5	19.0
29	24.0	21.5	22.5	22.0	20.5	21.0	24.5	22.0	23.5	18.5	17.5	18.0
30	25.0	21.5	23.0	22.5	21.0	22.0	24.0	23.0	23.5	17.5	17.0	17.5
31	---	---	---	24.0	21.5	22.5	23.5	22.0	22.5	---	---	---
MONTH	25.5	16.5	21.7	28.5	19.5	23.0	24.5	18.5	21.5	23.5	16.0	20.1
YEAR	28.5	0.0	13.2									

SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	12.2	9.4	10.7	9.5	8.2	8.9
2	---	---	---	---	---	---	10.7	9.3	9.9	8.7	7.7	8.2
3	---	---	---	---	---	---	12.3	9.5	10.7	8.2	7.4	7.7
4	---	---	---	---	---	---	11.4	10.1	10.8	8.9	7.6	8.3
5	---	---	---	---	---	---	13.8	10.5	12.0	9.0	8.5	8.7
6	---	---	---	---	---	---	14.1	11.6	12.8	9.3	8.3	8.8
7	---	---	---	---	---	---	13.3	10.6	12.0	---	---	---
8	---	---	---	---	---	---	11.3	9.7	10.5	9.3	8.0	8.6
9	---	---	---	---	---	---	11.9	9.2	10.4	9.5	8.9	9.2
10	---	---	---	---	---	---	11.8	9.6	10.5	9.1	7.9	8.7
11	---	---	---	---	---	---	9.8	8.9	9.3	8.7	7.9	8.3
12	---	---	---	---	---	---	10.2	9.0	9.6	8.4	7.9	8.2
13	---	---	---	---	---	---	10.0	9.6	9.8	---	---	---
14	---	---	---	---	---	---	9.7	9.4	9.6	---	---	---
15	---	---	---	---	---	---	10.3	9.6	10.0	---	---	---
16	---	---	---	---	---	---	10.5	10.0	10.2	---	---	---
17	---	---	---	---	---	---	10.2	9.6	10	---	---	---
18	---	---	---	---	---	---	9.8	8.9	9.4	---	---	---
19	---	---	---	---	---	---	9.3	8.5	8.8	7.6	7.1	7.3
20	---	---	---	---	---	---	---	---	---	7.8	7.1	7.5
21	---	---	---	---	---	---	---	---	---	7.7	7.3	7.5
22	---	---	---	---	---	---	---	---	---	7.6	7.0	7.4
23	---	---	---	---	---	---	---	---	---	7.1	6.4	6.8
24	---	---	---	---	---	---	9.7	7.8	8.7	7.0	6.1	6.5
25	---	---	---	---	---	---	9.6	8.2	8.9	7.0	5.9	6.4
26	---	---	---	---	---	---	9.0	8.5	8.7	6.6	5.8	6.2
27	---	---	---	---	---	---	8.9	8.5	8.8	6.2	5.4	5.9
28	---	---	---	---	---	---	10.3	8.8	9.5	6.6	5.5	6.2
29	---	---	---	---	---	---	10.4	9.1	9.9	7.5	6.5	7.1
30	---	---	---	---	---	---	9.9	8.8	9.3	8.0	7.2	7.7
31	---	---	---	12.1	9.6	10.9	---	---	---	7.6	7.3	7.5
MONTH	---	---	---	12.1	9.6	10.9	14.1	7.8	10.0	9.5	5.4	7.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
2	8.2	7.3	7.7	---	---	---	---	---	---	9.3	7.1	8.1
3	8.1	7.1	7.5	8.4	6.4	7.4	7.7	7.6	7.6	9.1	6.9	7.8
4	8.6	6.9	7.6	8.7	6.4	7.5	7.6	7.4	7.5	---	---	---
5	7.6	7.0	7.3	8.7	6.3	7.4	7.4	7.0	7.3	---	---	---
6	7.7	7.2	7.4	8.6	5.9	7.2	8.1	7.4	7.8	---	---	---
7	8.0	7.6	7.8	8.4	5.9	7.0	8.7	8.1	8.3	---	---	---
8	7.6	7.3	7.5	8.2	5.4	6.8	9.1	8.5	8.7	---	---	---
9	7.4	6.8	7.2	8.5	5.3	7.0	9.1	8.3	8.7	---	---	---
10	7.0	6.1	6.6	9.0	6.3	7.5	9.5	8.0	8.6	---	---	---
11	6.9	6.0	6.5	8.9	6.1	7.4	9.6	7.8	8.6	7.9	6.7	7.3
12	7.8	6.7	7.2	---	---	---	10.2	7.6	8.7	---	---	---
13	7.9	7.1	7.5	---	---	---	---	---	---	---	---	---
14	8.1	7.3	7.6	---	---	---	---	---	---	8.4	7.3	7.8
15	7.5	6.6	7.2	---	---	---	---	---	---	8.6	7.4	8.0
16	6.6	5.4	5.9	7.7	7.5	7.6	---	---	---	8.8	7.6	8.2
17	6.5	5.4	6.0	7.6	7.5	7.6	8.3	8.0	8.1	8.8	7.6	8.1
18	---	---	---	7.6	7.4	7.5	8.2	7.7	8.0	---	---	---
19	---	---	---	7.9	6.8	7.7	8.1	7.0	7.7	---	---	---
20	---	---	---	7.9	7.6	7.8	8.1	7.4	7.7	---	---	---
21	---	---	---	7.8	7.6	7.7	7.6	6.8	7.2	---	---	---
22	7.3	6.8	7.1	7.7	7.3	7.5	---	---	---	---	---	---
23	6.8	5.8	6.4	7.4	7.2	7.3	---	---	---	9.3	9.1	9.2
24	7.0	5.8	6.5	7.4	6.9	7.2	7.9	7.5	7.7	9.1	9.0	9.0
25	6.8	5.9	6.4	7.9	7.3	7.6	8.0	7.5	7.7	9.2	8.9	9.0
26	---	---	---	8.4	7.8	8.1	8.1	7.4	7.7	9.2	8.8	9.0
27	---	---	---	8.1	7.4	7.7	8.2	7.5	7.7	9.4	9.0	9.1
28	---	---	---	---	---	---	8.4	7.2	7.7	9.0	8.1	8.7
29	---	---	---	---	---	---	8.6	7.1	7.7	---	---	---
30	---	---	---	7.9	7.6	7.7	8.5	6.8	7.5	---	---	---
31	---	---	---	8.0	7.6	7.8	---	---	---	---	---	---
MONTH	8.6	5.4	7.1	9.0	5.3	7.5	10.2	6.8	7.9	9.4	6.7	8.4

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	Temperature, water, deg C (00010)
JUL							
27...	1411	1028	1028	380	.00	--	--
27...	1412	1028	1028	365	3.50	8.3	21.8
27...	1413	1028	1028	365	1.00	8.2	21.8
27...	1417	1028	1028	315	5.00	8.2	21.8
27...	1418	1028	1028	315	1.00	8.2	22.2
27...	1420	1028	1028	270	5.00	8.2	21.8
27...	1421	1028	1028	270	1.00	8.2	22.0
27...	1422	1028	1028	225	5.00	8.2	21.8
27...	1423	1028	1028	225	1.00	8.2	21.9
27...	1425	1028	1028	180	3.00	8.2	21.8
27...	1426	1028	1028	180	1.00	8.2	22.0
27...	1429	1028	1028	150	3.00	8.3	21.8
27...	1430	1028	1028	150	1.00	8.3	21.9
27...	1433	1028	1028	90	5.00	8.3	21.8
27...	1434	1028	1028	90	1.00	8.3	21.8
27...	1442	1028	1028	75	5.00	8.2	21.7
27...	1443	1028	1028	75	1.00	8.2	21.8

SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA
(National Water-Quality Assessment Station)

LOCATION.--Lat 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^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 7, 1968, nonrecording gage at site 70 ft upstream at same datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s (revised) and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1645	1,550	7.86
Dec. 11	1300	1,800	8.03
Dec. 17	1145	1,050	7.05
Feb. 6	----	Unknown	Ice jam
July 12	1830	2,840	9.07
July 28	0815	1,420	7.58
Aug. 13	0615	1,200	7.27
Sept. 18	1430	*3,360	*9.51
Sept. 28	2315	2,890	9.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	148	127	136	e102	89	121	102	73	36	404	108
2	84	133	116	135	98	95	140	99	59	36	207	73
3	78	124	106	135	e160	98	214	153	52	34	131	65
4	86	117	103	136	e200	103	262	185	47	32	111	59
5	86	176	112	226	164	97	201	119	98	32	135	56
6	75	250	123	180	e800	177	130	118	265	35	96	55
7	71	171	115	130	830	146	117	102	103	33	83	53
8	69	127	108	116	280	120	111	99	70	40	76	60
9	68	112	105	114	162	100	118	86	59	34	70	78
10	66	106	141	99	191	90	101	100	55	30	66	63
11	65	105	1280	119	185	85	95	86	67	30	67	53
12	62	146	389	113	137	80	108	78	67	721	85	49
13	59	134	220	109	127	72	327	73	53	582	524	48
14	61	108	273	103	126	69	262	70	51	224	137	46
15	297	97	420	95	110	70	187	68	57	488	100	46
16	98	93	232	104	e92	78	138	135	119	125	86	48
17	80	93	615	140	e88	87	124	81	68	85	77	50
18	112	93	380	138	87	96	115	74	111	152	72	1220
19	82	249	241	132	96	162	108	169	64	204	69	312
20	72	511	210	107	114	188	102	129	52	98	69	122
21	69	181	188	e110	130	285	97	89	46	77	86	92
22	76	143	181	e100	125	169	94	81	47	64	93	78
23	74	128	178	e98	104	122	98	69	56	62	66	71
24	65	122	331	e95	101	112	134	63	46	105	60	66
25	62	135	248	e93	99	107	99	57	42	73	57	63
26	63	116	183	e100	90	101	293	64	42	62	55	61
27	867	110	168	e105	86	101	286	79	38	209	53	59
28	454	196	156	e107	84	96	147	66	36	960	51	564
29	539	329	153	e105	85	86	120	56	44	453	50	910
30	261	149	154	e103	---	84	109	51	39	164	196	195
31	174	---	143	e102	---	105	---	55	---	122	420	---
TOTAL	4463	4702	7499	3685	5053	3470	4558	2856	2026	5402	3852	4823
MEAN	144	157	242	119	174	112	152	92.1	67.5	174	124	161
MAX	867	511	1280	226	830	285	327	185	265	960	524	1220
MIN	59	93	103	93	84	69	94	51	36	30	50	46
CFSM	2.44	2.65	4.09	2.01	2.95	1.89	2.57	1.56	1.14	2.95	2.10	2.72
IN.	2.81	2.96	4.72	2.32	3.18	2.18	2.87	1.80	1.28	3.40	2.42	3.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

MEAN	51.0	71.7	102	107	123	144	134	103	82.7	62.2	42.2	55.0
MAX	180	166	328	394	266	350	306	250	353	258	124	214
(WY)	1997	1973	1997	1979	1984	1994	1983	1989	1972	1984	2004	1999
MIN	16.7	17.3	19.2	13.7	24.8	40.5	35.6	31.9	22.2	11.1	11.7	14.1
(WY)	2002	2002	2002	1981	2002	1981	1985	1969	1999	1999	2002	1980

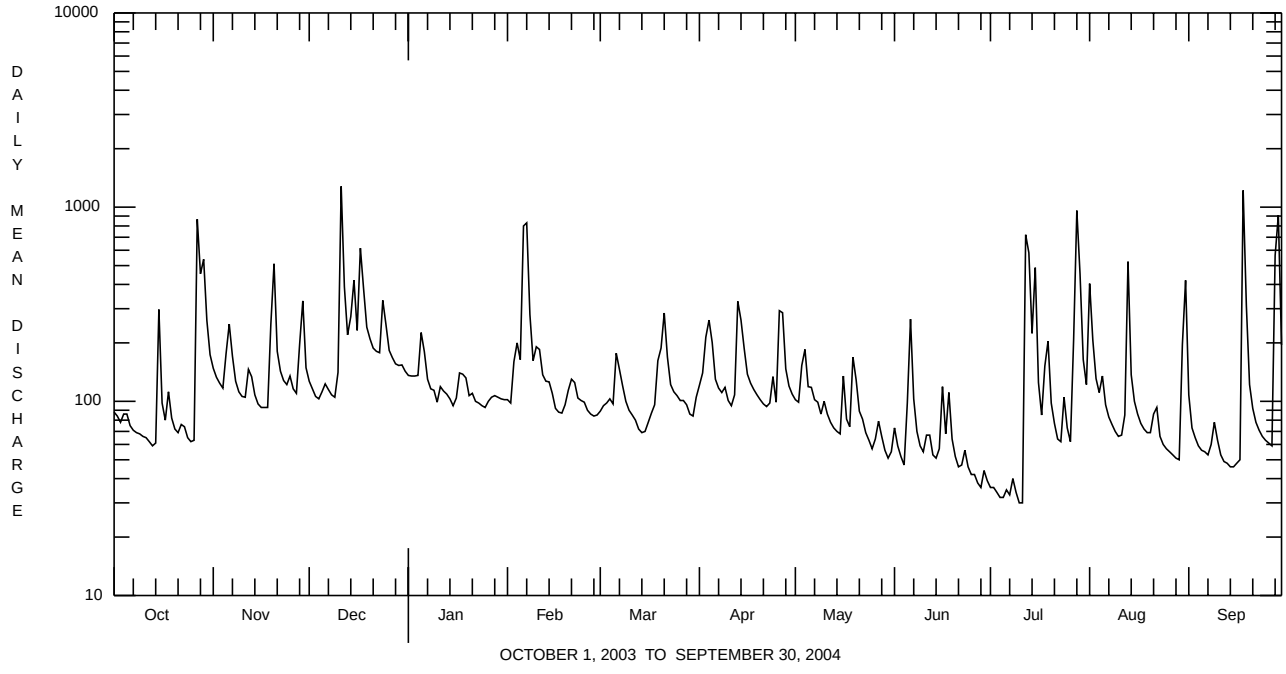
e Estimated.

SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1969 - 2004	
ANNUAL TOTAL	58093		52389			
ANNUAL MEAN	159		143		89.6	
HIGHEST ANNUAL MEAN					155	1984
LOWEST ANNUAL MEAN					30.4	2002
HIGHEST DAILY MEAN	2130	Jun 21	1280	Dec 11	4530	Jun 22 1972
LOWEST DAILY MEAN	33	Aug 29	30	Jul 10,11	7.1	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	34	Aug 25	33	Jul 5	7.3	Aug 2 1999
MAXIMUM PEAK FLOW			**a**3360	Sep 18	**a**11200	Jun 22 1972
MAXIMUM PEAK STAGE			9.51	Sep 18	13.66	Jun 22 1972
INSTANTANEOUS LOW FLOW			29	Jul 11,12	6.9	Aug 8 1999
ANNUAL RUNOFF (CFSM)	2.69		2.42		1.52	
ANNUAL RUNOFF (INCHES)	36.57		32.98		20.60	
10 PERCENT EXCEEDS	298		253		172	
50 PERCENT EXCEEDS	105		102		56	
90 PERCENT EXCEEDS	47		53		20	

a From rating curve extended above 2,500 ft^3/s, on basis of slope-area measurement of peak flow.



SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1998 to April 1999, June 1999 to August 1999, June 2000 to September 2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 07...	1300	1028	80020	70	11.8	7.8	7.7	164	168	10.8	14.8	5.11	1.68

Date	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
OCT 07...	8.25	12.8	17.3	12.2	<.04	1.56	E.004	<.02	21	146

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	10/07/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	4
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	15
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	6
Lymnaeidae	
Fossaria	2
Planorbidae	
Gyraulus	2
Mesogastropoda	
Hydrobiidae	2
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	6
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	6
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	16
Amphipoda (SCUDS)	
Crangonyctidae	
Stygonectes	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	7
Baetis	16
Ephemerellidae	
Eurylophella	5
Serratella	6
Heptageniidae	
Stenonema	33
Isonychiidae	
Isonychia	29
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
Argia	3
Gomphidae	4

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/07/03
Benthic macroinvertebrate	Count
Plecoptera (STONEFLIES)	
Chloroperlidae	
Haploperla	3
Perlidae	
Acroneuria	7
Paragnetina	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Nigronia	1
Trichoptera (CADDISFLIES)	
Apataniidae	
Apatania	37
Brachycentridae	
Micrasema	26
Glossosomatidae	
Glossosoma	6
Hydropsychidae	
Cheumatopsyche	53
Hydropsyche	118
Potamyia	18
Hydroptilidae	
Leucotrichia	38
Leptoceridae	
Oecetis	1
Philopotamidae	
Chimarra	5
Lepidoptera	
Pyralidae (MOTHS)	
Petrophila	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Dubiraphia	1
Optioservus	29
Oulimnius	6
Stenelmis	13
Psephenidae (WATER PENNIES)	
Ectopria	1
Psephenus	24
Diptera (TRUE FLIES)	
Ceratopogonidae	1
Chironomidae (MIDGES)	48
Empididae (DANCE FLIES)	
Hemerodromia	1
Simuliidae (BLACK FLIES)	
Simulium	9
Total Organisms	612
Total Taxa	42

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued
(National Water-Quality Assessment Station)

REMARKS.--These samples were collected as part of the Delaware River Basin National Water-Quality Assessment Program (DELR NAWQA). For the definition of the type of quality-control data listed under SAMPLE TYPE, refer to "Water-Quality-Control Data" in the "Introduction."

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)
NOV											
13...	0910	Environmental	138	744	10.9	96	7.4	150	12.5	9.9	35
13...	*0911*	*Split Replicate*	--	--	--	--	--	--	--	--	--
DEC											
08...	1050	Environmental	108	756	14.6	102	7.3	166	.0	.7	30
JAN											
20...	1200	Environmental	115	761	14.9	102	7.2	174	-2.5	.1	29
MAR											
16...	0900	Environmental	70	756	13.0	101	7.1	158	1.0	4.9	25
APR											
12...	0950	Environmental	98	751	12.2	104	7.2	153	11.5	8.4	28
MAY											
20...	1140	Environmental	124	764	10.1	106	7.8	150	21.5	17.8	32
JUN											
16...	1040	Environmental	155	760	8.9	98	7.5	144	27.0	20.0	33
JUL											
07...	0930	Environmental	32	754	8.9	100	7.8	165	25.0	20.9	43
SEP											
01...	1030	Environmental	109	763	9.0	98	7.4	148	25.5	19.6	33

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV										
13...	12.1	11.8	<.04	1.41	<.008	.009	.037	1.67	3	1.1
13...	*12.0*	*11.8*	*<.04*	*1.40*	*<.008*	*.009*	*.028*	*1.62*	*3*	--
DEC										
08...	16.8	12.8	<.04	1.72	<.008	E.004	.015	1.83	1	.29
JAN										
20...	22.9	13.1	<.04	1.92	<.008	.007	.017	2.10	3	.93
MAR										
16...	14.7	11.3	<.04	1.57	E.004	<.006	.016	1.74	2	.38
APR										
12...	14.2	10.8	<.04	1.51	<.008	E.003	.020	1.67	4	1.1
MAY										
20...	13.1	8.0	<.04	1.08	.008	.018	.066	1.49	--	--
JUN										
16...	12.7	9.4	<.04	1.16	.009	.024	.167	1.48	60	25
JUL										
07...	13.0	11.9	<.04	1.14	<.008	.010	.028	1.28	3	.26
SEP										
01...	11.3	17.1	E.02	.93	E.004	.052	.106	1.34	10	2.9

Remark codes used in this table:
< -- Less than
E -- Estimated value

SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

WATER-COLUMN PESTICIDE ANALYSES

REMARKS.--The following were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, on page 215). Only pesticides detected in one or more surface-water samples are listed in the following table.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	CIAT, water, fltrd, µg/L (04040)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	Atra-zine, water, fltrd, µg/L (39632)	Ben-flur-alin, water, fltrd 0.7µ GF µg/L (82673)	Car-baryl, water, fltrd 0.7µ GF µg/L (82680)	Chlor-pyrifos water, fltrd, µg/L (38933)	DCPA, water fltrd 0.7µ GF µg/L (82682)
NOV											
13...	0910	Environmental	E.008	<.006	<.005	<.005	.013	<.010	<.041	<.005	<.003
JAN											
20...	1200	Environmental	E.025	<.006	<.005	<.005	.010	<.010	<.041	<.005	<.003
MAR											
16...	0900	Environmental	E.019	<.006	<.005	<.005	.010	<.010	<.041	<.005	<.003
APR											
12...	0950	Environmental	E.021	<.006	<.005	<.005	.011	<.010	E.008	<.005	<.003
MAY											
20...	1140	Environmental	E.035	.009	<.005	<.005	.228	<.010	<.041	<.005	<.003
JUN											
16...	*1039*	*Field Blank*	*<.006*	*<.006*	*<.005*	*<.005*	*<.007*	*<.010*	*<.041*	*<.005*	*<.003*
16...	1040	Environmental	E.031	.026	<.005	<.005	.223	<.010	E.026	.017	<.003
JUL											
07...	0930	Environmental	E.035	<.006	<.005	<.005	.028	<.010	<.041	<.005	<.003
SEP											
01...	1030	Environmental	E.019	<.006	<.005	<.005	.023	<.010	<.041	<.005	<.003

Date	Desulf-inyl fipro-nil, water, fltrd, µg/L (62170)	Diazi-non, water, fltrd, µg/L (39572)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide water, fltrd, µg/L (62167)	Fipro-nil sulfone water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Lindane water, fltrd, µg/L (39341)	Metola-chlor, water, fltrd, µg/L (39415)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Prome-ton, water, fltrd, µg/L (04037)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron water fltrd 0.7µ GF µg/L (82670)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)
NOV													
13...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.009	<.022	M	.008	<.02	<.009
JAN													
20...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.009	<.022	<.01	.007	<.02	<.009
MAR													
16...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.009	<.022	<.01	.008	<.02	<.009
APR													
12...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.008	<.022	<.01	.013	<.02	<.009
MAY													
20...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.108	<.022	.01	.182	<.02	<.009
JUN													
16...	*<.012*	*<.005*	*<.029*	*<.013*	*<.024*	*<.016*	*<.004*	*<.013*	*<.022*	*<.01*	*<.005*	*<.02*	*<.009*
16...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.139	<.022	.01	.284	<.02	<.009
JUL													
07...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.011	<.022	<.01	.035	<.02	<.009
SEP													
01...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.035	<.022	.01	.019	<.02	<.009

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 bridge on Church Road, 0.9 mi upstream from Molasses Creek, and 1.0 mi southwest of East Greenville.

DRAINAGE AREA.--38.0 mi^2.

PERIOD OF RECORD.--October 1981 to current year.

REVISED RECORD.--WDR PA-98-1: 1982-97(P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 288.50 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, and those greater than 1,500 ft^3/s, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1915	1,520	4.26	July 14	2345	1,210	3.99
Dec. 11	0900	1,090	3.86	July 27	2230	2,170	4.80
Dec. 17	1130	1,110	3.88	Aug. 13	0745	1,520	4.26
Feb. 6	1615	2,970	5.38	Sept. 18	1000	*5,720	*7.07
July 12	2030	2,720	5.21	Sept. 29	0015	1,800	4.50

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	114	97	87	e55	67	68	68	62	25	128	53
2	66	104	87	87	e50	74	78	67	43	24	82	45
3	60	95	77	86	e80	71	80	97	40	22	66	41
4	72	88	74	92	e110	74	76	95	33	21	64	38
5	64	91	79	179	e80	69	66	70	57	20	79	36
6	56	97	82	112	e1100	99	59	64	87	19	56	35
7	53	88	75	87	e400	80	57	71	50	21	51	33
8	52	74	70	83	e130	79	64	59	40	30	48	90
9	51	68	68	e80	e100	78	79	55	35	20	45	89
10	50	65	90	e78	e100	70	59	54	34	18	44	55
11	49	65	643	e76	e95	64	56	51	46	18	45	44
12	47	100	189	e74	83	60	66	48	37	733	53	39
13	43	79	129	e70	81	56	218	46	31	143	439	37
14	44	65	138	e60	77	54	165	44	32	324	95	34
15	186	63	173	e55	67	54	123	47	47	252	71	33
16	64	61	125	e50	58	57	94	100	67	87	61	36
17	61	60	476	e65	56	60	84	52	39	64	55	35
18	73	58	208	e70	60	65	77	48	47	108	52	2020
19	57	187	149	e65	70	93	71	49	33	102	50	211
20	53	275	126	e60	73	107	65	48	29	65	47	121
21	52	117	112	e55	89	142	64	45	27	54	77	98
22	59	98	108	e55	82	97	61	43	36	49	56	84
23	52	88	105	e50	72	78	64	39	40	48	46	73
24	47	84	305	e50	73	73	64	36	28	54	42	67
25	44	104	160	e45	65	75	61	40	27	44	40	62
26	45	80	122	e50	62	72	252	42	47	40	38	59
27	648	74	112	e55	61	70	136	76	28	511	36	56
28	243	199	104	e60	61	63	94	57	25	513	35	318
29	447	196	100	e55	64	59	80	39	46	127	33	478
30	179	109	99	e50	---	57	73	34	28	93	164	163
31	131	---	92	e55	---	69	---	47	---	76	110	---
TOTAL	3220	3046	4574	2196	3554	2286	2654	1731	1221	3725	2308	4583
MEAN	104	102	148	70.8	123	73.7	88.5	55.8	40.7	120	74.5	153
MAX	648	275	643	179	1100	142	252	100	87	733	439	2020
MIN	43	58	68	45	50	54	56	34	25	18	33	33
CFSM	2.73	2.67	3.88	1.86	3.23	1.94	2.33	1.47	1.07	3.16	1.96	4.02
IN.	3.15	2.98	4.48	2.15	3.48	2.24	2.60	1.69	1.20	3.65	2.26	4.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	38.6	51.5	71.4	68.8	75.7	98.2	93.2	72.0	52.3	43.1	30.0	42.1
MAX	117	102	246	223	138	273	213	160	176	154	74.5	153
(WY)	1997	2004	1997	1996	1984	1994	1983	1989	2003	1984	2004	2004
MIN	10.6	10.5	14.7	25.4	21.4	34.5	24.9	35.0	18.5	10.2	11.3	13.4
(WY)	2002	2002	1999	2002	2002	1985	1985	1995	1999	1999	1995	1986

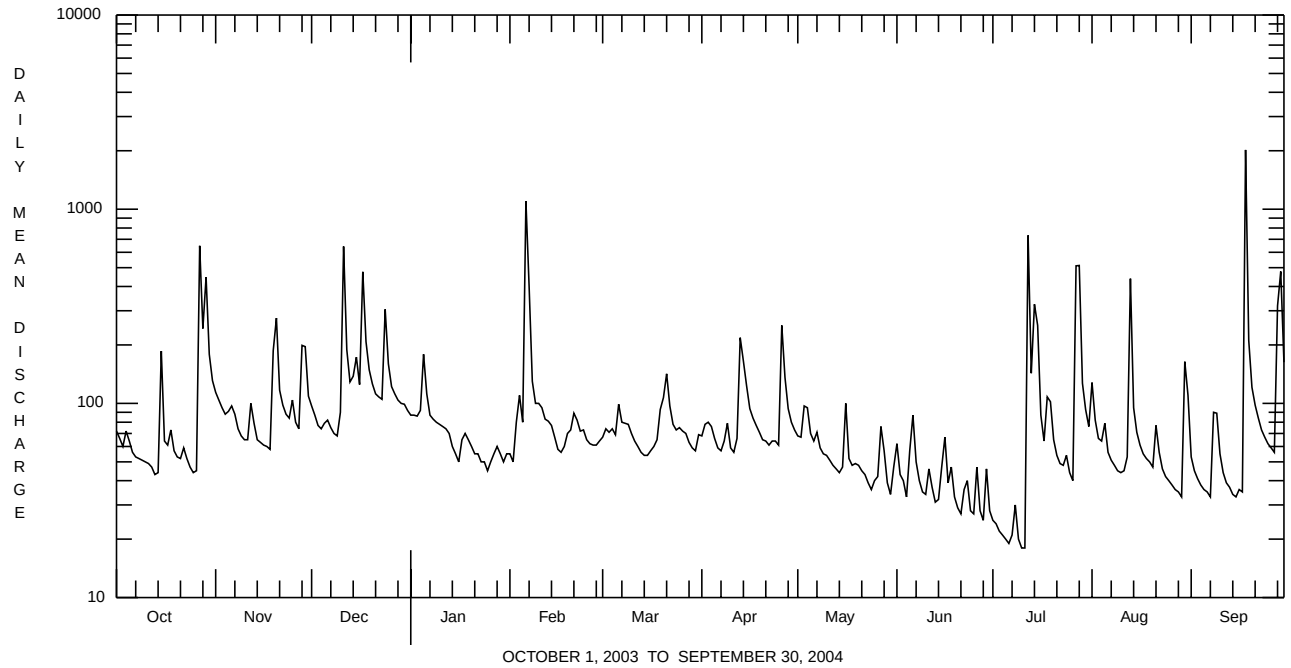
e Estimated.

SCHUYLKILL RIVER BASIN

01472198 PERKIOMEN CREEK AT EAST GREENVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	37149		35098			
ANNUAL MEAN	102		95.9		61.3	
HIGHEST ANNUAL MEAN					101	1984
LOWEST ANNUAL MEAN					31.3	2002
HIGHEST DAILY MEAN	1200	Jun 21	2020	Sep 18	2800	Jan 19 1996
LOWEST DAILY MEAN	14	Feb 17	18	Jul 10,11	4.2	Aug 21 1985
ANNUAL SEVEN-DAY MINIMUM	23	Aug 24	21	Jul 5	4.4	Aug 18 1985
MAXIMUM PEAK FLOW			**a**5720	Sep 18	**a**6740	Jun 25 1984
MAXIMUM PEAK STAGE			7.07	Sep 18	7.26	Jun 25 1984
INSTANTANEOUS LOW FLOW			17	Jul 11,12	3.8	Sep 5 1985
ANNUAL RUNOFF (CFSM)	2.68		2.52		1.61	
ANNUAL RUNOFF (INCHES)	36.37		34.36		21.92	
10 PERCENT EXCEEDS	179		142		114	
50 PERCENT EXCEEDS	70		65		38	
90 PERCENT EXCEEDS	35		36		15	

a From rating curve extended above 1,500 ft^3/s on basis of contracted-opening measurement at gage height 6.53 ft and Flood Insurance Study of Montgomery County.



SCHUYLKILL RIVER BASIN

01472199 WEST 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 from bridge on private road off Heffner Road, and 0.5 mi north of Hillegass.

DRAINAGE AREA.--23.0 mi^2.

PERIOD OF RECORD.--October 1981 to current year. Prior to October 1992, published as "*Northwest Branch*".

REVISED RECORDS: WDR PA-01-1: 1982-85, 1987, 1989, 1990, 1993-96 (P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 290.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges and those above 560 ft^3/s, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Feb. 6	----	Unknown	Icejam	July 27	2230	1,320	4.81
June 15	2345	1,210	4.70	Aug. 13	0345	990	4.46
July 12	1700	1,270	4.76	Sept. 18	1200	*2,420	*5.76

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	60	56	47	e27	44	45	40	40	16	106	32
2	48	54	50	46	e27	48	46	39	29	16	60	27
3	45	51	46	45	e50	45	49	54	28	14	50	25
4	49	49	44	49	e90	45	47	56	22	14	46	22
5	47	55	46	104	e45	42	43	41	42	13	61	21
6	41	59	47	63	e800	62	37	38	87	13	42	21
7	39	54	44	e49	e350	48	35	38	39	14	37	19
8	37	45	42	e44	e65	45	37	34	31	19	35	29
9	36	42	41	e38	e55	49	47	31	27	14	32	42
10	36	41	61	e34	e55	44	37	30	24	13	31	30
11	35	40	432	e34	e50	39	34	29	28	12	32	23
12	34	58	111	e33	e45	36	40	27	26	468	42	20
13	34	48	73	e32	e40	33	136	25	20	106	236	19
14	32	41	84	e32	e38	31	96	25	20	179	59	18
15	111	38	108	e31	e36	32	67	25	74	167	45	18
16	41	36	75	e30	e35	33	51	70	204	61	41	20
17	39	36	293	e31	e33	35	47	31	46	48	36	20
18	46	34	120	e35	e32	38	44	28	42	89	33	871
19	36	114	82	e37	36	50	42	29	32	76	32	118
20	33	183	70	e36	41	65	39	29	27	49	30	66
21	32	66	60	e35	51	103	38	26	24	41	49	54
22	32	55	58	e34	48	64	37	25	24	36	40	47
23	32	49	58	e32	43	49	38	22	27	35	30	42
24	27	48	150	e30	42	46	39	20	20	38	27	39
25	28	59	87	e28	37	46	36	19	19	32	26	37
26	30	46	65	e29	35	44	178	25	30	30	25	35
27	360	43	59	e30	35	44	87	79	19	384	24	33
28	141	118	55	e31	36	41	54	33	17	361	22	152
29	254	134	53	e31	40	37	46	26	24	93	21	225
30	98	63	53	e30	---	36	43	23	18	65	50	86
31	70	---	49	e28	---	43	---	27	---	55	75	---
TOTAL	1973	1819	2672	1188	2317	1417	1615	1044	1110	2571	1475	2211
MEAN	63.6	60.6	86.2	38.3	79.9	45.7	53.8	33.7	37.0	82.9	47.6	73.7
MAX	360	183	432	104	800	103	178	79	204	468	236	871
MIN	27	34	41	28	27	31	34	19	17	12	21	18
CFSM	2.77	2.64	3.75	1.67	3.47	1.99	2.34	1.46	1.61	3.61	2.07	3.20
IN.	3.19	2.94	4.32	1.92	3.75	2.29	2.61	1.69	1.80	4.16	2.39	3.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	22.9	32.9	47.2	43.3	47.7	62.3	58.6	46.2	33.4	25.3	17.4	24.2
MAX	66.9	60.6	165	140	93.8	171	146	114	108	99.0	47.6	92.8
(WY)	1997	2004	1984	1996	1984	1994	1983	1989	2003	1984	2004	2003
MIN	7.45	7.47	7.94	15.3	11.9	23.4	16.4	22.9	11.0	5.67	5.65	5.47
(WY)	2002	2002	1999	2002	2002	1985	1985	1995	1999	1999	2002	1983

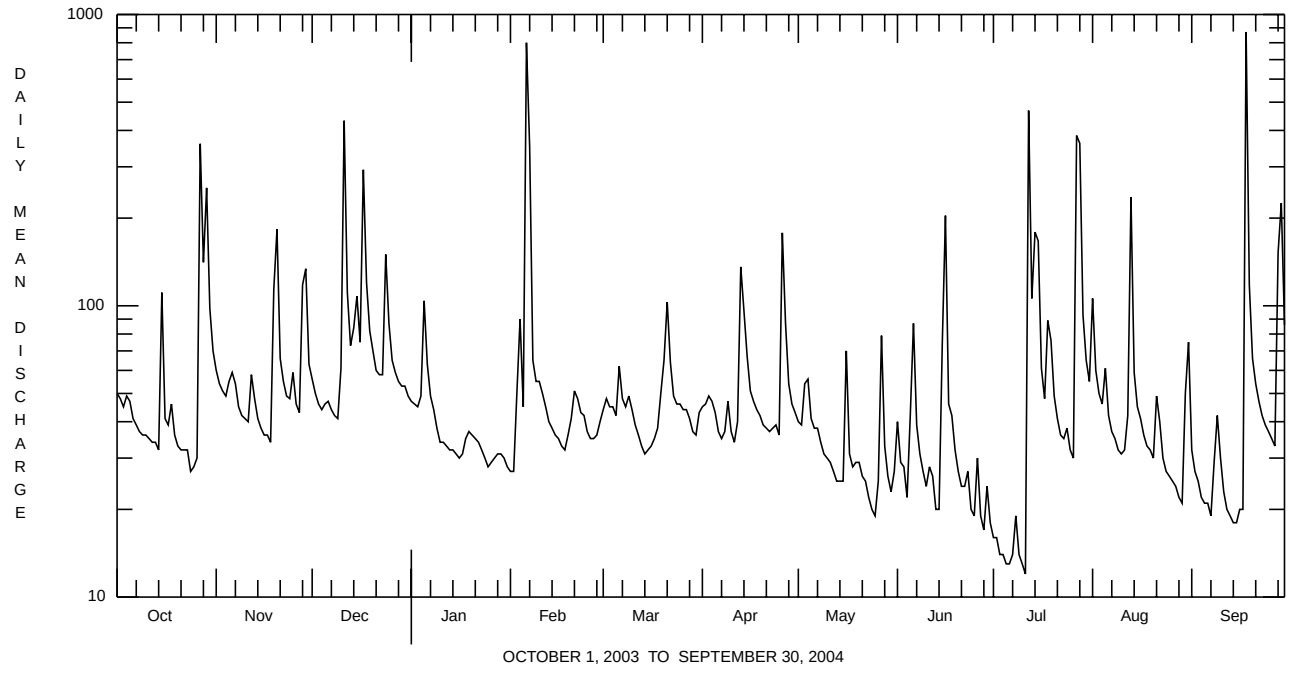
e Estimated.

SCHUYLKILL RIVER BASIN

01472199 WEST BRANCH PERKIOMEN CREEK AT HILLEGASS, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	22746.4		21412			
ANNUAL MEAN	62.3		58.5		38.4	
HIGHEST ANNUAL MEAN					69.5	1984
LOWEST ANNUAL MEAN					19.1	2002
HIGHEST DAILY MEAN	906	Sep 15	871	Sep 18	1760	Jan 19 1996
LOWEST DAILY MEAN	7.4	Feb 17	12	Jul 11	3.0	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	16	Aug 24	14	Jul 5	3.2	Aug 1 1999
MAXIMUM PEAK FLOW			**a**2420	Sep 18	**a**3270	Jan 19 1996
MAXIMUM PEAK STAGE			5.76	Sep 18	6.34	Jan 19 1996
INSTANTANEOUS LOW FLOW			12	Jul 6,7,10-12	**b**2.6	Dec 31 1998
ANNUAL RUNOFF (CFSM)	2.71		2.54		1.67	
ANNUAL RUNOFF (INCHES)	36.79		34.63		22.69	
10 PERCENT EXCEEDS	110		91		74	
50 PERCENT EXCEEDS	45		40		24	
90 PERCENT EXCEEDS	22		24		8.0	

a From rating curve extended above 560 ft^3/s on basis of contracted-opening measurement at gage height 5.51 ft.
b Result of freeze-up.



SCHUYLKILL RIVER BASIN

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 from bridge on Bucks Road, 4.5 mi northeast of Perkasie, and 5.0 mi southeast of Quakertown.

DRAINAGE AREA.--4.05 mi^2, not including distributary.

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

REVISED RECORD.--WDR PA-99-1: 1984, 1985, 1989, 1993, 1994, 1996, 1997 (M).

GAGE.--Water-stage recorder, crest-stage gage and concrete control. Datum of gage is 338.14 ft (revised) above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 10 ft^3/s, which are poor, and those for estimated daily discharges, which are fair. Diversion since August 1989 from Delaware River at Point Pleasant to Bradshaw Reservoir (Geddes Creek Basin). Pumpage from reservoir enters the stream about 0.5 mi upstream of gage. Pumpage into the creek was equivalent to an annual mean discharge of 19.9 ft^3/s. See station 01472618, Distributary from Bradshaw Reservoir, for pumpage data. Peak flows are unregulated. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1645	646	4.90
Nov. 19	1915	444	4.02
Dec. 11	1015	1,010	6.24
Dec. 17	1000	405	3.84
July 27	2015	779	5.39
Sept. 18	1330	964	6.08
Sept. 28	2045	*1,090	*6.49

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	20	18	16	20	17	22	29	37	28	38	34
2	31	18	17	16	e22	19	23	29	31	28	37	33
3	31	17	16	17	23	19	27	41	30	28	36	33
4	32	16	15	19	26	20	24	37	30	28	35	33
5	31	24	16	45	20	19	19	32	30	28	36	33
6	30	24	16	22	122	29	17	31	30	32	35	33
7	30	21	16	17	64	20	16	34	30	34	34	33
8	30	18	15	16	25	19	17	30	30	34	34	41
9	30	16	15	15	20	19	19	29	29	34	34	38
10	29	16	28	14	28	18	16	29	30	34	34	35
11	29	16	257	14	22	17	15	29	31	34	29	34
12	29	25	27	14	18	16	23	28	30	59	35	34
13	29	19	21	14	18	15	96	28	25	40	39	34
14	30	17	39	14	17	15	49	29	33	54	35	34
15	58	16	50	13	15	15	44	29	33	45	34	34
16	30	16	25	13	14	15	21	27	29	36	34	34
17	29	16	101	13	14	16	19	30	30	35	34	34
18	32	15	28	14	14	17	17	29	30	46	34	215
19	29	75	21	14	16	23	15	30	29	56	34	23
20	28	76	18	13	16	46	15	29	29	37	34	18
21	30	24	16	13	19	38	15	29	29	35	33	8.1
22	31	20	16	13	17	20	19	29	29	35	34	3.3
23	27	18	16	13	16	17	28	29	29	34	34	3.3
24	15	18	82	13	16	16	31	29	29	35	33	3.3
25	15	22	27	18	16	16	33	29	28	36	33	3.3
26	15	17	20	19	16	16	83	30	28	35	33	3.2
27	223	17	19	19	15	17	43	40	28	119	33	13
28	36	52	17	19	15	16	34	40	29	82	33	208
29	155	39	17	19	16	15	31	31	29	43	33	98
30	26	20	17	19	---	15	30	30	28	39	33	36
31	22	---	16	e20	---	45	---	33	---	37	47	---
TOTAL	1224	728	1022	518	680	625	861	958	892	1280	1074	1219.5
MEAN	39.5	24.3	33.0	16.7	23.4	20.2	28.7	30.9	29.7	41.3	34.6	40.6
MAX	223	76	257	45	122	46	96	41	37	119	47	215
MIN	15	15	15	13	14	15	15	27	25	28	29	3.2

e Estimated.

SCHUYLKILL RIVER BASIN

01472620 EAST BRANCH PERKIOMEN CREEK NEAR DUBLIN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.0	40.1	32.5	25.5	21.4	27.8	27.0	46.5	53.5	57.2	56.8	55.9
MAX	61.8	60.3	57.9	48.1	30.1	43.2	43.4	66.9	69.6	67.0	65.1	72.5
(WY)	2001	1999	1999	2002	2002	1993	2002	2001	2001	2001	2000	1999
MIN	23.8	12.8	14.5	16.6	12.3	17.2	16.4	30.9	29.7	41.3	34.6	40.7
(WY)	1990	1991	1995	2003	1991	1991	1992	2004	2004	2004	2004	2004

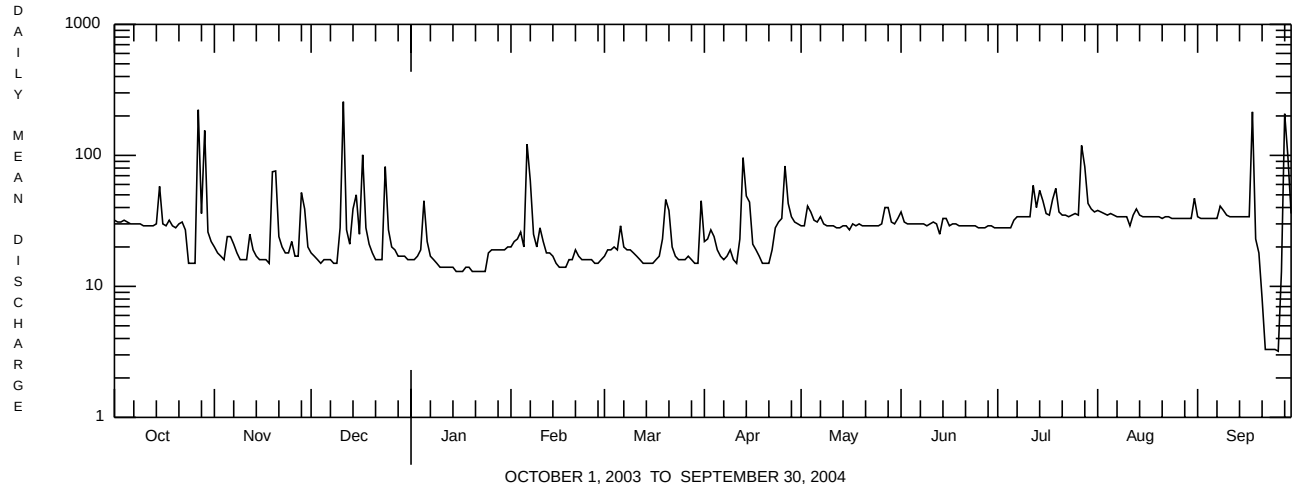
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	13307.51		11081.5			
ANNUAL MEAN	36.5		30.3		41.5	
HIGHEST ANNUAL MEAN					50.3	1999
LOWEST ANNUAL MEAN					30.3	2004
HIGHEST DAILY MEAN	257	Dec 11	257	Dec 11	528	Sep 16 1999
LOWEST DAILY MEAN	**a**0.45	Jan 23-25	**a**3.2	Sep 26	**a**0.00	Sep 24 2002
ANNUAL SEVEN-DAY MINIMUM	2.7	Jan 21	5.4	Sep 21	2.5	Apr 17 1990
MAXIMUM PEAK FLOW			1090	Sep 28	**b**1860	Sep 16 1999
MAXIMUM PEAK STAGE			6.49	Sep 28	8.57	Sep 16 1999
10 PERCENT EXCEEDS	64		40		64	
50 PERCENT EXCEEDS	31		28		39	
90 PERCENT EXCEEDS	14		15		14	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1989, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.19	10.1	8.67	5.60	11.8	8.00	7.61	9.15	3.18	5.25	2.89	6.55
MAX	2.56	14.7	20.9	9.16	19.1	15.7	17.2	21.0	12.5	20.9	15.6	25.7
(WY)	1986	1986	1984	1986	1984	1984	1984	1984	1989	1984	1989	1989
MIN	.14	1.92	1.96	2.61	4.26	2.21	.91	.41	.090	.13	.025	.027
(WY)	1987	1985	1989	1985	1987	1985	1985	1986	1987	1985	1987	1986

SUMMARY STATISTICS	WATER YEARS 1984 - 1989	
ANNUAL MEAN	6.63	
HIGHEST ANNUAL MEAN	11.7	1984
LOWEST ANNUAL MEAN	3.60	1985
HIGHEST DAILY MEAN	418	Sep 20 1989
LOWEST DAILY MEAN	.00	Jul 20 1985
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 14 1985
MAXIMUM PEAK FLOW	**b**1790	Jul 7 1984
MAXIMUM PEAK STAGE	8.41	Jul 7 1984
ANNUAL RUNOFF (CFSM)	1.50	
ANNUAL RUNOFF (INCHES)	20.42	
10 PERCENT EXCEEDS	13	
50 PERCENT EXCEEDS	1.2	
90 PERCENT EXCEEDS	.06	

a Result of no pumpage from the Delaware River diversion.
b From rating curve extended above 1,300 ft^3/s.



SCHUYLKILL RIVER BASIN

01472810 EAST BRANCH PERKIOMEN CREEK NEAR SCHWENKSVILLE, PA

LOCATION.--Lat 40°15'31", long 75°25'45", Montgomery County, Hydrologic Unit 02040203, on left bank 600 ft upstream from Bergey's Mill bridge, and 2.0 mi east of Schwenksville.

DRAINAGE AREA.--58.7 mi^2, not including distributary.

PERIOD OF RECORD.--January 1991 to current year.

REVISED RECORD.--WDR PA-96-1: 1993-95(P). WDR PA-99-1: 1996, 1997 (M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion since August 1989 from Delaware River at Point Pleasant to Bradshaw Reservoir (Geddes Creek Basin). Pumpage from reservoir enters stream about 19 mi upstream of gage. Pumpage into the creek was equivalent to an annual mean discharge of 26.5 ft^3/s. See station 01472618, Distributary from Bradshaw Reservoir, for pumpage data. Peak flows are unregulated. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1730	4,860	8.97	Feb. 6	2100	Unknown	Ice jam
Oct. 29	0930	3,340	7.56	July 12	1900	2,510	6.64
Nov. 20	0130	3,080	7.30	July 27	2100	3,650	7.87
Dec. 11	1130	3,470	7.69	Sept. 18	0830	6,590	10.35
Dec. 17	1500	2,530	6.67	Sept. 29	0300	*6,820	*10.52

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	133	127	59	e50	55	137	74	86	33	138	82
2	76	106	93	54	e50	64	114	69	59	32	105	61
3	70	84	79	54	e70	79	220	122	60	32	77	54
4	70	74	67	56	e100	81	209	246	48	32	69	50
5	72	76	68	313	e80	92	167	106	49	33	81	47
6	64	165	74	208	e1100	180	99	92	54	35	63	46
7	59	137	64	100	e600	136	79	99	48	36	56	46
8	57	87	63	e80	296	100	70	84	45	40	52	227
9	57	72	60	e75	148	115	78	67	41	37	50	230
10	54	68	89	e70	184	103	64	63	40	37	48	101
11	52	64	2190	e70	195	86	55	57	49	36	51	71
12	51	130	361	e65	119	72	60	53	47	830	62	61
13	51	144	173	e60	95	59	809	49	41	292	108	56
14	50	91	213	e55	103	51	679	46	36	314	69	52
15	496	74	683	e50	78	48	479	46	50	394	55	50
16	127	65	240	e50	72	50	177	150	54	116	51	53
17	98	63	1190	e70	87	59	119	67	41	76	49	50
18	129	59	440	e60	51	74	89	57	56	157	46	2970
19	96	543	188	e55	43	210	73	70	43	264	45	446
20	77	1360	128	e50	52	346	63	69	38	111	44	160
21	72	259	94	e45	59	444	55	55	36	76	52	100
22	72	152	82	e45	70	174	49	50	36	65	55	63
23	69	110	75	e40	53	104	55	46	36	59	46	48
24	53	92	636	e45	52	82	60	43	33	58	44	39
25	40	120	332	e50	57	71	58	40	37	54	42	33
26	40	90	152	e55	54	70	330	44	44	50	40	29
27	2640	76	112	e55	51	69	475	179	36	662	40	26
28	834	244	88	e50	47	68	161	93	33	1640	41	1120
29	1890	690	77	e50	50	57	108	62	44	560	40	2510
30	374	179	73	e50	---	51	85	50	34	172	149	279
31	187	---	66	e45	---	261	---	51	---	112	366	---
TOTAL	8162	5607	8377	2184	4066	3511	5276	2399	1354	6445	2234	9160
MEAN	263	187	270	70.5	140	113	176	77.4	45.1	208	72.1	305
MAX	2640	1360	2190	313	1100	444	809	246	86	1640	366	2970
MIN	40	59	60	40	43	48	49	40	33	32	40	26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	123	125	171	146	116	195	127	107	99.1	90.2	92.7	126
MAX	287	201	405	456	183	388	230	230	330	208	159	305
(WY)	1997	1994	1997	1996	2001	1994	1993	1998	2003	2004	1994	2004
MIN	65.1	66.0	52.1	70.5	49.0	113	43.2	60.9	45.1	56.3	52.5	64.8
(WY)	2002	2002	1996	2004	2002	2004	1992	1999	2004	1999	1997	2002

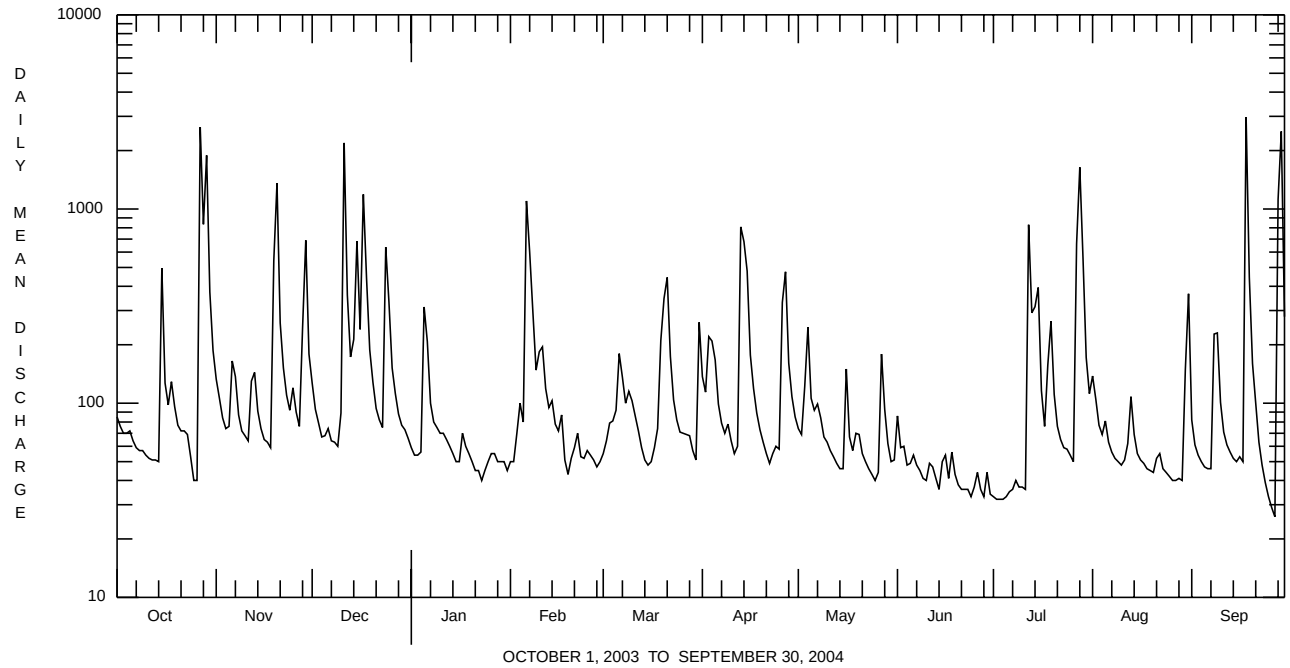
e Estimated.

SCHUYLKILL RIVER BASIN

01472810 EAST BRANCH PERKIOMEN CREEK NEAR SCHWENKSVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004	
ANNUAL TOTAL	72113		58775			
ANNUAL MEAN	198		161		128	
HIGHEST ANNUAL MEAN					178	2003
LOWEST ANNUAL MEAN					80.6	1992
HIGHEST DAILY MEAN	2640	Oct 27	2970	Sep 18	6020	Jan 19 1996
LOWEST DAILY MEAN	**e**20	Jan 27	26	Sep 27	3.5	Sep 25 2002**a**
ANNUAL SEVEN-DAY MINIMUM	**b**27	Jan 22	33	Jun 30	11	Sep 19 2002
MAXIMUM PEAK FLOW			**c**6820	Sep 29	**c**12300	Sep 16 1999
MAXIMUM PEAK STAGE			10.52	Sep 29	14.03	Sep 16 1999
10 PERCENT EXCEEDS	446		301		207	
50 PERCENT EXCEEDS	86		69		73	
90 PERCENT EXCEEDS	49		41		48	

a Result of no pumpage from the Delaware River diversion.
b Computed using estimated daily discharges.
c From rating curve extended above 2,840 ft^3/s on basis of contracted-opening measurement of peak flow at gage height 14.03 ft.
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 Lodel Creek, and 2.5 mi north of Collegeville.

DRAINAGE AREA.--279 mi^2.

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), WDR PA-91-1: 1989-90 (adjusted means and monthly runoff).

GAGE.--Water-stage recorder and crest-stage gage. 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 those for estimated daily discharges, which are poor. Some regulation since Dec. 21, 1956 by Green Lane Reservoir (station 01472200) 10.5 mi upstream. Diversion from the Delaware River at Point Pleasant to Bradshaw Reservoir (Geddes Creek Basin) has been pumped from the reservoir to the East Branch Perkiomen Creek since August 1989. See station 01472618, Distributary from Bradshaw Reservoir, for pumpage data. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	331	711	632	376	e230	357	515	376	333	124	1070	447
2	299	562	488	356	e240	412	511	342	245	117	704	276
3	261	477	393	353	e350	477	792	531	220	116	442	222
4	259	421	347	358	e1200	467	740	1050	182	107	353	199
5	297	463	363	1310	e1100	487	701	498	182	104	441	185
6	249	927	414	1010	4830	787	424	413	428	124	327	177
7	223	709	364	529	5070	701	350	378	282	108	265	171
8	214	481	328	e390	1450	513	329	355	211	126	236	663
9	207	374	315	e350	706	597	465	286	178	119	223	891
10	200	336	391	e330	777	503	384	271	161	110	201	424
11	195	319	7270	e310	883	426	337	250	174	104	210	270
12	188	571	1890	e290	574	377	327	229	188	3850	241	221
13	179	628	892	e280	477	306	2590	211	157	2610	2530	200
14	172	399	953	e270	479	268	2310	196	141	1610	738	184
15	1650	314	2340	e260	390	269	1330	192	178	3120	406	172
16	544	292	1060	e260	298	278	688	506	1780	747	318	178
17	371	281	4550	e250	277	328	466	308	389	433	284	181
18	477	266	2200	e280	271	358	451	237	302	628	250	13800
19	375	1610	1010	e270	281	920	398	261	235	1260	241	2800
20	298	5120	754	e260	338	1280	351	253	183	552	231	926
21	273	1140	581	e260	413	1750	290	212	159	359	241	600
22	271	721	506	e250	501	875	265	201	157	283	341	446
23	269	544	487	e250	384	530	288	182	179	249	242	365
24	222	464	2330	e240	363	436	309	166	156	255	204	332
25	193	607	1570	e240	365	400	280	154	142	234	187	328
26	190	461	809	e250	321	398	2020	160	166	207	175	331
27	8850	385	629	e240	306	386	2150	739	151	3250	165	335
28	4170	1010	519	e250	300	375	817	397	130	9520	162	2510
29	6140	2720	470	e240	319	310	536	254	146	1960	155	8980
30	1830	876	460	e230	---	283	434	183	144	796	760	1370
31	953	---	414	e240	---	613	---	177	---	528	1700	---
TOTAL	30350	24189	35729	10782	23493	16467	21848	9968	7679	33710	14043	38184
MEAN	979	806	1153	348	810	531	728	322	256	1087	453	1273
MAX	8850	5120	7270	1310	5070	1750	2590	1050	1780	9520	2530	13800
MIN	172	266	315	230	230	268	265	154	130	104	155	171

e Estimated.

SCHUYLKILL RIVER BASIN

01473000 PERKIOMEN CREEK AT GRATERFORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	231	376	539	548	599	769	626	426	291	224	168	270
MAX	1059	1182	1869	2071	1241	2100	1759	1298	1544	1286	493	1273
(WY)	1997	1973	1997	1979	1971	1994	1983	1989	2003	1984	1971	2004
MIN	28.1	43.8	63.3	75.6	147	186	128	84.0	52.9	41.7	37.4	24.8
(WY)	1958	1958	1966	1981	2002	1985	1985	1965	1965	1965	1957	1957

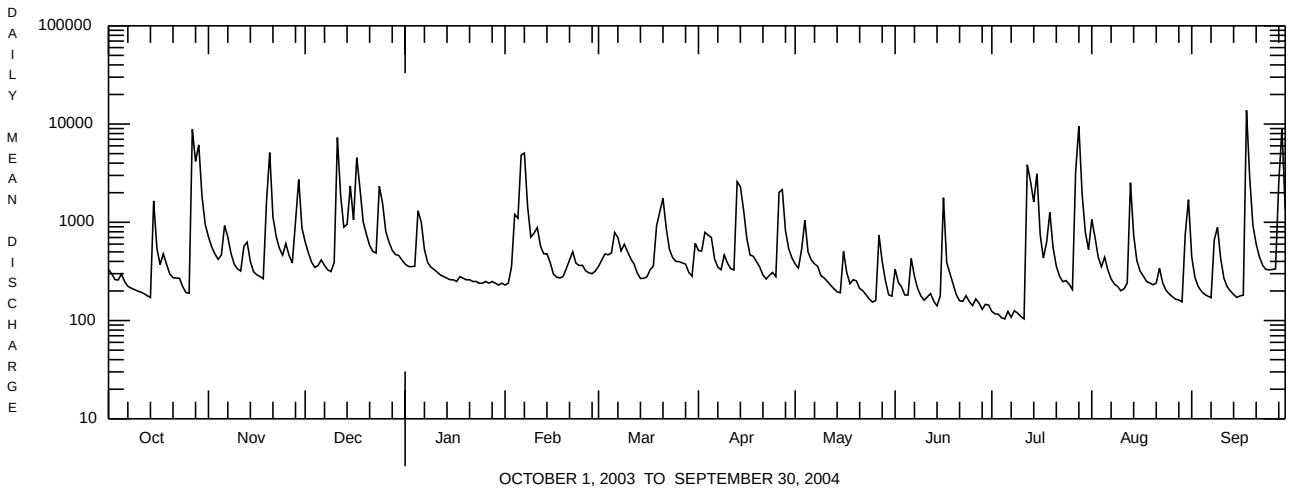
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1957 - 2004	
ANNUAL TOTAL	296265		266442			
ANNUAL MEAN	812		728		421	
HIGHEST ANNUAL MEAN					767	1984
LOWEST ANNUAL MEAN					165	1965
HIGHEST DAILY MEAN	10600	Jun 21	13800	Sep 18	16600	Dec 5 1993
LOWEST DAILY MEAN	**e**100	Feb 17	104	Jul 5,11	13	Sep 1 1957
ANNUAL SEVEN-DAY MINIMUM	**a**113	Feb 13	114	Jul 5	19	Aug 31 1957
MAXIMUM PEAK FLOW			**b**26500	Sep 18	**b**35800	Jun 22 1972
MAXIMUM PEAK STAGE			14.80	Sep 18	17.08	Jun 22 1972
10 PERCENT EXCEEDS	1790		1490		851	
50 PERCENT EXCEEDS	374		350		186	
90 PERCENT EXCEEDS	150		178		62	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1956, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	192	345	445	504	641	771	513	346	213	274	261	177
MAX	856	1119	1077	1336	1458	2193	1335	1395	976	1190	1378	869
(WY)	1956	1933	1928	1915	1918	1936	1952	1948	1946	1919	1955	1934
MIN	21.2	38.0	69.8	66.5	80.2	247	167	71.7	32.7	32.4	21.0	23.8
(WY)	1942	1932	1923	1925	1934	1915	1946	1941	1921	1954	1930	1932

SUMMARY STATISTICS	WATER YEARS 1915 - 1956	
ANNUAL MEAN	389	
HIGHEST ANNUAL MEAN	689	1956
LOWEST ANNUAL MEAN	188	1931
HIGHEST DAILY MEAN	18600	Jul 9 1935
LOWEST DAILY MEAN	3.8	Jun 25 1921
ANNUAL SEVEN-DAY MINIMUM	5.2	Jun 22 1921
MAXIMUM PEAK FLOW	**b**39900	Jul 9 1935
MAXIMUM PEAK STAGE	18.26	Jul 9 1935
INSTANTANEOUS LOW FLOW	4.7	Oct 4 1941
ANNUAL RUNOFF (CFSM)	1.40	
ANNUAL RUNOFF (INCHES)	18.96	
10 PERCENT EXCEEDS	800	
50 PERCENT EXCEEDS	166	
90 PERCENT EXCEEDS	42	

a Computed using estimated daily discharges.
b From rating curve extended above 14,000 ft^3/s on basis of slope-area measurement at 32,000 ft^3/s, gage height 16.23 ft.
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 from Pennsylvania turnpike bridge, 0.9 mi downstream from Little Valley Creek, 2.2 mi upstream from mouth, and 1.0 mi south of Valley Forge.

DRAINAGE AREA.--20.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 108.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those greater than 400 ft^3/s, which are fair. Several measurements of water temperature were made during the year. Satellite telemetry at station. Intermittent pumpage from quarry upstream.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1615	1,120	7.56
Nov. 19	2030	935	7.17
Dec. 11	0700	1,090	7.48
Feb. 6	1400	1,310	8.02
July 12	1945	1,160	7.65
July 28	0045	1,370	8.16
Aug. 1	0945	1,360	8.13
Sept. 18	1530	1,580	8.64
Sept. 28	2245	*2,730	*10.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	43	43	49	31	33	41	41	35	23	319	31
2	26	42	41	48	31	33	53	41	29	22	58	28
3	25	38	39	47	101	32	55	78	29	22	45	27
4	27	36	39	49	63	36	88	53	27	21	42	26
5	25	130	41	67	39	32	49	47	54	21	41	26
6	24	81	42	49	449	55	42	44	51	20	36	26
7	23	60	40	45	144	36	40	51	31	21	35	25
8	23	42	38	44	63	38	40	42	29	22	33	32
9	22	39	38	43	52	37	39	40	28	20	32	34
10	22	38	83	41	56	33	37	50	28	19	31	26
11	22	37	419	40	48	30	37	39	34	19	31	25
12	22	52	82	40	45	29	52	37	28	349	43	24
13	22	38	65	40	43	29	122	36	27	65	45	24
14	30	35	143	39	42	29	72	36	27	65	32	24
15	119	35	111	38	41	29	57	35	31	55	31	24
16	27	34	69	37	38	39	47	37	32	31	30	24
17	26	33	187	36	37	37	44	34	32	30	29	24
18	31	31	87	51	37	38	43	35	33	74	28	566
19	24	191	73	40	37	70	42	55	26	40	28	86
20	23	139	67	36	37	49	40	37	25	31	27	55
21	23	54	62	35	38	44	40	35	24	29	46	47
22	26	50	60	35	36	38	40	34	26	27	30	43
23	23	48	58	34	35	36	54	32	25	37	27	41
24	22	46	120	34	36	35	56	31	24	36	26	40
25	22	47	67	33	35	35	42	30	50	27	26	38
26	23	43	60	34	34	34	100	32	34	26	25	38
27	497	41	57	34	34	35	68	39	25	109	25	37
28	80	90	54	34	33	34	48	31	24	277	24	477
29	279	81	53	33	33	33	44	29	35	51	24	510
30	63	46	52	33	---	33	42	29	24	40	113	127
31	48	---	50	32	---	44	---	31	---	35	82	---
TOTAL	1696	1720	2440	1250	1748	1145	1574	1221	927	1664	1444	2555
MEAN	54.7	57.3	78.7	40.3	60.3	36.9	52.5	39.4	30.9	53.7	46.6	85.2
MAX	497	191	419	67	449	70	122	78	54	349	319	566
MIN	22	31	38	32	31	29	37	29	24	19	24	24
CFSM	2.63	2.76	3.78	1.94	2.90	1.78	2.52	1.89	1.49	2.58	2.24	4.09
IN.	3.03	3.08	4.36	2.24	3.13	2.05	2.82	2.18	1.66	2.98	2.58	4.57

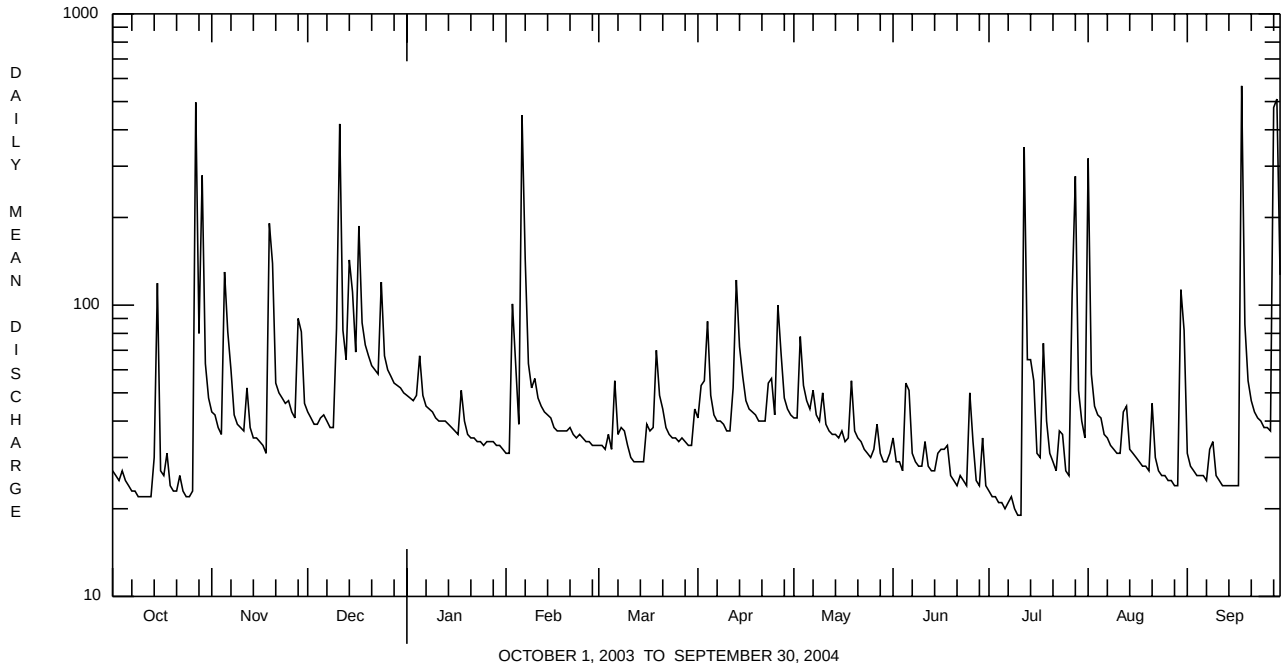
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	24.2	28.6	34.1	33.5	34.3	44.1	43.2	36.7	30.1	27.5	24.6	31.9
MAX	61.8	57.3	103	95.8	60.3	85.9	98.8	77.5	72.9	53.7	46.6	95.5
(WY)	1997	2004	1997	1996	2004	1994	1983	1984	2003	2004	2004	1999
MIN	9.91	10.1	12.7	16.8	11.9	17.9	15.8	19.5	15.1	11.1	10.5	14.5
(WY)	2002	2002	1999	1985	2002	1985	2002	1995	1995	2002	2002	2002

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	17777		19384			
ANNUAL MEAN	48.7		53.0		32.7	
HIGHEST ANNUAL MEAN					53.0	2004
LOWEST ANNUAL MEAN					15.2	2002
HIGHEST DAILY MEAN	514	Jun 20	566	Sep 18	2020	Sep 16 1999
LOWEST DAILY MEAN	**e**18	Feb 16	19	Jul 10,11	7.4	Jul 13 1999
ANNUAL SEVEN-DAY MINIMUM	**a**19	Feb 12	20	Jul 5	7.7	Aug 13 2002
MAXIMUM PEAK FLOW			2730	Sep 28	**b**6280	Sep 16 1999
MAXIMUM PEAK STAGE			10.92	Sep 28	**c**14.75	Sep 16 1999
INSTANTANEOUS LOW FLOW			18	Jul 10-12	6.4	Jul 29 1999
ANNUAL RUNOFF (CFSM)	2.34		2.55		1.57	
ANNUAL RUNOFF (INCHES)	31.79		34.67		21.37	
10 PERCENT EXCEEDS	81		75		52	
50 PERCENT EXCEEDS	33		37		24	
90 PERCENT EXCEEDS	21		24		14	

a Computed using estimated daily discharges.
b From rating curve extended above 3,690 ft^3/s on basis of slope-area measurement of peak flow.
c From outside highwater mark.



SCHUYLKILL RIVER BASIN

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1984, 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 01...	1200	1028	80020	27	10.7	8.0	8.1	660	690	13.6	61.9	29.7	3.25

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
OCT 01...	39.1	230	76.7	7.8	27.0	<.04	2.10	.020	<.02	82	E5

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	10/01/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	46
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	12
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	63
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	14
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	30
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
Caecidotea	2
Lirceus	1
Decapoda (CRAYFISH)	
Cambaridae	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	19
Acentrella	4
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Gomphidae	
Ophiogompus	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	127
Hydropsyche	276
Philopotamidae	
Chimarra	77

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/01/03
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	752
Oulimnius	113
Stenelmis	308
Psephenidae (WATER PENNIES)	
Ectopria	1
Psephenus	13
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	91
Empididae (DANCE FLIES)	
Hemerodromia	6
Simuliidae (BLACK FLIES)	
Simulium	84
Tipulidae (CRANE FLIES)	
Antocha	38
Total Organisms	2080
Total Taxa	24

SCHUYLKILL RIVER BASIN

01473500 SCHUYLKILL RIVER AT NORRISTOWN, PA

LOCATION.--Lat 40°06'40", long 75°20'25", Montgomery County, Hydrologic Unit 02040203, on left bank at Haws Avenue bridge leading to Barbadoes Island, 0.2 miles upstream from Stony Creek, 0.6 miles upstream from Norristown Dam.

DRAINAGE AREA.--1,760 mi^2.

PERIOD OF RECORD.--August 2001 to current year. October 1927 to May 1933 at site 0.6 mi downstream, at different datum. Annual maximums, October 1983 to September 1993 from crest-stage gage located 0.7 mi downstream at different datum.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 51.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, and those greater than 34,000 ft^3/s, which are poor. Several measurements of temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 23,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	2200	24,500	13.15	July 15	0415	23,200	12.01
Dec. 11	1315	26,100	12.39	July 28	0700	43,200	14.52
Feb. 7	0130	29,600	12.82	Sept. 18	2115	*54,300	*16.00
July 12	2345	34,200	13.34	Sept. 29	0400	49,500	15.34

REVISIONS.--The annual maximum reported for water years 2002 and 2003 have been revised as shown in the following table.

Water Year	Date	Discharge ft^3/s	Gage Height (ft)
2002	May 14, 2002	*31,900	*13.08
2003	June 21, 2003	*56,100	*16.25

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3220	6830	5600	3700	e1500	2500	3010	3300	2230	1220	10400	3340
2	2960	5580	5140	3460	e1700	2750	3100	3120	2130	1120	7230	2530
3	2750	4830	4610	3280	e2000	3080	3910	3850	1850	1060	5210	2160
4	2550	4050	4010	3210	e3000	3190	3780	6350	1700	985	4350	2240
5	2660	4690	3650	4890	e3800	3180	3910	4430	1650	932	4240	2170
6	2440	5820	3530	6110	11900	3820	2950	3830	3420	977	3870	1890
7	2220	4500	3270	4780	20600	4300	2580	3400	4000	961	3180	1780
8	2080	3690	2990	4040	9390	3800	2450	3300	3190	1130	2850	2010
9	1980	3200	2820	3750	5350	3950	2670	2960	2630	1020	2650	3360
10	1910	2940	2990	e3100	4840	3660	2640	2850	2270	893	2450	2570
11	1840	2810	19400	e2800	5180	3370	2340	2700	2130	804	2280	2110
12	1750	3200	19300	e2700	4340	3140	2360	2540	2230	8320	2410	1780
13	1650	3460	11400	e2900	3990	2950	6570	2360	1920	19200	10900	1590
14	1610	2910	9380	e2700	3650	2800	8230	2230	1740	7260	15200	1490
15	5190	2580	12400	e2400	3250	2700	8000	2130	2000	15700	9160	1430
16	4400	2420	8120	e2300	2900	2680	5690	2850	4370	6260	7010	1430
17	3190	2360	13400	e2100	2660	2810	4610	2770	2850	4580	5310	1450
18	3050	2280	11600	e2200	2410	2790	4180	2400	2450	4280	3960	26000
19	2710	3860	7610	e2300	2330	4060	3800	2590	2550	6680	3480	31300
20	2370	13300	6170	e2200	2470	4880	3460	2480	2040	4460	3240	12600
21	2210	6620	5270	e2100	2730	5730	3220	2170	1700	3310	3420	8370
22	2150	4890	4700	e2000	3140	4680	3100	2060	1670	2790	9030	6710
23	2100	4140	4380	e1900	3040	4190	3050	1940	2080	2770	6300	5460
24	1960	3770	6920	e1800	2870	3700	3270	1830	1860	4950	4560	4210
25	1830	3830	8960	e1700	3100	3420	2920	1690	1620	4320	3640	3500
26	1810	3900	7290	e1700	2930	3180	5110	1680	2180	3540	3060	3120
27	12900	3320	6070	e1800	2600	3000	9170	2800	1620	4800	2740	2880
28	15100	3660	5220	e1800	2390	2980	5240	2970	1360	29700	2540	9950
29	17200	10000	4660	e1850	2400	2760	4140	2370	1410	11100	2380	33600
30	12600	7010	4200	e1700	---	2610	3570	1940	1380	5800	3420	12400
31	9050	---	3990	e1600	---	3160	---	1820	---	4470	8490	---
TOTAL	131440	136450	219050	84870	122460	105820	123030	85710	66230	165392	158960	195430
MEAN	4240	4548	7066	2738	4223	3414	4101	2765	2208	5335	5128	6514
MAX	17200	13300	19400	6110	20600	5730	9170	6350	4370	29700	15200	33600
MIN	1610	2280	2820	1600	1500	2500	2340	1680	1360	804	2280	1430
CFSM	2.41	2.58	4.01	1.56	2.40	1.94	2.33	1.57	1.25	3.03	2.91	3.70
IN.	2.78	2.88	4.63	1.79	2.59	2.24	2.60	1.81	1.40	3.50	3.36	4.13

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

MEAN	2048	2590	2893	2215	3146	3947	3963	2834	2695	2306	1739	1958
MAX	4449	5866	7066	3772	6811	6980	7141	3873	8885	5335	5128	6514
(WY)	1928	1933	2004	2003	1928	2003	1933	1933	2003	2004	2004	2004
MIN	256	353	508	910	1045	1746	1917	1603	1113	534	351	283
(WY)	1931	1931	1931	1931	2002	1931	1931	1930	1930	2002	1930	1932

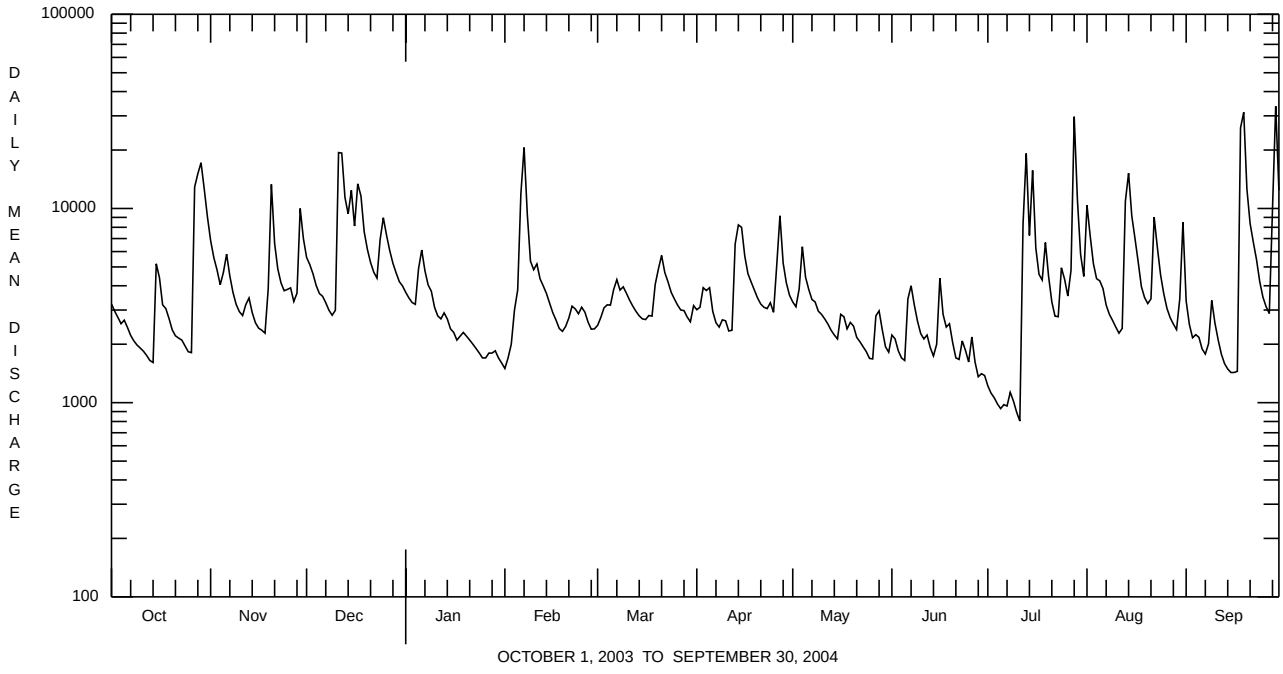
e Estimated.

SCHUYLKILL RIVER BASIN

01473500 SCHUYLKILL RIVER AT NORRISTOWN, PA

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	1737940		1594842			
ANNUAL MEAN	4761		4357		2620	
HIGHEST ANNUAL MEAN					4421	2003
LOWEST ANNUAL MEAN					1259	1931
HIGHEST DAILY MEAN	27500	Jun 21	33600	Sep 29	33600	Sep 29 2004
LOWEST DAILY MEAN	**e**600	Feb 17	804	Jul 11	179	Dec 18 1930
ANNUAL SEVEN-DAY MINIMUM	**a**950	Feb 13	960	Jul 5	232	Oct 3 1930
MAXIMUM PEAK FLOW			**b**54300	Sep 18	**b**56100	Jun 21 2003
MAXIMUM PEAK STAGE			16.00	Sep 18	16.25	Jun 21 2003
ANNUAL RUNOFF (CFSM)	2.71		2.48		1.49	
ANNUAL RUNOFF (INCHES)	36.73		33.71		20.23	
10 PERCENT EXCEEDS	9540		8340		5410	
50 PERCENT EXCEEDS	3670		3110		1740	
90 PERCENT EXCEEDS	1630		1750		422	

a Computed using estimated daily discharges.
b From rating curve extended above 34,000 ft^3/s on basis of runoff comparisons.
e Estimated.



SCHUYLKILL RIVER BASIN

01473900 WISSAHICKON CREEK AT FORT WASHINGTON, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°07'26", long 75°13'13", Montgomery County, Hydrologic Unit 02040203, on left bank at downstream side of bridge on State Highway 73, 0.5 mi downstream from Sandy Run, and 1 mi south of Fort Washington.

DRAINAGE AREA.--40.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1961 to March 1969; June 2000 to current year; Annual maximums, October 1969 to September 1979, at site and datum then in use.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 139.98 ft above National Geodetic Vertical Datum of 1929. From Sept. 1961 to Mar. 1969 gage at present site at datum 140.70 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 16, 1999, reached a stage of 18.05 ft, from floodmarks, discharge about 14,300 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s (revised) and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Nov. 5	2215	3,330	10.12	Feb. 6	1545	3,450	10.30
Nov. 19	2145	2,530	8.87	July 28	0245	3,210	9.96
Dec. 11	1015	3,770	10.72	Aug. 1	1145	4,060	11.09
Dec. 24	1030	2,500	8.81	Sept. 28	2230	*10,600	*16.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	78	75	68	35	42	100	67	46	22	1080	37
2	38	69	66	66	34	45	108	64	34	52	116	32
3	35	63	60	64	218	45	195	149	33	23	272	30
4	37	60	57	65	165	52	157	110	30	21	98	27
5	36	644	63	164	75	47	111	86	32	20	73	26
6	32	313	64	86	1170	120	88	72	32	21	60	28
7	31	155	60	66	423	69	80	63	30	25	54	28
8	31	95	56	60	122	70	77	58	29	28	49	77
9	30	78	53	58	83	75	78	55	28	21	45	53
10	29	70	207	53	113	63	68	54	28	19	43	34
11	28	66	1650	53	88	56	65	51	29	19	43	29
12	27	122	162	55	69	53	94	46	27	536	44	28
13	26	80	108	54	65	48	557	44	25	94	43	27
14	31	66	546	50	65	46	380	42	26	191	38	26
15	363	61	349	49	59	46	416	42	31	202	53	28
16	48	58	127	e46	52	59	137	77	27	43	38	29
17	43	57	462	46	48	70	112	42	28	33	35	27
18	74	52	177	87	49	85	99	40	31	163	34	719
19	43	501	117	64	50	199	e90	72	24	97	34	95
20	38	602	101	49	51	178	e80	49	22	44	33	51
21	36	113	88	45	56	152	72	41	22	35	61	42
22	35	88	82	44	53	89	68	39	27	33	41	36
23	32	77	76	41	48	75	72	37	27	339	32	33
24	30	72	960	40	48	69	95	36	22	157	31	31
25	29	86	191	38	48	66	67	33	63	72	30	30
26	30	65	119	38	45	63	249	37	55	51	29	29
27	1060	61	102	38	43	66	229	45	25	497	29	29
28	207	165	90	40	43	61	97	36	22	939	28	2040
29	1020	262	84	37	42	57	79	32	45	235	27	1780
30	140	87	80	37	---	57	72	30	24	115	85	145
31	93	---	72	35	---	186	---	37	---	82	208	---
TOTAL	3773	4366	6504	1736	3460	2409	4192	1686	924	4229	2886	5626
MEAN	122	146	210	56.0	119	77.7	140	54.4	30.8	136	93.1	188
MAX	1060	644	1650	164	1170	199	557	149	63	939	1080	2040
MIN	26	52	53	35	34	42	65	30	22	19	27	26
CFSM	2.98	3.57	5.14	1.37	2.92	1.90	3.42	1.33	0.75	3.34	2.28	4.60
IN.	3.44	3.98	5.93	1.58	3.15	2.20	3.82	1.54	0.84	3.86	2.63	5.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	31.3	42.6	62.4	59.7	77.3	98.5	68.9	52.3	64.6	37.1	41.0	45.1
MAX	122	146	210	108	119	162	140	77.5	219	136	107	188
(WY)	2004	2004	2004	1964	2004	2003	2004	1968	2001	2004	1967	2004
MIN	7.45	11.7	14.0	17.4	23.8	61.6	30.2	17.2	10.9	9.88	8.55	11.3
(WY)	1964	1966	1966	1966	2002	1965	1963	1963	1963	1962	1964	1968

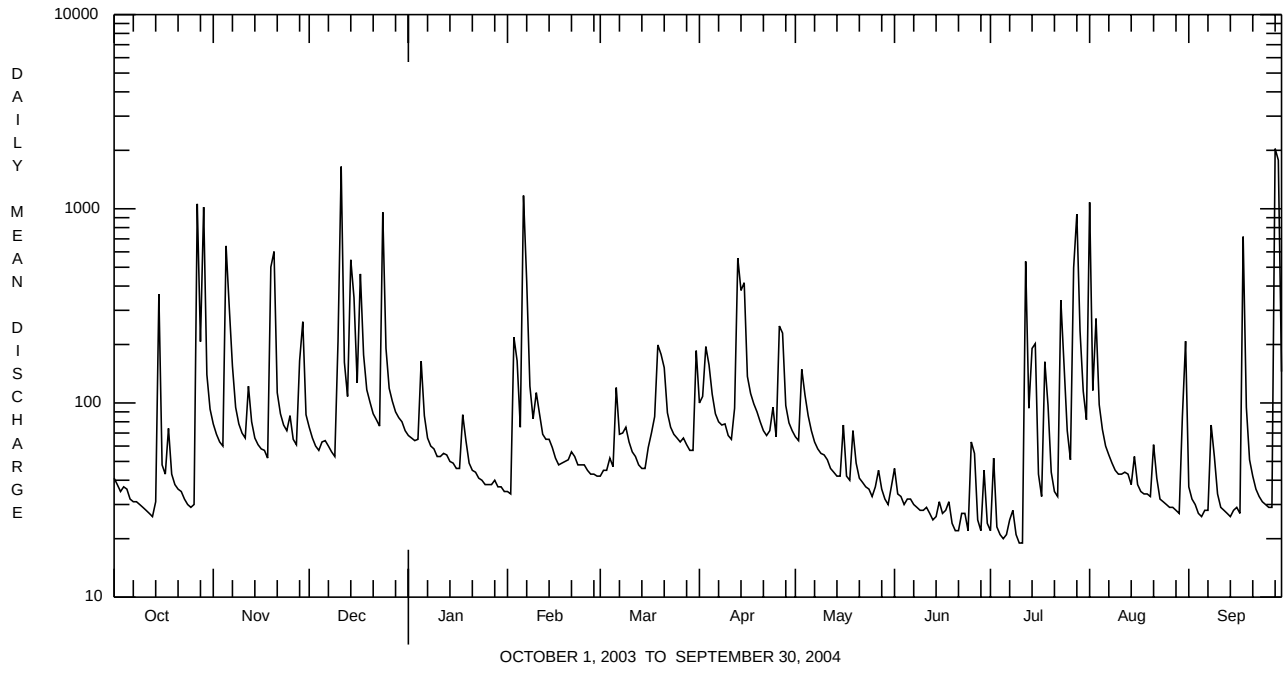
e Estimated.

SCHUYLKILL RIVER BASIN

01473900 WISSAHICKON CREEK AT FORT WASHINGTON, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	42261		41791			
ANNUAL MEAN	116		114		57.8	
HIGHEST ANNUAL MEAN					114	2004
LOWEST ANNUAL MEAN					31.6	1965
HIGHEST DAILY MEAN	1650	Dec 11	2040	Sep 28	2490	Jun 17 2001
LOWEST DAILY MEAN	23	Jul 31,Sep 12	19	Jul 10,11	4.6	Jul 5 1963
ANNUAL SEVEN-DAY MINIMUM	26	Jul 25	22	Jul 5	5.6	Jul 1 1963
MAXIMUM PEAK FLOW			**a**10600	Sep 28	**a**11000	Jun 17 2001
MAXIMUM PEAK STAGE			16.07	Sep 28	**b**16.30	Jun 17 2001
INSTANTANEOUS LOW FLOW			16	Jul 10,11	2.9	Sep 2 1963
ANNUAL RUNOFF (CFSM)	2.84		2.80		1.42	
ANNUAL RUNOFF (INCHES)	38.53		38.10		19.25	
10 PERCENT EXCEEDS	248		196		105	
50 PERCENT EXCEEDS	60		56		29	
90 PERCENT EXCEEDS	29		28		9.5	

a From rating curve extended above 3,670 ft^3/s on basis of slope-area measurement at gage height 16.30 ft.
b From floodmark.



SCHUYLKILL RIVER BASIN

01473900 WISSAHICKON CREEK AT FORT WASHINGTON, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
06...	1320	1028	9813	33	11.5	7.9	8.0	705	714	13.3	180	45.8	17.0
DEC													
04...	1300	1028	9813	58	14.3	7.8	7.9	607	608	5.2	160	39.1	15.0
FEB 2004													
25...	1050	1028	9813	45	16.9	7.9	7.9	777	781	3.8	190	46.1	17.2
APR													
19...	1120	1028	9813	E90	13.8	8.3	8.1	627	620	14.6	170	41.9	15.5
JUN													
28...	1150	1028	9813	23	8.8	7.8	7.7	684	695	19.7	180	42.0	17.3
AUG													
23...	1300	1028	9813	32	10.2	7.9	7.9	595	608	20.2	170	41.3	16.3

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
06...	105	71.1	532	2	<.020	8.00	<.200	1.13	1.33	8.9	5.1	240	10
DEC													
04...	100	50.6	442	<2	.040	6.36	<.200	.82	.915	7.1	4.6	<200	<10
FEB 2004													
25...	98	68.0	496	<2	.080	6.49	.200	.85	.999	7.5	5.3	<200	10
APR													
19...	92	46.8	354	6	.030	3.44	<.040	.47	.569	4.1	4.1	<200	<10
JUN													
28...	98	60.7	470	12	.020	7.91	.090	1.44	1.52	8.6	6.7	<200	20
AUG													
23...	95	49.2	436	2	<.020	6.04	<.200	1.10	1.24	6.7	5.8	<200	10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
06...	100	<1.0	10	<50	20
DEC					
04...	190	<1.0	30	<50	260
FEB 2004					
25...	160	<1.0	50	<50	20
APR					
19...	200	<1.0	40	<50	10
JUN					
28...	230	<1.0	50	<50	20
AUG					
23...	140	<1.0	30	<50	20

01473900 WISSAHICKON CREEK AT FORT WASHINGTON, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/09/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	12
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	7
Annelida	
Hirudinea (LEECHES)	
Arhynchobdellida	
Erpobdellidae	2
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	12
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	15
Hydropsyche	15
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Stenelmis	24
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	41
Simuliidae (BLACK FLIES)	
Simulium	1
Total Organisms	129
Total Taxa	9

SCHUYLKILL RIVER BASIN

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°00'55", long 75°12'26", Philadelphia County, Hydrologic Unit 02040203, on left bank 100 ft upstream from dam at Ridge Avenue, 750 ft upstream from mouth, and 1,000 ft northwest of Gustine Lake in Philadelphia.

DRAINAGE AREA.--64.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1897 to September 1903, January 1905 to July 1906, October 1965 to current year. Prior to October 1965, records furnished by Department of Public Works, City of Philadelphia. 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, crest-stage gage and concrete control. 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.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft^3/s (revised) and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 11	1445	3,760	6.05
Feb. 6	2015	3,570	5.91
July 12	1645	3,010	5.47
July 27	2215	3,150	5.58
July 28	0700	3,070	5.52
Aug. 1	0815	7,700	8.23
Sept. 28	1930	12,200	9.66
Sept. 29	0200	*15,300	*10.46

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	117	102	112	58	68	142	106	88	42	2220	66
2	65	101	89	106	58	69	143	101	59	67	271	58
3	61	91	81	103	313	70	289	221	56	47	386	54
4	64	82	77	105	309	79	241	207	53	42	243	52
5	66	300	83	241	130	74	167	116	56	44	142	51
6	61	780	92	153	1500	178	121	130	58	41	108	53
7	56	245	82	104	777	116	107	99	53	43	96	53
8	55	144	78	93	217	98	104	91	49	54	85	78
9	56	112	74	90	122	108	108	86	47	43	78	109
10	54	99	126	85	138	87	104	91	47	42	72	58
11	55	89	2160	82	147	78	99	79	50	41	72	51
12	56	165	279	84	102	75	125	75	50	1020	74	49
13	55	113	172	83	91	74	725	72	48	286	76	48
14	64	88	500	77	93	71	569	68	46	87	71	43
15	531	87	746	76	87	69	724	69	113	418	104	46
16	74	83	201	68	76	86	210	114	56	71	71	50
17	63	81	600	71	72	104	171	70	51	61	62	49
18	101	76	310	131	72	96	149	64	56	242	58	955
19	67	332	185	111	74	269	135	99	51	187	59	180
20	60	1040	164	75	76	224	120	82	48	72	59	72
21	57	171	140	68	79	233	109	63	47	62	85	61
22	57	127	130	68	81	121	103	61	52	58	95	57
23	55	109	118	65	72	98	125	61	61	300	60	53
24	55	100	1320	63	71	91	166	57	48	323	56	51
25	55	123	371	61	71	88	105	55	56	90	56	51
26	57	91	201	63	67	84	311	57	128	69	54	50
27	1100	86	175	62	66	90	441	64	51	643	53	50
28	431	122	150	65	68	87	150	57	46	1310	51	2450
29	1260	454	137	61	69	78	119	56	66	446	52	4920
30	233	122	131	60	---	74	106	54	48	150	70	279
31	140	---	119	59	---	249	---	61	---	149	365	---
TOTAL	5232	5730	9193	2745	5156	3386	6288	2686	1738	6550	5404	10197
MEAN	169	191	297	88.5	178	109	210	86.6	57.9	211	174	340
MAX	1260	1040	2160	241	1500	269	725	221	128	1310	2220	4920
MIN	54	76	74	59	58	68	99	54	46	41	51	43
CFSM	2.64	2.98	4.63	1.38	2.78	1.71	3.27	1.35	0.91	3.30	2.72	5.31
IN.	3.04	3.33	5.34	1.60	3.00	1.97	3.65	1.56	1.01	3.81	3.14	5.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

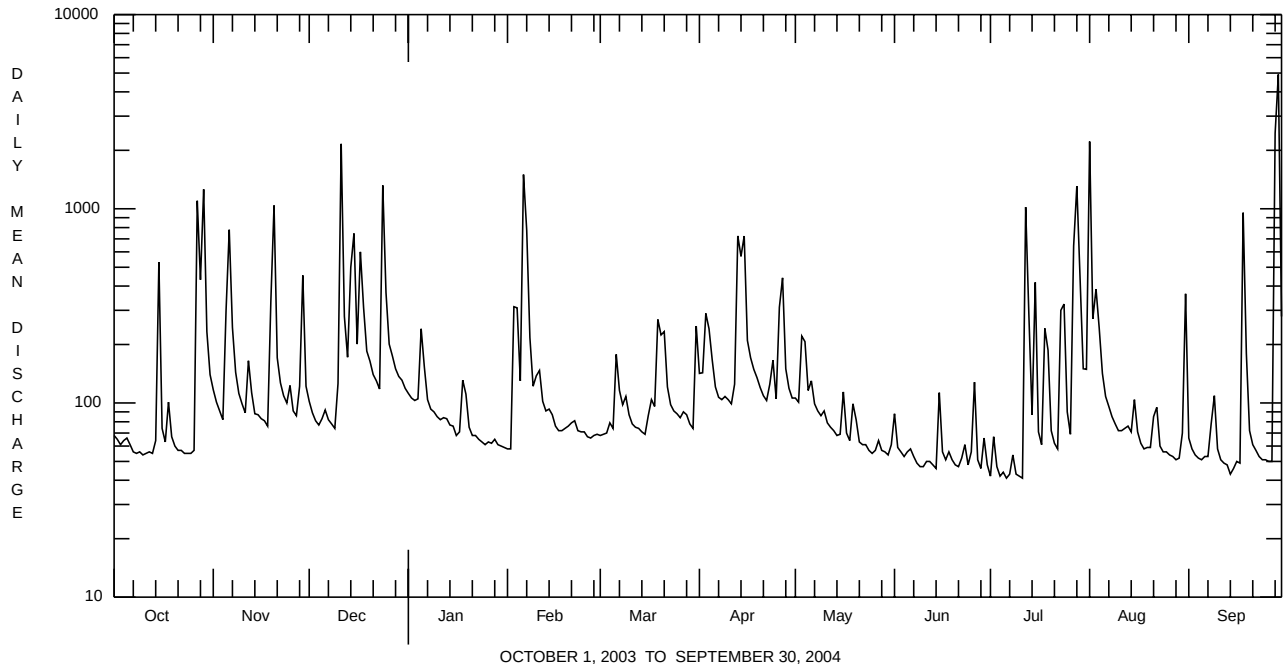
MEAN	70.6	88.3	117	117	124	153	138	115	96.6	83.1	77.5	90.9
MAX	216	265	398	378	266	370	410	229	306	230	174	365
(WY)	1997	1973	1997	1979	1979	1994	1983	1984	2001	1975	2004	1999
MIN	23.1	17.7	22.7	24.3	37.0	40.7	41.3	50.8	32.0	23.7	19.8	23.0
(WY)	1966	1966	1966	1981	1969	1985	1985	1986	1986	1999	1966	1968

SCHUYLKILL RIVER BASIN

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	60120		64305			
ANNUAL MEAN	165		176		106	
HIGHEST ANNUAL MEAN					176	2004
LOWEST ANNUAL MEAN					50.6	1966
HIGHEST DAILY MEAN	2160	Dec 11	4920	Sep 29	5560	Sep 16 1999
LOWEST DAILY MEAN	37	Aug 26	41	Jul 6,11	8.8	Aug 30 1995
ANNUAL SEVEN-DAY MINIMUM	44	Aug 20	44	Jul 5	12	Aug 27 1966
MAXIMUM PEAK FLOW			**a**15300	Sep 29	**a**19800	Sep 16 1999
MAXIMUM PEAK STAGE			10.46	Sep 29	**b**11.50	Sep 16 1999
INSTANTANEOUS LOW FLOW			39	Sep 14	2.0	Jul 18 1905**c**
ANNUAL RUNOFF (CFSM)	2.57		2.75		1.65	
ANNUAL RUNOFF (INCHES)	34.94		37.38		22.45	
10 PERCENT EXCEEDS	362		303		183	
50 PERCENT EXCEEDS	86		82		60	
90 PERCENT EXCEEDS	54		51		28	

a From rating curve extended above 4,000 ft^3/s on basis of slope-area measurement at peak flow.
b From floodmark. Maximum recorded 10.77 ft.
c Also July 19. Minimum observed is outside computed statistical period.



01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
06...	1245	1028	9813	61	11.2	8.2	8.2	673	678	11.7	200	46.0	21.6
DEC													
10...	1130	1028	9813	77	17.4	8.2	8.1	972	985	4.2	210	47.8	20.9
FEB 2004													
12...	1200	1028	9813	100	14.8	7.9	7.9	676	697	3.9	170	40.0	17.1
APR													
13...	1300	1028	9813	493	12.5	7.3	7.3	--	681	8.9	160	34.3	17.9
JUN													
15...	1330	1028	9813	55	9.4	8.0	8.0	742	733	19.8	210	45.5	23.2
AUG													
24...	1230	1028	9813	59	10.1	8.1	8.1	575	587	20.2	180	39.1	20.1

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
06...	125	49.4	462	6	<.020	6.27	<.200	.71	.754	7.0	3.4	<200	<10
DEC													
10...	116	49.8	--	--	<.020	5.54	<.200	.47	.542	6.0	3.1	<200	<10
FEB 2004													
12...	89	34.2	388	<2	<.020	3.31	.320	.27	.326	4.0	3.9	<200	<10
APR													
13...	44	20.9	386	456	.200	1.58	.080	.09	1.10	4.6	6.4	10400	130
JUN													
15...	124	61.0	590	12	.070	6.11	<.200	.77	.823	6.8	4.1	<200	10
AUG													
24...	112	38.0	372	6	.030	4.22	<.200	.54	.595	4.4	3.6	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
06...	110	<1.0	10	<50	30
DEC					
10...	120	<1.0	20	<50	20
FEB 2004					
12...	190	<1.0	30	<50	10
APR					
13...	16600	230	780	<50	390
JUN					
15...	180	1.0	20	<50	120
AUG					
24...	50	<1.0	10	<50	10

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/12/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
Corbicula fluminea	1
Arthropoda	
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	16
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	22
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	4
Hydropsyche	37
Philopotamidae	
Chimarra	9
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	1
Stenelmis	63
Psephenidae (WATER PENNIES)	
Psephenus	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	8
Total Organisms	163
Total Taxa	11

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National Water-Quality Assessment Station)

LOCATION.--Lat 39°58'04", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from bridge on Spring Garden Street in Philadelphia, and 8.7 mi upstream from mouth.

DRAINAGE AREA.--1,893 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 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, and 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, crest-stage gage, 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 upstream from Fairmount Dam at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Lake (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee. Daily mean discharges do not include diversion above station by city of Philadelphia for municipal water supply. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by Philadelphia Water Department.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869 reached a stage of 17.0 ft, discharge, about 135,000 ft^3/s. Flood of Mar. 1, 1902 reached a stage of 14.8 ft, discharge, about 98,000 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 28	0000	32,600	9.85	July 15	0630	23,400	8.97
Oct. 29	1530	26,600	9.29	July 28	0800	44,600	10.84
Nov. 20	0800	22,400	8.87	July 29	0300	21,900	8.81
Dec. 11	1630	29,100	9.53	Aug. 1	0930	21,500	8.77
Dec. 17	2030	22,900	8.92	Aug. 14	0430	20,000	8.62
Feb. 7	0200	30,100	9.62	Sept. 18	2230	51,100	11.33
July 13	0200	33,000	9.89	Sept. 29	0400	*58,500	*11.86

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3740	7850	6620	4220	1550	2320	3050	3650	2250	1270	13700	3730
2	3340	6320	5940	4010	1770	2540	3080	3450	2220	1150	8960	2640
3	3000	5480	5360	3810	2480	2930	4230	4140	1850	1090	5860	2120
4	2780	4660	4700	3680	4650	3160	4080	6860	1650	1020	4790	2160
5	2870	4850	4270	5130	4470	3170	4270	4970	1590	1030	4360	2220
6	2720	7820	4170	7090	11500	3830	3010	4290	3190	986	4080	1890
7	2360	5260	3840	5440	22900	4470	2530	3780	4400	1010	3390	1780
8	2200	4310	3530	4590	11200	3930	2350	3610	3570	1150	2990	1780
9	2090	3750	3270	4200	6040	4120	2490	3290	2870	1060	2770	3460
10	1960	3440	3330	3710	5140	3810	2570	3130	2280	945	2470	2630
11	1870	3220	20300	3200	5610	3480	2230	2900	2070	844	2240	2120
12	1800	3730	21000	3520	4740	3150	2310	2670	2210	7050	2260	1760
13	1700	4130	13400	3390	4160	2890	6870	2410	1960	21800	9110	1560
14	1680	3430	11000	3120	3810	2690	9240	2200	1740	7810	16900	1420
15	5900	3030	14900	2850	3400	2590	9250	2140	2210	16900	10600	1340
16	5060	2770	9780	2390	2990	2560	6250	2920	4470	7160	7880	1340
17	3680	2740	13700	2550	2700	2720	4960	3110	3460	4980	5710	1320
18	3530	2550	14300	3000	2430	2720	4410	2600	2640	4750	4290	21200
19	3150	3430	9060	3150	2220	4020	4120	2790	2780	7270	3610	33900
20	2730	16600	7290	2660	2310	5220	3670	2750	2200	5030	3350	14700
21	2480	7880	6190	2310	2640	5960	3290	2260	1820	3690	3310	9430
22	2340	5750	5530	2250	3050	4950	3110	2120	1710	3040	9640	7280
23	2300	4830	5170	2040	3150	4220	3010	2010	2270	3130	7070	5800
24	2030	4390	8870	1930	2850	3760	3340	1880	1990	5150	4950	4420
25	1880	4350	10800	1820	3020	3400	2860	1650	1660	4890	3880	3640
26	1800	4480	8620	1940	2830	3160	4240	1600	2310	3810	3260	3200
27	13600	3820	7060	1860	2480	2970	10700	2510	1870	4720	2840	2890
28	19900	3860	6060	1980	2250	2870	5910	3320	1470	30700	2620	10700
29	20600	11700	5490	1840	2200	2670	4640	2510	1490	13600	2440	40100
30	15000	8320	4950	1790	---	2400	3940	2000	1440	6400	2540	14300
31	10500	---	4570	1570	---	3260	---	1800	---	4850	10200	---
TOTAL	150590	158750	253070	97040	130540	105940	130010	91320	69640	178285	172070	206830
MEAN	4858	5292	8164	3130	4501	3417	4334	2946	2321	5751	5551	6894
MAX	20600	16600	21000	7090	22900	5960	10700	6860	4470	30700	16900	40100
MIN	1680	2550	3270	1570	1550	2320	2230	1600	1440	844	2240	1320
(†)	199	186	199	211	208	200	182	184	190	197	196	192

† Diversion for municipal supply of City of Philadelphia, equivalent in cubic feet per second.

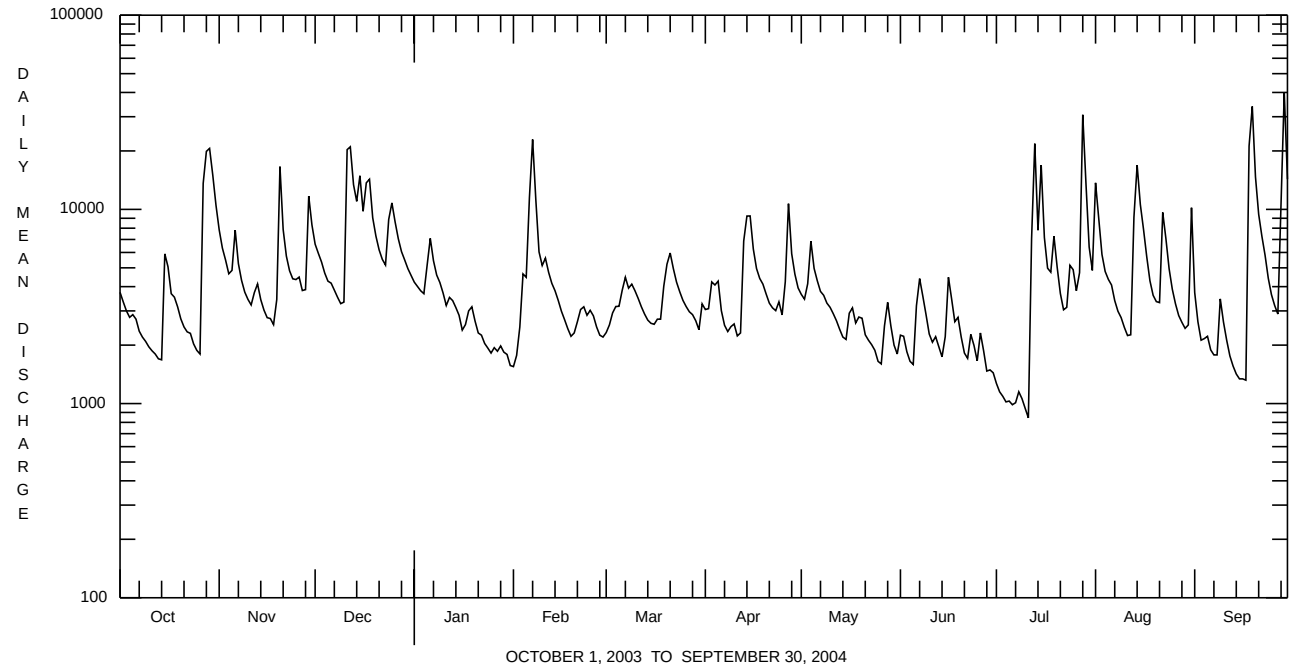
01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1464	2350	3249	3338	3619	4864	4236	3115	2227	1684	1446	1561
MAX	5624	6272	11150	11400	8136	13320	11620	9943	11640	6434	7980	6894
(WY)	1997	1973	1997	1979	1939	1936	1983	1989	1972	1984	1933	2004
MIN	89.4	223	444	340	647	1552	1237	693	261	116	140	117
(WY)	1942	1932	1981	1981	1934	1981	1985	1965	1965	1966	1966	1932

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	1898487		1744085			
ANNUAL MEAN	5201		4765		2758	
HIGHEST ANNUAL MEAN					4791	1984
LOWEST ANNUAL MEAN					1014	1965
HIGHEST DAILY MEAN	41200	Jun 21	40100	Sep 29	93400	Jun 23 1972
LOWEST DAILY MEAN	370	Feb 18	844	Jul 11	0.60	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	880	Feb 13	1000	Jul 5	24	Sep 28 1941
MAXIMUM PEAK FLOW			58500	Sep 29	**a**103000	Jun 23 1972
MAXIMUM PEAK STAGE			11.86	Sep 29	14.65	Jun 23 1972
INSTANTANEOUS LOW FLOW			760	Jul 6,12	0.00	Sep 2 1966**b**
10 PERCENT EXCEEDS	10900		9300		5930	
50 PERCENT EXCEEDS	3840		3320		1700	
90 PERCENT EXCEEDS	1450		1800		446	

a From rating curve extended above 92,000 ft^3/s.
b No flow over dam at times.



01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued
(National Water-Quality Assessment Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998, revised, to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1998 to April 1999, July 1999 to September 1999.
WATER TEMPERATURE: September 1998 to September 2001.

REMARKS.--These samples were collected as part of the Delaware River Basin National Water-Quality Assessment Program (NAWQA). For the definition of the type of quality-control data listed under SAMPLE TYPE refer to "Water-Quality-Control Data" in the "Introduction."

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)
NOV											
19...	1050	Environmental	2,600	756	11.6	102	7.8	367	19.0	10.0	78
DEC											
10...	0930	Environmental	3,240	762	15.6	117	7.6	381	8.0	3.2	67
FEB											
12...	*1039*	*Field Blank*	--	--	--	--	--	--	--	--	--
12...	1040	Environmental	4,960	766	14.6	109	7.5	385	5.0	3.2	59
MAR											
17...	1130	Environmental	2,860	758	13.3	107	8.6	403	2.0	6.2	65
APR											
13...	1100	Environmental	7,180	751	12.6	111	7.5	381	11.0	10.0	63
MAY											
11...	1130	Environmental	3,020	763	8.9	98	7.6	350	30.5	20.0	56
JUN											
15...	1140	Environmental	1,850	761	8.3	94	7.6	391	26.5	21.7	65
JUL											
06...	1050	Environmental	1,090	759	7.9	100	7.7	469	32.0	27.0	80
SEP											
02...	0900	Environmental	2,810	768	7.9	93	7.5	285	22.0	23.4	60

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV										
19...	29.1	43.5	.07	3.13	.023	.124	.166	3.64	7	49
DEC										
10...	39.3	41.4	.09	3.26	.020	.103	.107	3.31	1	8.7
FEB										
12...	*<.20*	*<.2*	*<.04*	*<.06*	*<.008*	*<.006*	*<.004*	*<.03*	*<1*	--
12...	51.7	28.6	.18	3.32	.040	.087	.141	3.90	8	107
MAR										
17...	49.9	35.8	.09	2.96	.043	.093	.169	3.37	3	23
APR										
13...	44.5	33.5	.18	2.70	.080	.175	.27	3.22	24	465
MAY										
11...	34.3	37.7	.08	2.54	.049	.129	.180	2.94	8	65
JUN										
15...	40.6	42.0	.08	3.29	.047	.206	.23	3.51	5	25
JUL										
06...	45.4	60.5	E.04	3.09	.031	.283	.32	3.39	5	15
SEP										
02...	23.2	27.9	.09	2.00	.030	.160	.18	2.59	16	121

Remark codes used in this table:
< -- Less than
E -- Estimated value

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER-COLUMN PESTICIDE ANALYSES

REMARKS.--The following were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, on page 215). Only pesticides detected in one or more surface-water sample are listed in the following table.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	CIAT, water, fltrd, µg/L (04040)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	Atra-zine, water, fltrd, µg/L (39632)	Ben-flur-alin, water, fltrd 0.7µ GF µg/L (82673)	Car-baryl, water, fltrd 0.7µ GF µg/L (82680)	Chlor-pyrifos water, fltrd, µg/L (38933)	DCPA, water fltrd 0.7µ GF µg/L (82682)
NOV											
19...	1050	Environmental	E.009	<.006	<.005	<.005	.030	<.010	<.041	<.005	<.003
FEB											
12...	1040	Environmental	E.033	<.006	<.005	<.005	.036	<.010	E.005	<.005	<.003
MAR											
17...	1130	Environmental	E.024	<.006	<.005	<.005	.029	<.010	<.041	<.005	<.003
APR											
13...	1100	Environmental	E.021	<.006	<.005	<.005	.024	<.010	E.016	<.005	<.003
MAY											
11...	1130	Environmental	E.035	.008	<.005	<.005	.068	<.010	<.041	<.005	<.003
11...	*1131*	*Split Replicate*	*E.026*	*.007*	*<.005*	*<.005*	*.063*	*<.010*	*E.008*	*<.005*	*<.003*
JUN											
15...	*1139*	*Field Blank*	*<.006*	*<.006*	*<.005*	*<.005*	*<.007*	*<.010*	*<.041*	*<.005*	*<.003*
15...	1140	Environmental	E.041	.008	<.005	<.005	.141	<.010	E.009	<.005	<.003
JUL											
06...	1050	Environmental	E.034	<.006	<.005	<.005	.088	<.010	<.041	<.005	<.003
SEP											
02...	0900	Environmental	E.022	<.006	<.005	<.005	.041	<.010	E.058	<.005	<.003

Date	Desulf-inyl fipro-nil, water, fltrd, µg/L (62170)	Diazi-non, water, fltrd, µg/L (39572)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide water, fltrd, µg/L (62167)	Fipro-nil sulfone water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Lindane water, fltrd, µg/L (39341)	Metola-chlor, water, fltrd, µg/L (39415)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Prome-ton, water, fltrd, µg/L (04037)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron water fltrd 0.7µ GF µg/L (82670)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)
NOV													
19...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.013	<.022	.01	.009	E.01	<.009
FEB													
12...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.022	<.022	.01	.020	<.02	<.009
MAR													
17...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.014	<.022	.01	.011	<.02	<.009
APR													
13...	E.004	.006	<.029	<.013	<.024	E.010	<.004	E.012	E.012	.01	.016	E.02	<.009
MAY													
11...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.029	<.022	.01	.028	<.02	<.009
11...	*<.012*	*<.005*	*<.029*	*<.013*	*<.024*	*E.004*	*<.004*	*.029*	*<.022*	*.01*	*.025*	*<.02*	*<.009*
JUN													
15...	*<.012*	*<.005*	*<.029*	*<.013*	*<.024*	*<.016*	*<.004*	*<.013*	*<.022*	*<.01*	*<.005*	*<.02*	*<.009*
15...	E.004	.007	<.029	<.013	E.003	E.011	<.004	.063	<.022	.03	.022	E.01	<.009
JUL													
06...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.031	<.022	.03	.017	<.02	<.009
SEP													
02...	<.012	<.010	<.029	<.013	<.024	<.016	<.004	.021	<.022	.05	.018	<.02	<.009

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, 1.0 mi upstream from mouth, and 2.3 mi north of Hometown. DRAINAGE AREA, 7.19 mi^2. PERIOD OF RECORD, January 1933 to current year. GAGE, nonrecording gage. Datum of gage is sea level (levels by Panther Valley Water Co.).

REMARKS.--Reservoir formed by earthfill dam with ungated concrete spillway at elevation 1,182.00 ft. Storage began 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 by valves on pipe through dam. COOPERATION.--Records provided 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 contents (after first filling), 588 acre-ft, Dec. 8, 1944, elevation, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,400 acre-ft, Dec. 12, elevation, 1,182.4 ft; minimum contents, 7,190 acre-ft, Sept. 16, 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 (station 01470960), 1.0 mi northeast of Blue Marsh, 1.9 mi upstream from Rebers Bridge, and 5.1 mi southeast of Bernville. DRAINAGE AREA, 175 mi^2. PERIOD OF RECORD, April 1979 to current year. GAGE, water-stage recorder (U.S. Army Corps of Engineers datum).

REMARKS.--Lake formed by earthfill dam with ungated concrete 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. Lake is used for flood control, water supply, and recreation. Figures herein represent total contents. Satellite telemetry at station. COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,480 acre-ft, Apr. 17, 1983, elevation, 301.65 ft; minimum contents (after first filling), 13,150 acre-ft, Mar. 18, 1994, elevation, 279.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,900 acre-ft, Aug. 13, elevation, 296.22 ft; minimum contents, 15,700 acre-ft, Mar. 25, elevation, 282.92 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^2. PERIOD OF RECORD, December 1956 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by Aqua Pennsylvania Water Co.).

REMARKS.--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 by valves on pipe through dam. COOPERATION.--Records provided by Aqua Pennsylvania Water Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,030 acre-ft, June 23, 1972, elevation, 290.05 ft; minimum contents (after first filling), 1,270 acre-ft, Aug. 25, 1957, elevation, 251.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,500 acre-ft, July 28, elevation, 287.20 ft; minimum contents, 13,170 acre-ft, Apr. 12, elevation, 285.70 ft.

01472618 DISTRIBUTARY FROM BRADSHAW RESERVOIR.--Lat 40°24'50", long 75°13'13", Bucks County, Hydrologic Unit 02040203, about 0.5 mi upstream from station 01472620, East Branch Perkiomen Creek near Dublin, Pa. PERIOD OF RECORD, October 1994 to current year.

REMARKS.--Water from the Delaware River near Point Pleasant is diverted to Bradshaw Reservoir located in Geddes Run Basin on Tohickon Creek, a tributary to the Delaware River, for consumptive use by the Philadelphia Electric Company. Figures in the table represent the equivalent monthly mean streamflow, in cubic feet per second, diverted from Bradshaw Reservoir to the East Branch Perkiomen Creek. COOPERATION.--Records provided by Philadelphia Electric Company.

Lakes and Reservoirs in Schuylkill River Basin--Continued

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	01469200 Still Creek Reservoir Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	01470870 Blue Marsh Lake Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
Sept. 30	1,181.7	8,210	--	286.38	19,000	--
Oct. 31	1,182.2	8,340	+2.1	285.28	17,900	-17.9
Nov. 30	1,182.2	8,340	0	287.17	19,800	+31.9
Dec. 31	1,182.1	8,320	-0.3	285.18	17,800	-32.5
CAL YR 2003	--	--	0	--	--	+0.3
Jan. 31	1,182.0	8,290	-0.5	285.00	17,600	-3.3
Feb. 29	1,182.1	8,320	+0.5	285.43	18,000	+7.0
Mar. 31	1,182.1	8,320	0	284.03	16,700	-21.1
Apr. 30	1,182.1	8,320	0	290.19	23,100	+108
May 31	1,180.8	7,960	-5.9	289.78	22,600	-8.1
June 30	1,180.8	7,960	0	290.17	23,100	+8.4
July 31	1,180.2	7,800	-2.6	290.12	23,000	-1.6
Aug. 31	1,179.3	7,550	-4.1	290.09	23,000	0
Sept. 30	1,182.1	8,320	+12.9	292.12	25,400	+40.3
WTR YR 2004	--	--	+0.2	--	--	+8.8

Date	01472200 Green Lane Reservoir Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
Sept. 30	286.17	13,600	--
Oct. 31	286.30	13,700	+1.6
Nov. 30	286.25	13,600	-1.7
Dec. 31	286.15	13,600	0
CAL YR 2003	--	--	0
Jan. 31	286.07	13,500	-1.6
Feb. 29	286.11	13,500	0
Mar. 31	286.10	13,500	0
Apr. 30	286.14	13,600	+1.7
May 31	286.04	13,500	-1.6
June 30	286.01	13,400	-1.7
July 31	286.17	13,600	+3.3
Aug. 31	286.45	13,800	+3.3
Sept. 30	286.32	13,700	-1.7
WTR YR 2004	--	--	+0.1

Date	Monthly Mean Discharge (equivalent in ft^3/s
01472618 Distributary from Bradshaw Reservoir	
Oct 2003	23.7
Nov	10.4
Dec	10.4
Jan 2004	10.7
Feb	10.2
Mar	10.5
Apr	15.0
May	28.5
June	29.2
July	31.5
Aug	34.6
Sept	23.6

CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA

LOCATION.--Lat 39°58'35", long 75°26'13", 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 Springton Reservoir, and 2.0 mi west of Newtown Square.

DRAINAGE AREA.--15.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to current year. Occasional low-flow measurements, water years 1932, 1949, 1970-1977, and annual maximum 1977-1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 207.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1600	621	5.69	July 28	0115	849	6.42
Nov. 19	2115	815	6.32	Aug. 1	1145	1,610	8.28
Dec. 11	0800	910	6.60	Sept. 18	1400	1,660	8.38
Feb. 6	1515	1,320	7.65	Sept. 28	2130	*3,610	*11.20

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e18	30	28	31	e17	22	35	28	22	10	353	14
2	e16	28	26	31	19	25	48	28	17	10	41	12
3	15	27	24	31	101	24	69	61	17	9.3	28	11
4	16	25	24	31	71	30	87	47	15	9.2	26	11
5	16	54	27	51	32	26	43	32	23	9.0	29	11
6	15	63	28	36	429	61	31	30	29	8.7	21	11
7	14	48	26	29	147	32	29	29	18	10	19	11
8	14	30	25	27	48	30	27	28	16	12	18	12
9	14	27	25	27	35	33	29	26	15	8.7	17	15
10	14	25	65	23	44	27	25	46	14	8.1	17	12
11	14	25	370	24	37	25	25	28	20	8.0	17	10
12	13	48	51	26	31	23	36	25	16	162	18	9.9
13	13	30	39	26	30	21	123	23	14	44	25	9.6
14	18	26	102	24	30	20	72	22	15	21	18	9.5
15	116	26	83	23	28	20	65	22	21	40	18	9.9
16	19	26	41	22	23	27	36	24	27	15	15	11
17	17	26	125	23	23	30	32	21	24	13	15	11
18	23	25	54	33	24	37	31	21	19	50	15	537
19	17	146	40	28	25	72	29	32	14	31	15	45
20	15	132	37	23	25	52	28	26	13	16	14	23
21	15	37	35	e19	28	42	27	22	12	13	21	18
22	16	31	34	e19	26	29	27	21	12	12	17	15
23	16	28	34	e16	24	25	34	19	12	23	14	14
24	14	28	124	e17	24	24	57	18	11	20	13	14
25	14	30	51	e15	24	25	29	17	11	13	13	13
26	15	27	38	e16	22	24	102	19	17	12	13	13
27	307	26	36	e18	22	24	73	20	11	44	13	13
28	63	59	34	e18	21	22	37	18	10	211	12	624
29	245	76	34	e18	21	22	32	16	17	41	12	357
30	44	31	33	e17	---	22	30	16	11	24	20	49
31	34	---	31	e16	---	36	---	18	---	20	40	---
TOTAL	1200	1240	1724	758	1431	932	1348	803	493	928.0	927	1925.9
MEAN	38.7	41.3	55.6	24.5	49.3	30.1	44.9	25.9	16.4	29.9	29.9	64.2
MAX	307	146	370	51	429	72	123	61	29	211	353	624
MIN	13	25	24	15	17	20	25	16	10	8.0	12	9.5
CFSM	2.45	2.62	3.52	1.55	3.12	1.90	2.84	1.64	1.04	1.89	1.89	4.06
IN.	2.83	2.92	4.06	1.78	3.37	2.19	3.17	1.89	1.16	2.18	2.18	4.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

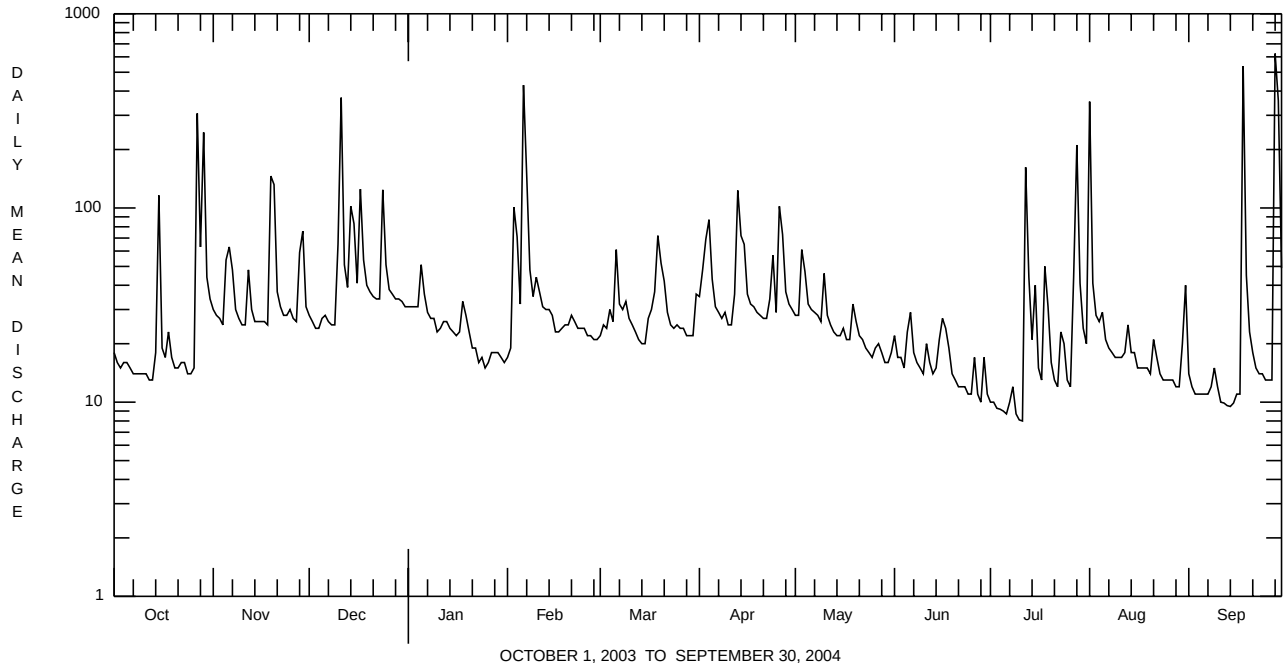
MEAN	15.4	20.9	26.9	26.3	28.5	37.2	32.6	25.3	19.9	16.0	13.1	18.0
MAX	53.4	41.3	92.6	63.0	49.3	95.0	76.8	58.9	55.8	36.2	29.9	74.6
(WY)	1997	2004	1997	1996	2004	1994	1983	1984	2003	1989	2004	1999
MIN	3.87	5.02	4.63	7.45	7.13	11.7	9.45	13.2	5.85	4.02	2.82	4.53
(WY)	2002	2002	1999	1985	2002	1985	1985	1999	1985	1999	2002	1998

e Estimated.

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	13136.5		13709.9			
ANNUAL MEAN	36.0		37.5		23.3	
HIGHEST ANNUAL MEAN					37.5	2004
LOWEST ANNUAL MEAN					9.24	2002
HIGHEST DAILY MEAN	473	Jun 20	624	Sep 28	1610	Sep 16 1999
LOWEST DAILY MEAN	8.5	Feb 16	8.0	Jul 11	0.64	Aug 8 1991
ANNUAL SEVEN-DAY MINIMUM	**a**9.8	Feb 15	9.2	Jul 5	1.2	Aug 16 2002
MAXIMUM PEAK FLOW			**b**3610	Sep 28	**b**4250	Sep 16 1999
MAXIMUM PEAK STAGE			11.20	Sep 28	**c**11.99	Sep 16 1999
ANNUAL RUNOFF (CFSM)	2.28		2.37		1.47	
ANNUAL RUNOFF (INCHES)	30.93		32.28		20.04	
10 PERCENT EXCEEDS	63		55		39	
50 PERCENT EXCEEDS	22		24		15	
90 PERCENT EXCEEDS	13		12		5.7	

a Computed using estimated daily discharges.
b From rating curve extended above 1,300 ft^3/s on basis of slope-area measurement at peak flow at gage height 11.99 ft.
c From outside floodmark.



CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975, 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 06...	1300	1028	80020	15	12.4	7.2	7.9	234	250	11.0	19.3	9.60	2.25

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
OCT 06...	11.8	60	28.8	17.1	13.7	<.04	1.95	E.007	<.02	23	64

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	10/06/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	44
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	47
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	21
Planorbidae	
Gyraulus	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	8
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	39
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	29
Acentrella	1
Ephemerellidae	
Eurylophella	1
Serratella	14
Heptageniidae	
Stenonema	40
Isonychiidae	
Isonychia	55
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Aeshnidae (DAMSELFLIES)	
Boyeria	1
Gomphidae (DRAGONFLIES)	3
Plecoptera (STONEFLIES)	
Capniidae	1
Perlidae	
Acroneuria	8
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	1

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/06/03
Benthic macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	170
Hydropsyche	310
Hydroptilidae	
Leucotrichia	1
Philopotamidae	
Chimarra	78
Wormaldia	3
Psychomyiidae	
Psychomyia	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	45
Oulimnius	26
Stenelmis	63
Psephenidae (WATER PENNIES)	
Psephenus	4
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	167
Empididae (DANCE FLIES)	
Hemerodromia	3
Simuliidae (BLACK FLIES)	
Simulium	130
Tipulidae (CRANE FLIES)	
Antocha	9
Dicranota	2
Total Organisms	1327
Total Taxa	32

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 bridge on U.S. Highway 1 (Baltimore Pike) at Media.

DRAINAGE AREA.--30.5 mi^2.

PERIOD OF RECORD.--October 1986 to September 1995, October 1995 to December 1996 (fragmentary), January 1997 to current year.

REVISED RECORDS.--WDR PA-94-1: 1987, 1991, 1992 adjusted monthly and yearly summaries.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Diversion during entire period of record by Aqua Pennsylvania Water Company (formerly Philadelphia Suburban Water Company). Satellite telemetry at station.

COOPERATION.--Records of diversion provided by Aqua Pennsylvania Water Company.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1915	835	5.77	July 12	1615	1,120	6.35
Oct. 29	1000	761	5.61	July 28	0615	1,100	6.30
Nov. 20	0215	840	5.78	Aug. 1	1645	1,280	6.65
Dec. 11	1045	1,050	6.21	Sept. 18	1815	1,650	7.28
Feb. 6	1915	1,650	7.28	Sept. 29	0115	*5,940	*12.80

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	59	52	61	e32	41	63	58	49	23	625	31
2	35	53	47	62	e33	44	69	57	45	23	101	27
3	33	49	44	60	140	43	145	112	38	22	66	25
4	34	45	44	60	187	52	152	105	33	21	61	24
5	35	58	51	93	72	46	104	66	48	20	70	25
6	32	119	54	74	674	130	64	61	76	18	50	24
7	31	82	47	56	357	73	56	60	42	23	46	23
8	31	53	45	52	110	57	53	58	35	31	44	25
9	30	46	44	52	71	54	57	53	32	20	41	38
10	30	45	80	e44	76	48	48	101	32	19	40	27
11	29	44	647	e46	72	44	46	60	51	17	39	23
12	28	94	117	49	57	41	59	53	40	396	41	21
13	27	55	78	50	56	38	225	50	30	178	70	22
14	31	44	176	e45	54	37	166	49	35	52	43	21
15	224	42	214	e43	51	38	132	48	98	82	43	21
16	36	41	90	e41	45	51	75	51	118	39	39	24
17	33	41	244	44	43	64	67	47	119	33	35	24
18	41	39	128	69	44	62	60	48	59	100	34	758
19	32	143	87	59	45	140	57	60	40	90	33	116
20	31	350	78	46	45	100	55	61	34	44	32	51
21	31	76	71	42	49	77	53	48	31	35	51	41
22	29	61	70	42	46	54	52	44	30	31	46	36
23	27	55	68	e37	43	47	71	42	30	40	33	32
24	25	52	287	39	43	46	120	39	27	52	30	31
25	24	57	122	e34	43	49	58	37	27	34	29	31
26	25	48	83	40	40	46	163	40	49	31	27	29
27	474	46	76	39	41	45	174	40	27	86	27	30
28	217	77	70	39	41	43	77	39	25	479	27	669
29	465	168	67	36	41	40	66	34	40	70	25	1510
30	103	59	67	35	---	41	61	33	27	53	45	122
31	70	---	62	e31	---	72	---	39	---	49	76	---
TOTAL	2326	2201	3410	1520	2651	1763	2648	1693	1367	2211	1969	3881
MEAN	75.0	73.4	110	49.0	91.4	56.9	88.3	54.6	45.6	71.3	63.5	129
MAX	474	350	647	93	674	140	225	112	119	479	625	1510
MIN	24	39	44	31	32	37	46	33	25	17	25	21
(†)	1.4	4.4	4.6	4.1	4.4	4.4	4.7	4.5	4.0	4.0	3.7	3.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	23.4	34.8	44.7	49.7	51.9	72.6	55.0	46.2	40.2	33.3	26.6	38.2
MAX	75.0	73.4	110	82.7	91.4	164	108	87.8	126	89.6	63.5	147
(WY)	2004	2004	2004	1990	2004	1994	1993	1989	2003	1989	2004	1999
MIN	6.24	10.0	8.14	20.3	12.1	30.6	19.4	23.1	11.7	6.42	5.45	8.42
(WY)	2002	2002	1999	2002	2002	2002	2002	1999	1999	2002	2002	1998

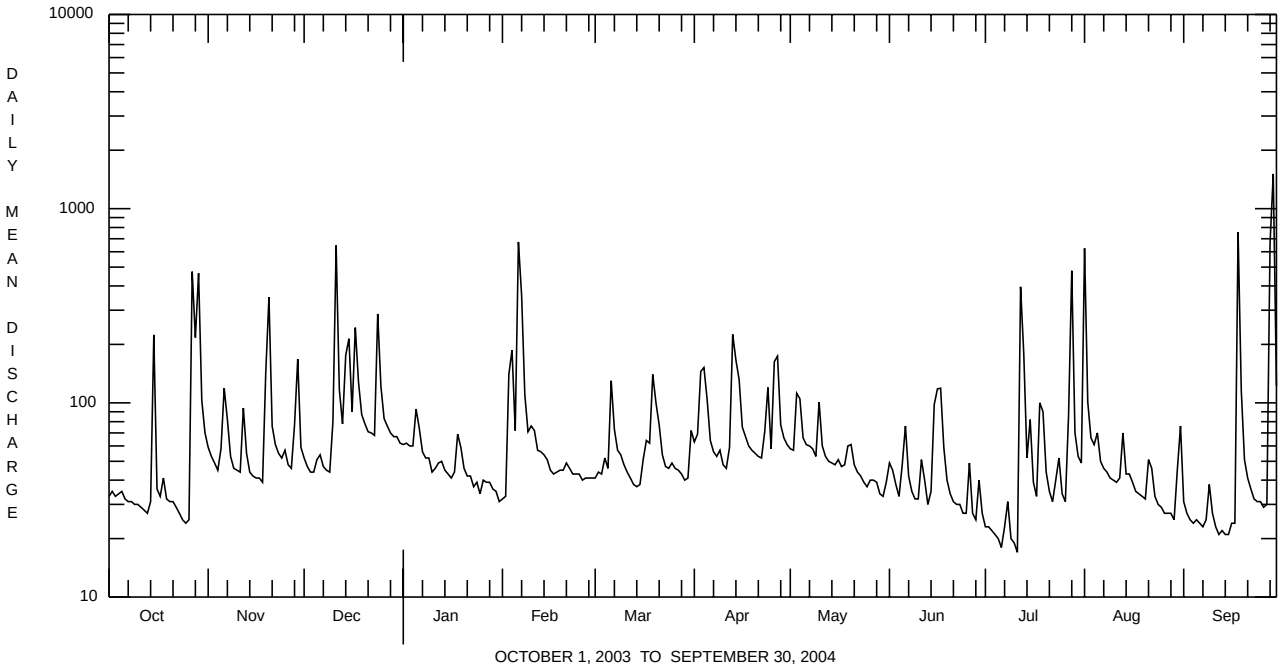
† Diversion for municipal supply, equivalent in cubic feet per second.
e Estimated.

RIDLEY CREEK BASIN

01476480 RIDLEY CREEK AT MEDIA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	26184		27640			
ANNUAL MEAN	71.7		75.5		42.9	
HIGHEST ANNUAL MEAN					75.5	2004
LOWEST ANNUAL MEAN					15.2	2002
HIGHEST DAILY MEAN	693	Jun 20	1510	Sep 29	2860	Sep 16 1999
LOWEST DAILY MEAN	16	Jan 28,Feb 16	17	Jul 11	0.57	Aug 17 2002
ANNUAL SEVEN-DAY MINIMUM	20	Jan 22	21	Jul 5	1.6	Aug 14 2002
MAXIMUM PEAK FLOW			**a**5940	Sep 29	**a**8000	Sep 16 1999
MAXIMUM PEAK STAGE			12.80	Sep 29	**b**15.10	Sep 16 1999
10 PERCENT EXCEEDS	134		119		75	
50 PERCENT EXCEEDS	45		46		28	
90 PERCENT EXCEEDS	25		27		9.7	

a From rating curve extended above 1,600 ft^3/s on basis of slope-area measurement of peak flow at gage height 15.10 ft.
b From floodmark.



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 bridge on Dutton Mill Road, and 3.0 mi northwest of Chester.

DRAINAGE AREA.--61.1 mi^2.

PERIOD OF RECORD.--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 30 ft upstream and at gage, all at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion about 2.6 mi upstream into Ridley Creek basin (see station 01476480 Ridley Creek at Media) by Aqua Pennsylvania Water Company (formerly Philadelphia Suburban Water Company). Diversion for the year was equivalent to a mean daily discharge of 2.7 ft^3/s. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1845	1,720	6.91
Oct. 29	0945	1,410	6.28
Nov. 20	0200	1,420	6.31
Dec. 11	0715	2,070	7.58
Feb. 6	1600	3,190	9.43
July 12	1700	3,410	9.75
July 28	0230	1,740	6.95
Aug. 1	Unknown	2,980	9.10
Sept. 18	1500	2,650	8.58
Sept. 29	0215	*9,450	*16.43

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	110	106	132	e75	92	134	113	92	60	e1200	60
2	83	101	99	131	e90	98	165	111	89	59	e180	53
3	79	97	93	129	369	96	282	236	82	53	105	51
4	78	96	93	129	327	113	301	206	69	52	95	51
5	82	123	108	192	149	104	194	129	115	51	126	50
6	75	215	115	155	1450	350	129	116	202	53	79	50
7	72	161	105	123	e800	165	118	114	93	68	70	49
8	72	106	98	115	e220	130	111	114	77	95	68	54
9	71	95	96	e107	e145	114	121	105	70	54	65	72
10	69	93	186	e90	e155	107	107	281	68	48	63	56
11	67	92	1140	e100	e140	102	103	128	117	47	62	49
12	65	221	245	112	e130	98	136	108	88	1100	111	48
13	65	124	161	111	e115	91	505	100	70	366	147	47
14	65	103	338	105	e110	89	370	94	70	114	76	45
15	472	95	396	e92	e105	90	301	91	288	141	78	46
16	115	92	181	e78	e100	132	157	95	103	82	70	50
17	91	94	446	e100	e98	159	137	90	237	71	66	50
18	114	90	257	163	102	140	127	96	154	234	61	1180
19	89	275	174	137	103	328	121	135	86	209	61	271
20	81	629	156	106	103	192	114	123	73	94	60	84
21	77	148	143	e92	107	141	108	100	68	76	124	69
22	79	116	139	e96	104	113	110	96	66	67	101	62
23	79	108	138	e85	99	106	129	85	68	88	65	57
24	72	105	605	e72	100	102	242	81	65	93	60	55
25	71	121	266	e64	100	106	120	77	64	67	58	53
26	72	100	175	e72	94	102	305	81	105	62	56	52
27	760	95	161	e82	93	102	362	80	68	106	55	51
28	431	155	151	e94	91	98	154	76	60	811	55	1280
29	785	325	147	e84	91	92	128	71	85	129	54	2860
30	197	119	146	e74	---	94	120	68	64	93	65	206
31	127	---	136	e65	---	154	---	80	---	88	118	---
TOTAL	4743	4404	6800	3287	5765	4000	5511	3480	2956	4731	3654	7161
MEAN	153	147	219	106	199	129	184	112	98.5	153	118	239
MAX	785	629	1140	192	1450	350	505	281	288	1100	1200	2860
MIN	65	90	93	64	75	89	103	68	60	47	54	45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

MEAN	56.9	77.8	92.0	104	116	142	128	101	79.8	69.1	62.9	70.8
MAX	234	233	328	326	326	627	413	224	286	254	217	543
(WY)	1980	1951	1997	1979	1979	1994	1980	1983	2003	1975	1955	1971
MIN	13.7	18.2	24.3	23.4	36.0	53.1	41.9	34.8	28.3	15.6	13.7	10.4
(WY)	1942	1932	1932	1981	2002	1981	1963	1942	1966	2002	1966	1932

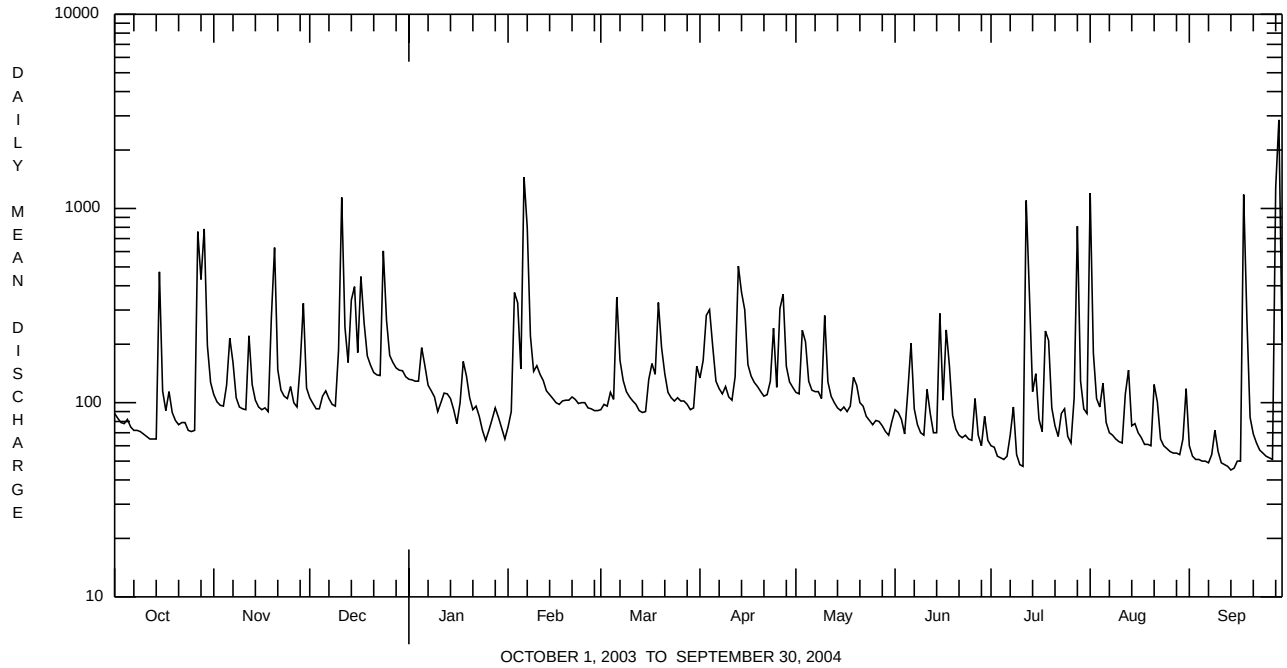
e Estimated.

CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	55607		56492			
ANNUAL MEAN	152		154		91.5	
HIGHEST ANNUAL MEAN					168	1979
LOWEST ANNUAL MEAN					38.0	2002
HIGHEST DAILY MEAN	1880	Jun 20	2860	Sep 29	6510	Sep 13 1971
LOWEST DAILY MEAN	**e**30	Feb 18	45	Sep 14	5.8	Aug 11 2002
ANNUAL SEVEN-DAY MINIMUM	**a**36	Feb 14	48	Sep 11	6.1	Aug 8 2002
MAXIMUM PEAK FLOW			**b**9450	Sep 29	**b**21000	Sep 13 1971
MAXIMUM PEAK STAGE			16.43	Sep 29	**c**24.59	Sep 13 1971
INSTANTANEOUS LOW FLOW			43	Sep 14	0.30	Aug 7 1934
10 PERCENT EXCEEDS	296		260		156	
50 PERCENT EXCEEDS	96		100		61	
90 PERCENT EXCEEDS	55		60		27	

a Computed using estimated daily discharges.
b From rating curve extended above 2,400 ft^3/s on basis of contracted-opening measurement at 9,400 ft^3/s, at gage height 13.57 ft, and slope-area measurement of peak flow at gage height 24.59.
c From floodmark.
e Estimated.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

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 Kimberly-Clark Paper Company at Chester.

DRAINAGE AREA.--10,300 mi^2, approximately.

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 TEMPERATURES: December 1961 to current year.
DISSOLVED OXYGEN: December 1961 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1961. Probes interfaced with a data collection platform since the 1986 water year.

REMARKS.--Specific conductance, pH, and water temperature records rated good. Dissolved oxygen record rated good except for periods Apr. 11-19 and May 24-28, which are poor. Data collection discontinued during winter months. Other interruptions in the record were due to malfunctions of the instrumentation. Prior to April 1981 sampling site located at auxiliary tidal-gaging station at the end of Reynolds Aluminum Company pier, 0.5 mi downstream from Chester Creek in Chester (latitude 39°50'12", longitude 75°22'00").

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, Oct. 16, 1979; minimum, 5.5, Dec. 10, 11, 1969.
WATER TEMPERATURE: Maximum, 33.0°C, July 21, 1977, Aug. 3, 1999; minimum, 0.0°C, many days during winters.
DISSOLVED OXYGEN: Maximum, 16.3 mg/L, Mar. 28, 1993; minimum, 0.0 mg/L, on many days.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	201	186	193	181	158	171	233	208	218	---	---	---
2	191	178	185	175	155	164	---	---	---	---	---	---
3	193	172	181	179	151	163	---	---	---	---	---	---
4	196	179	186	165	151	158	---	---	---	---	---	---
5	194	181	188	164	152	158	---	---	---	---	---	---
6	206	180	193	184	153	168	---	---	---	---	---	---
7	204	185	195	182	162	175	---	---	---	---	---	---
8	206	190	199	184	170	179	---	---	---	---	---	---
9	207	193	201	190	176	183	---	---	---	---	---	---
10	209	197	203	197	178	188	---	---	---	---	---	---
11	212	199	205	203	181	192	---	---	---	---	---	---
12	211	200	204	232	193	208	---	---	---	---	---	---
13	233	201	208	230	201	214	---	---	---	---	---	---
14	217	200	209	227	205	218	---	---	---	---	---	---
15	227	203	212	228	207	218	---	---	---	---	---	---
16	235	208	218	236	207	224	---	---	---	---	---	---
17	246	216	231	235	215	225	---	---	---	---	---	---
18	244	227	236	234	218	226	---	---	---	---	---	---
19	243	230	237	242	224	234	---	---	---	---	---	---
20	243	233	237	242	220	232	---	---	---	---	---	---
21	242	232	237	262	227	246	---	---	---	---	---	---
22	237	231	234	247	211	230	---	---	---	---	---	---
23	245	232	238	222	209	214	---	---	---	---	---	---
24	251	234	244	220	206	212	---	---	---	---	---	---
25	255	237	245	218	206	211	---	---	---	---	---	---
26	257	240	250	219	205	210	---	---	---	---	---	---
27	269	224	248	217	198	208	---	---	---	---	---	---
28	254	228	244	215	198	208	---	---	---	---	---	---
29	253	190	220	217	183	201	---	---	---	---	---	---
30	219	191	205	222	198	210	---	---	---	---	---	---
31	201	177	190	---	---	---	---	---	---	---	---	---
MONTH	269	172	215	262	151	202	233	208	218	---	---	---

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	331	317	323	279	248	256
2	---	---	---	---	---	---	329	316	323	258	248	253
3	---	---	---	---	---	---	325	314	319	260	248	254
4	---	---	---	---	---	---	320	304	313	263	252	256
5	---	---	---	---	---	---	318	291	303	266	251	257
6	---	---	---	---	---	---	310	295	301	266	254	258
7	---	---	---	---	---	---	312	296	304	260	247	255
8	---	---	---	---	---	---	308	287	300	254	242	249
9	---	---	---	---	---	---	303	284	295	252	239	245
10	---	---	---	---	---	---	296	282	290	253	235	241
11	---	---	---	---	---	---	294	275	286	241	230	236
12	---	---	---	---	---	---	296	277	287	---	---	---
13	---	---	---	---	---	---	290	270	281	243	232	237
14	---	---	---	---	---	---	284	262	272	243	232	236
15	---	---	---	---	---	---	282	265	272	241	225	235
16	---	---	---	---	---	---	273	252	262	236	226	231
17	---	---	---	---	---	---	264	248	256	244	226	231
18	---	---	---	---	---	---	262	243	249	238	228	232
19	---	---	---	---	---	---	254	243	247	239	229	232
20	---	---	---	---	---	---	255	246	249	242	230	235
21	---	---	---	---	---	---	261	245	251	242	232	237
22	---	---	---	---	---	---	259	246	251	244	231	237
23	---	---	---	---	---	---	257	248	252	238	230	235
24	---	---	---	---	---	---	261	250	254	245	230	236
25	---	---	---	---	---	---	259	247	254	241	235	237
26	---	---	---	---	---	---	262	250	255	242	235	238
27	---	---	---	---	---	---	304	249	262	247	238	242
28	---	---	---	---	---	---	276	258	267	261	239	244
29	---	---	---	---	---	---	283	263	272	261	246	251
30	---	---	---	329	318	323	277	250	263	261	246	254
31	---	---	---	331	317	323	---	---	---	265	248	257
MONTH	---	---	---	331	317	323	331	243	277	279	225	243

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	266	252	258	306	296	301	236	193	221	227	194	210
2	267	253	258	314	296	304	251	205	227	225	203	214
3	265	254	259	317	304	310	243	230	238	221	210	215
4	267	256	260	341	309	323	244	235	239	221	211	216
5	269	258	264	363	308	331	250	232	241	220	213	216
6	273	260	266	349	308	327	245	235	239	231	214	219
7	276	260	267	357	309	331	268	239	248	225	214	219
8	275	261	268	372	318	338	253	239	246	225	214	219
9	280	264	270	367	318	337	273	243	253	232	216	223
10	280	270	276	362	318	338	259	243	251	241	219	228
11	295	272	282	393	321	346	262	244	255	252	221	236
12	311	281	294	---	---	---	267	247	258	250	230	242
13	308	284	295	342	286	308	272	251	261	248	236	241
14	317	286	299	328	277	302	291	255	268	245	238	242
15	298	282	290	311	259	278	---	---	---	250	239	242
16	288	274	282	281	256	265	---	---	---	250	236	243
17	298	266	284	271	250	263	239	228	232	245	235	241
18	297	276	286	271	249	261	238	227	232	252	223	238
19	303	280	289	270	249	261	237	213	230	265	176	216
20	297	283	290	259	249	255	234	208	224	180	131	153
21	302	287	294	264	255	259	228	200	215	132	109	121
22	301	284	292	265	255	260	213	193	202	127	110	117
23	293	284	288	281	258	263	213	188	197	142	119	128
24	293	284	288	281	261	266	207	193	200	148	121	138
25	296	287	289	271	262	266	219	194	200	151	130	143
26	301	289	295	278	265	270	201	185	194	159	139	151
27	308	293	299	278	265	271	204	180	192	169	148	157
28	311	290	301	273	228	260	193	180	189	166	143	157
29	304	294	298	260	231	246	202	185	190	---	---	---
30	304	295	299	254	224	235	206	188	195	---	---	---
31	---	---	---	239	225	232	209	192	198	---	---	---
MONTH	317	252	283	393	224	287	291	180	225	265	109	199

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	7.0	6.9	6.9	7.0	6.9	6.9	7.3	7.2	7.3	---	---	---
2	6.9	6.9	6.9	6.9	6.8	6.8	---	---	---	---	---	---
3	7.0	6.9	6.9	6.9	6.8	6.8	---	---	---	---	---	---
4	7.0	7.0	7.0	6.9	6.8	6.8	---	---	---	---	---	---
5	7.0	7.0	7.0	7.0	6.8	6.9	---	---	---	---	---	---
6	7.0	7.0	7.0	6.9	6.8	6.9	---	---	---	---	---	---
7	7.0	7.0	7.0	6.9	6.9	6.9	---	---	---	---	---	---
8	7.0	6.9	7.0	7.0	6.9	6.9	---	---	---	---	---	---
9	6.9	6.9	6.9	7.0	7.0	7.0	---	---	---	---	---	---
10	6.9	6.9	6.9	7.0	7.0	7.0	---	---	---	---	---	---
11	6.9	6.9	6.9	7.0	6.9	7.0	---	---	---	---	---	---
12	6.9	6.9	6.9	7.0	6.9	7.0	---	---	---	---	---	---
13	6.9	6.9	6.9	7.1	7.0	7.0	---	---	---	---	---	---
14	6.9	6.8	6.9	7.2	7.1	7.2	---	---	---	---	---	---
15	6.9	6.8	6.9	7.2	7.2	7.2	---	---	---	---	---	---
16	7.0	6.9	6.9	7.2	7.1	7.2	---	---	---	---	---	---
17	7.0	6.9	6.9	7.2	7.1	7.1	---	---	---	---	---	---
18	7.0	6.9	6.9	7.1	7.1	7.1	---	---	---	---	---	---
19	6.9	6.9	6.9	7.2	7.1	7.1	---	---	---	---	---	---
20	7.0	6.9	6.9	7.2	7.1	7.2	---	---	---	---	---	---
21	6.9	6.9	6.9	7.2	7.2	7.2	---	---	---	---	---	---
22	7.0	6.9	6.9	7.2	7.1	7.1	---	---	---	---	---	---
23	7.0	7.0	7.0	7.1	7.1	7.1	---	---	---	---	---	---
24	7.1	7.0	7.0	7.1	7.1	7.1	---	---	---	---	---	---
25	7.0	7.0	7.0	7.1	7.1	7.1	---	---	---	---	---	---
26	7.0	7.0	7.0	7.1	7.1	7.1	---	---	---	---	---	---
27	7.0	7.0	7.0	7.1	7.0	7.1	---	---	---	---	---	---
28	7.1	7.0	7.0	7.1	7.0	7.0	---	---	---	---	---	---
29	7.0	7.0	7.0	7.2	7.1	7.1	---	---	---	---	---	---
30	7.1	7.0	7.0	7.3	7.2	7.2	---	---	---	---	---	---
31	7.0	7.0	7.0	---	---	---	---	---	---	---	---	---
MAX	7.1	7.0	7.0	7.3	7.2	7.2	7.3	7.2	7.3	---	---	---
MIN	6.9	6.8	6.9	6.9	6.8	6.8	7.3	7.2	7.3	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	7.6	7.5	7.6	7.2	7.2	7.2
2	---	---	---	---	---	---	7.6	7.5	7.6	7.2	7.2	7.2
3	---	---	---	---	---	---	7.6	7.5	7.5	7.2	7.2	7.2
4	---	---	---	---	---	---	7.5	7.5	7.5	7.2	7.2	7.2
5	---	---	---	---	---	---	7.6	7.5	7.5	7.2	7.2	7.2
6	---	---	---	---	---	---	7.6	7.5	7.5	7.2	7.2	7.2
7	---	---	---	---	---	---	7.6	7.5	7.5	7.2	7.1	7.2
8	---	---	---	---	---	---	7.5	7.5	7.5	7.2	7.1	7.2
9	---	---	---	---	---	---	7.5	7.4	7.5	7.2	7.1	7.2
10	---	---	---	---	---	---	7.5	7.4	7.4	7.2	7.1	7.1
11	---	---	---	---	---	---	7.4	7.4	7.4	7.1	7.1	7.1
12	---	---	---	---	---	---	7.5	7.4	7.4	---	---	---
13	---	---	---	---	---	---	7.5	7.4	7.5	7.2	7.1	7.2
14	---	---	---	---	---	---	7.4	7.4	7.4	7.2	7.1	7.2
15	---	---	---	---	---	---	7.4	7.4	7.4	7.2	7.1	7.2
16	---	---	---	---	---	---	7.4	7.4	7.4	7.2	7.1	7.1
17	---	---	---	---	---	---	7.4	7.4	7.4	7.1	7.1	7.1
18	---	---	---	---	---	---	7.4	7.3	7.3	7.1	7.0	7.1
19	---	---	---	---	---	---	7.3	7.2	7.2	7.1	7.0	7.0
20	---	---	---	---	---	---	7.2	7.2	7.2	7.0	7.0	7.0
21	---	---	---	---	---	---	7.3	7.2	7.2	7.0	7.0	7.0
22	---	---	---	---	---	---	7.2	7.2	7.2	7.0	6.9	7.0
23	---	---	---	---	---	---	7.3	7.2	7.2	7.0	6.9	7.0
24	---	---	---	---	---	---	7.3	7.2	7.2	7.0	6.9	7.0
25	---	---	---	---	---	---	7.3	7.2	7.2	7.1	7.0	7.0
26	---	---	---	---	---	---	7.3	7.2	7.2	7.1	7.0	7.1
27	---	---	---	---	---	---	7.2	7.2	7.2	7.1	7.0	7.1
28	---	---	---	---	---	---	7.3	7.2	7.2	7.1	7.0	7.1
29	---	---	---	---	---	---	7.3	7.2	7.2	7.1	7.0	7.1
30	---	---	---	7.6	7.6	7.6	7.2	7.2	7.2	7.1	7.0	7.0
31	---	---	---	7.6	7.6	7.6	---	---	---	7.1	7.0	7.0
MAX	---	---	---	7.6	7.6	7.6	7.6	7.5	7.6	7.2	7.2	7.2
MIN	---	---	---	7.6	7.6	7.6	7.2	7.2	7.2	7.0	6.9	7.0

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	7.0	7.1	7.1	7.0	7.0	7.0	6.9	7.0	6.9	6.9	6.9
2	7.1	7.0	7.1	7.1	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9
3	7.1	7.0	7.0	7.0	6.9	7.0	7.0	6.9	7.0	6.9	6.9	6.9
4	7.1	7.0	7.0	7.1	6.9	7.0	7.0	6.9	7.0	6.9	6.8	6.9
5	7.1	7.0	7.1	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.8	6.9
6	7.2	7.1	7.1	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.9	7.0
7	7.1	7.1	7.1	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.9	7.0
8	7.1	7.1	7.1	7.1	7.0	7.1	7.0	7.0	7.0	7.0	6.9	6.9
9	7.1	7.1	7.1	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.9	7.0
10	7.1	6.9	7.0	7.1	7.0	7.0	7.1	7.0	7.0	7.0	7.0	7.0
11	7.0	7.0	7.0	7.1	7.0	7.0	7.1	7.0	7.1	7.0	7.0	7.0
12	7.0	7.0	7.0	---	---	---	7.1	7.0	7.1	7.0	6.9	7.0
13	7.1	7.0	7.0	7.1	7.0	7.0	7.1	7.0	7.1	7.0	6.9	6.9
14	7.1	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.1	7.0	6.9	7.0
15	7.1	7.0	7.0	7.0	7.0	7.0	---	---	---	7.1	7.0	7.0
16	7.1	6.9	7.0	7.0	7.0	7.0	---	---	---	7.0	7.0	7.0
17	7.0	6.9	6.9	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0
18	7.0	6.9	6.9	7.0	7.0	7.0	7.1	7.0	7.0	7.0	7.0	7.0
19	7.0	6.9	6.9	7.0	7.0	7.0	7.1	7.0	7.1	7.1	7.0	7.1
20	7.0	6.9	7.0	7.0	6.9	6.9	7.1	7.0	7.0	7.2	7.0	7.1
21	7.0	6.9	7.0	7.0	6.9	6.9	7.1	7.0	7.0	7.0	6.9	6.9
22	7.1	7.0	7.0	6.9	6.9	6.9	7.0	7.0	7.0	6.9	6.9	6.9
23	7.1	7.0	7.0	7.0	6.9	6.9	7.0	6.9	7.0	7.0	6.9	6.9
24	7.1	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	7.0	6.9	6.9
25	7.1	7.0	7.0	7.0	7.0	7.0	6.9	6.9	6.9	7.0	6.9	7.0
26	7.0	6.9	7.0	7.0	7.0	7.0	6.9	6.9	6.9	7.0	6.9	6.9
27	7.0	7.0	7.0	7.1	7.0	7.0	6.9	6.8	6.8	7.0	6.9	6.9
28	7.1	7.0	7.0	7.1	7.0	7.0	6.8	6.8	6.8	7.0	6.9	6.9
29	7.1	7.0	7.0	7.0	6.9	7.0	6.9	6.8	6.8	---	---	---
30	7.1	7.0	7.0	7.0	6.9	6.9	6.9	6.7	6.8	---	---	---
31	---	---	---	7.0	6.9	6.9	6.9	6.8	6.8	---	---	---
MAX	7.2	7.1	7.1	7.1	7.0	7.1	7.1	7.0	7.1	7.2	7.0	7.1
MIN	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.7	6.8	6.9	6.8	6.9

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	19.0	19.5	13.0	12.5	12.5	9.0	8.5	8.5	---	---	---
2	19.0	18.5	19.0	13.0	12.5	12.5	---	---	---	---	---	---
3	18.5	18.0	18.0	13.0	12.5	12.5	---	---	---	---	---	---
4	18.0	17.5	18.0	13.5	12.5	13.0	---	---	---	---	---	---
5	18.0	17.0	17.5	13.5	13.0	13.5	---	---	---	---	---	---
6	17.5	17.0	17.5	13.5	13.0	13.5	---	---	---	---	---	---
7	17.5	17.0	17.0	14.0	13.5	13.5	---	---	---	---	---	---
8	17.5	17.0	17.5	13.5	13.0	13.5	---	---	---	---	---	---
9	18.0	17.0	17.5	13.0	12.5	13.0	---	---	---	---	---	---
10	18.0	17.0	17.5	12.5	12.5	12.5	---	---	---	---	---	---
11	17.5	17.0	17.5	12.5	12.5	12.5	---	---	---	---	---	---
12	17.5	17.0	17.5	13.0	12.5	12.5	---	---	---	---	---	---
13	17.5	17.0	17.5	13.0	11.5	12.5	---	---	---	---	---	---
14	17.5	17.0	17.5	11.5	11.0	11.0	---	---	---	---	---	---
15	17.5	16.0	17.0	11.0	10.5	11.0	---	---	---	---	---	---
16	16.5	16.0	16.0	11.0	10.5	11.0	---	---	---	---	---	---
17	16.0	15.5	16.0	11.0	10.5	11.0	---	---	---	---	---	---
18	15.5	15.5	15.5	11.0	10.5	11.0	---	---	---	---	---	---
19	15.5	15.0	15.5	12.0	10.5	11.0	---	---	---	---	---	---
20	15.5	15.0	15.5	12.0	10.5	11.0	---	---	---	---	---	---
21	15.5	15.0	15.5	11.0	10.0	10.5	---	---	---	---	---	---
22	15.5	15.0	15.5	11.0	10.0	10.5	---	---	---	---	---	---
23	15.0	14.5	14.5	10.5	10.0	10.5	---	---	---	---	---	---
24	14.5	14.0	14.5	11.0	10.0	10.5	---	---	---	---	---	---
25	14.0	13.5	14.0	11.0	10.5	10.5	---	---	---	---	---	---
26	15.0	14.0	14.5	10.5	10.0	10.5	---	---	---	---	---	---
27	15.5	14.5	14.5	10.5	9.5	10.0	---	---	---	---	---	---
28	14.5	14.0	14.0	10.5	10.0	10.0	---	---	---	---	---	---
29	14.0	13.0	14.0	10.5	9.0	9.5	---	---	---	---	---	---
30	13.0	12.5	13.0	9.0	8.5	8.5	---	---	---	---	---	---
31	13.0	12.5	13.0	---	---	---	---	---	---	---	---	---
MONTH	19.5	12.5	16.2	14.0	8.5	11.5	9.0	8.5	8.5	---	---	---

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	10.0	9.0	9.5	18.0	16.5	17.0
2	---	---	---	---	---	---	10.0	9.5	9.5	18.5	17.0	17.5
3	---	---	---	---	---	---	10.0	9.5	10.0	18.0	17.5	17.5
4	---	---	---	---	---	---	10.0	9.0	9.5	17.5	16.5	17.0
5	---	---	---	---	---	---	10.0	9.0	9.5	17.5	16.5	17.0
6	---	---	---	---	---	---	10.0	9.0	9.5	18.0	17.0	17.0
7	---	---	---	---	---	---	11.0	9.0	10.0	18.0	17.5	17.5
8	---	---	---	---	---	---	11.0	9.5	10.0	18.0	17.0	17.5
9	---	---	---	---	---	---	11.0	10.0	10.5	18.0	17.5	17.5
10	---	---	---	---	---	---	11.0	10.0	10.5	19.0	18.0	18.5
11	---	---	---	---	---	---	11.0	10.5	10.5	19.5	18.5	19.0
12	---	---	---	---	---	---	11.0	10.5	10.5	---	---	---
13	---	---	---	---	---	---	11.0	10.0	10.5	21.0	20.0	20.5
14	---	---	---	---	---	---	11.0	10.5	10.5	21.5	20.5	21.0
15	---	---	---	---	---	---	11.0	10.5	10.5	22.0	20.5	21.0
16	---	---	---	---	---	---	11.5	10.5	11.0	22.0	21.0	21.5
17	---	---	---	---	---	---	12.5	11.0	11.5	22.5	21.5	22.0
18	---	---	---	---	---	---	13.5	11.5	12.5	23.0	21.5	22.0
19	---	---	---	---	---	---	14.5	12.5	13.0	22.5	22.0	22.0
20	---	---	---	---	---	---	14.5	13.0	14.0	22.5	22.0	22.0
21	---	---	---	---	---	---	15.0	13.5	14.5	23.0	22.0	22.5
22	---	---	---	---	---	---	16.0	14.0	15.0	24.0	22.0	23.0
23	---	---	---	---	---	---	16.0	14.5	15.5	24.5	23.0	23.5
24	---	---	---	---	---	---	16.0	15.0	15.5	25.0	23.5	24.0
25	---	---	---	---	---	---	16.0	15.0	15.5	25.0	24.0	24.5
26	---	---	---	---	---	---	15.5	15.0	15.5	25.0	24.0	24.5
27	---	---	---	---	---	---	16.0	15.0	15.5	25.0	24.0	24.5
28	---	---	---	---	---	---	16.0	15.5	15.5	25.0	24.5	24.5
29	---	---	---	---	---	---	16.5	15.5	16.0	24.5	24.0	24.0
30	---	---	---	9.5	9.0	9.0	17.5	16.0	16.5	24.0	23.5	24.0
31	---	---	---	9.0	9.0	9.0	---	---	---	24.0	23.0	23.5
MONTH	---	---	---	9.5	9.0	9.0	17.5	9.0	12.3	25.0	16.5	20.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	23.5	22.5	23.0	26.5	25.0	25.5	26.0	25.0	25.5	25.5	25.0	25.0
2	23.5	23.0	23.5	27.0	25.5	26.0	27.0	25.5	26.0	25.5	25.0	25.0
3	24.0	23.0	23.5	27.0	26.0	26.0	27.0	26.0	26.5	25.5	25.0	25.0
4	23.5	23.0	23.5	27.0	26.0	26.5	27.0	26.5	26.5	25.5	25.0	25.5
5	23.5	22.0	23.0	27.5	26.5	27.0	27.0	26.0	26.5	25.5	25.0	25.0
6	22.5	21.5	22.0	27.5	26.5	27.0	26.0	25.5	25.5	25.0	24.5	24.5
7	23.0	22.0	22.0	27.5	26.5	27.0	25.5	25.0	25.0	25.0	24.5	24.5
8	23.5	22.5	23.0	27.5	27.0	27.0	25.0	24.5	24.5	25.0	24.5	25.0
9	24.0	23.0	23.5	27.5	27.0	27.5	25.5	24.5	25.0	25.5	25.0	25.0
10	24.5	23.5	24.0	27.5	27.0	27.0	25.5	25.0	25.0	25.5	24.5	25.0
11	24.0	23.5	23.5	28.0	27.0	27.5	26.0	25.0	25.5	25.0	24.5	25.0
12	23.5	23.0	23.5	---	---	---	26.0	25.5	25.5	25.0	24.0	24.5
13	23.5	23.0	23.0	26.5	25.5	26.0	26.0	25.5	25.5	25.5	24.5	25.0
14	23.5	23.0	23.0	26.5	25.5	26.0	25.5	25.0	25.0	25.0	24.5	24.5
15	24.5	23.0	23.5	26.0	24.5	25.5	---	---	---	24.5	24.0	24.0
16	24.5	23.5	24.0	25.0	24.5	25.0	---	---	---	24.5	24.0	24.0
17	25.0	24.0	24.5	26.0	24.5	25.0	25.5	24.5	25.0	24.5	24.0	24.5
18	25.5	24.5	24.5	25.5	24.5	25.0	25.5	24.5	25.0	24.5	22.5	24.0
19	25.5	24.5	25.0	25.5	24.5	25.0	25.5	24.5	25.0	22.5	21.0	22.0
20	25.0	24.0	24.5	25.5	24.5	25.0	26.0	25.0	25.0	21.0	18.5	19.0
21	25.0	24.0	24.5	26.0	25.0	25.5	25.5	24.5	25.0	18.5	18.0	18.0
22	25.5	24.5	25.0	26.5	25.5	26.0	25.0	24.0	24.5	18.5	17.5	18.0
23	25.5	24.5	25.0	26.5	26.0	26.0	24.5	24.0	24.5	19.0	18.0	18.5
24	26.0	25.0	25.0	26.0	25.5	26.0	24.5	24.0	24.5	19.5	18.5	19.0
25	25.5	25.0	25.5	26.0	25.5	25.5	24.5	24.0	24.5	19.5	18.5	19.0
26	25.5	25.0	25.5	25.5	25.0	25.5	24.5	24.0	24.5	19.5	19.0	19.5
27	25.5	25.0	25.0	25.5	25.0	25.0	25.5	24.0	24.5	20.0	19.0	19.5
28	25.5	25.0	25.5	25.5	24.0	25.0	26.0	24.5	25.0	20.5	19.5	20.0
29	25.5	25.0	25.0	25.5	24.5	25.0	26.5	25.0	25.5	---	---	---
30	26.0	24.5	25.5	25.5	25.0	25.0	26.0	25.5	25.5	---	---	---
31	---	---	---	26.5	25.0	25.5	25.5	25.0	25.5	---	---	---
MONTH	26.0	21.5	24.1	28.0	24.0	25.9	27.0	24.0	25.2	25.5	17.5	22.8

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	6.7	6.5	6.6	9.1	8.8	8.9	10.5	10.2	10.3	---	---	---
2	6.8	6.5	6.6	9.1	8.7	8.9	---	---	---	---	---	---
3	7.4	6.7	7.0	9.0	8.7	8.8	---	---	---	---	---	---
4	7.6	7.2	7.3	8.8	8.5	8.7	---	---	---	---	---	---
5	7.7	7.3	7.5	8.8	8.4	8.6	---	---	---	---	---	---
6	7.8	7.2	7.5	8.6	8.3	8.5	---	---	---	---	---	---
7	7.7	7.3	7.5	8.4	8.2	8.3	---	---	---	---	---	---
8	7.6	7.2	7.4	8.4	8.2	8.3	---	---	---	---	---	---
9	7.6	7.2	7.4	8.4	8.4	8.4	---	---	---	---	---	---
10	7.6	7.0	7.3	8.4	8.3	8.3	---	---	---	---	---	---
11	7.7	7.2	7.4	8.4	8.2	8.3	---	---	---	---	---	---
12	7.6	7.2	7.4	8.3	8.1	8.2	---	---	---	---	---	---
13	7.7	7.3	7.5	9.1	8.1	8.5	---	---	---	---	---	---
14	7.8	7.3	7.4	9.5	9.0	9.2	---	---	---	---	---	---
15	8.4	7.4	8.0	9.6	9.3	9.4	---	---	---	---	---	---
16	8.4	8.1	8.2	9.4	9.2	9.3	---	---	---	---	---	---
17	8.2	7.8	8.1	9.2	9.0	9.1	---	---	---	---	---	---
18	7.9	7.6	7.8	9.1	9.0	9.0	---	---	---	---	---	---
19	7.9	7.4	7.7	9.5	8.9	9.1	---	---	---	---	---	---
20	7.7	7.6	7.6	9.5	8.9	9.2	---	---	---	---	---	---
21	7.9	7.6	7.8	9.7	9.4	9.5	---	---	---	---	---	---
22	7.9	7.5	7.7	9.5	9.2	9.3	---	---	---	---	---	---
23	8.1	7.5	7.8	9.6	9.3	9.4	---	---	---	---	---	---
24	8.2	7.5	7.9	9.4	9.2	9.3	---	---	---	---	---	---
25	8.1	7.6	7.8	9.3	9.1	9.2	---	---	---	---	---	---
26	8.0	7.6	7.8	9.3	9.0	9.1	---	---	---	---	---	---
27	8.0	7.5	7.8	9.3	9.0	9.1	---	---	---	---	---	---
28	8.2	7.8	8.0	9.3	8.9	9.1	---	---	---	---	---	---
29	8.8	8.0	8.3	10.2	9.2	9.7	---	---	---	---	---	---
30	9.4	8.7	9.1	10.4	10.1	10.3	---	---	---	---	---	---
31	9.1	8.8	9.0	---	---	---	---	---	---	---	---	---
MONTH	9.4	6.5	7.7	10.4	8.1	9.0	10.5	10.2	10.3	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	---	---	---	11.6	11.2	11.4	7.9	7.6	7.7
2	---	---	---	---	---	---	11.5	11.1	11.3	7.8	7.5	7.6
3	---	---	---	---	---	---	11.3	10.9	11.1	7.6	7.3	7.5
4	---	---	---	---	---	---	11.2	10.8	10.9	7.6	7.2	7.3
5	---	---	---	---	---	---	11.2	10.9	11.0	7.5	7.1	7.3
6	---	---	---	---	---	---	11.0	10.7	10.9	7.4	6.9	7.1
7	---	---	---	---	---	---	10.8	10.5	10.7	7.3	6.8	7.0
8	---	---	---	---	---	---	10.8	10.4	10.6	7.7	6.8	7.2
9	---	---	---	---	---	---	10.6	10.3	10.5	7.7	7.0	7.4
10	---	---	---	---	---	---	10.6	10.4	10.5	7.6	7.0	7.4
11	---	---	---	---	---	---	10.7	10.4	10.5	7.4	7.0	7.2
12	---	---	---	---	---	---	10.7	10.3	10.5	---	---	---
13	---	---	---	---	---	---	11.0	10.6	10.8	8.3	7.3	7.8
14	---	---	---	---	---	---	10.7	10.3	10.5	8.5	7.4	7.8
15	---	---	---	---	---	---	10.6	10.3	10.4	8.4	7.4	7.8
16	---	---	---	---	---	---	10.4	10.0	10.2	8.0	7.3	7.6
17	---	---	---	---	---	---	10.0	9.7	9.9	7.4	6.9	7.2
18	---	---	---	---	---	---	9.8	9.1	9.4	7.1	6.6	6.9
19	---	---	---	---	---	---	9.1	8.6	8.8	6.8	6.1	6.4
20	---	---	---	---	---	---	8.7	8.4	8.5	6.2	5.6	5.9
21	---	---	---	---	---	---	8.5	8.2	8.4	6.0	5.2	5.6
22	---	---	---	---	---	---	8.4	8.1	8.3	5.5	4.6	5.1
23	---	---	---	---	---	---	8.4	8.1	8.3	5.4	4.7	5.1
24	---	---	---	---	---	---	8.5	8.1	8.3	5.8	4.7	5.3
25	---	---	---	---	---	---	8.4	8.1	8.3	5.8	5.5	5.7
26	---	---	---	---	---	---	8.3	7.9	8.1	5.8	5.5	5.6
27	---	---	---	---	---	---	8.0	7.7	7.8	5.7	5.4	5.6
28	---	---	---	---	---	---	8.3	7.6	7.8	5.6	4.9	5.3
29	---	---	---	---	---	---	8.2	7.6	7.9	5.5	4.7	5.0
30	---	---	---	11.4	10.8	11.1	8.1	7.8	7.9	5.5	4.6	4.9
31	---	---	---	11.6	11.1	11.4	---	---	---	5.2	4.7	4.9
MONTH	---	---	---	11.6	10.8	11.2	11.6	7.6	9.7	8.5	4.6	6.5

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	5.3	4.7	5.0	5.5	4.7	5.1	5.0	3.8	4.3	5.5	5.2	5.3
2	5.3	4.8	5.0	5.4	4.5	4.9	4.6	3.9	4.2	5.3	5.1	5.2
3	5.1	4.7	4.9	5.2	4.3	4.8	4.4	3.8	4.0	5.2	4.9	5.1
4	5.2	4.6	4.8	5.3	4.3	4.9	4.1	3.8	3.9	5.1	4.7	4.9
5	5.4	4.9	5.1	5.4	4.8	5.2	4.0	3.6	3.8	5.5	4.7	5.0
6	5.7	5.2	5.4	5.3	4.9	5.1	4.1	3.6	3.9	6.2	5.4	5.7
7	5.5	5.2	5.3	5.4	5.0	5.1	4.3	4.0	4.1	5.8	5.4	5.7
8	5.5	5.2	5.3	5.5	4.9	5.1	4.5	4.2	4.3	5.7	5.0	5.3
9	5.4	5.1	5.3	5.2	4.8	5.0	4.6	4.4	4.5	6.0	5.3	5.8
10	5.4	5.1	5.2	5.0	4.7	4.9	4.9	4.4	4.6	6.0	5.0	5.4
11	5.6	5.2	5.4	5.0	4.6	4.8	5.1	4.7	4.9	5.5	4.6	5.0
12	5.9	5.2	5.5	---	---	---	5.1	4.6	4.8	5.2	4.5	4.8
13	6.2	5.4	5.7	5.5	4.4	4.8	5.2	4.7	5.0	5.0	4.6	4.7
14	6.2	5.8	5.9	4.6	4.2	4.3	5.0	4.6	4.8	5.2	4.6	4.8
15	6.1	5.8	5.9	4.9	4.1	4.4	---	---	---	5.3	5.1	5.2
16	5.9	5.2	5.4	5.1	4.2	4.5	---	---	---	5.3	5.0	5.1
17	5.5	4.6	4.9	4.7	4.1	4.4	5.4	4.6	5.0	5.1	4.8	4.9
18	5.2	4.4	4.7	4.8	4.1	4.4	5.5	4.9	5.2	6.0	5.0	5.4
19	5.1	4.2	4.6	4.6	4.2	4.3	5.6	5.1	5.3	6.9	5.5	6.2
20	5.2	4.5	4.8	4.2	4.0	4.1	5.8	5.2	5.3	7.3	6.8	7.0
21	5.5	4.8	5.1	4.1	3.7	3.9	5.5	5.2	5.4	7.4	7.0	7.2
22	5.5	5.2	5.4	4.1	3.7	3.9	5.6	5.3	5.4	7.8	7.1	7.3
23	5.3	4.8	5.1	4.1	3.8	3.9	5.6	5.2	5.4	7.5	7.2	7.3
24	5.3	4.7	5.0	4.1	3.8	3.9	5.8	5.3	5.5	7.4	7.1	7.3
25	5.1	4.5	4.8	4.7	3.9	4.3	6.8	5.4	5.7	7.2	7.0	7.1
26	5.0	4.3	4.6	4.8	4.5	4.6	5.8	5.5	5.7	7.0	6.8	6.9
27	5.4	4.4	4.8	4.9	4.6	4.8	5.6	5.3	5.5	7.0	6.6	6.8
28	5.3	4.8	5.0	5.2	4.5	4.7	5.6	5.2	5.3	6.9	6.5	6.6
29	5.4	4.9	5.1	4.6	4.3	4.5	5.5	5.2	5.3	---	---	---
30	5.4	4.7	5.1	4.3	3.8	4.1	5.5	5.2	5.3	---	---	---
31	---	---	---	4.3	3.7	3.9	5.6	5.2	5.4	---	---	---
MONTH	6.2	4.2	5.1	5.5	3.7	4.6	6.8	3.6	4.9	7.8	4.5	5.8

CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 39°44'51", long 75°46'15", Chester County, Hydrologic Unit 02040205, on right bank 0.1 mi downstream from West Branch White Clay Creek, in the White Clay Creek State Preserve, and 1.5 mi northeast of Strickersville.

DRAINAGE AREA.--59.2 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,800 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1530	2,750	8.73
Dec. 11	0600	3,020	9.04
Feb. 6	1800	3,490	9.58
June 15	0145	2,340	8.22
June 17	2330	3,050	9.08
July 12	1515	1,820	7.50
July 28	0145	3,400	9.48
Aug. 1	0915	1,840	7.53
Aug. 12	2100	2,840	8.84
Sept. 18	1615	3,620	9.73
Sept. 28	2315	*9,390	*14.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	144	120	134	e95	92	158	91	78	76	551	104
2	90	135	111	137	e100	99	151	91	85	73	154	94
3	86	129	104	135	e450	97	191	156	78	69	121	89
4	90	126	104	134	382	102	235	153	67	66	113	85
5	90	128	121	171	164	98	145	104	e200	67	138	84
6	84	168	128	151	1530	298	109	104	e185	64	100	79
7	82	167	116	127	705	149	103	98	e100	137	92	77
8	82	128	111	120	205	126	99	100	84	120	90	79
9	81	119	109	121	149	104	111	88	75	73	84	91
10	80	117	257	e117	192	98	95	462	107	66	83	78
11	79	119	1570	e115	154	94	91	128	273	63	82	73
12	77	214	245	119	128	90	113	104	123	527	583	71
13	75	144	183	117	122	84	e330	94	89	182	525	70
14	80	123	285	e110	121	83	253	88	85	116	156	72
15	373	119	321	e105	114	84	165	84	592	117	136	82
16	102	118	191	e100	101	112	120	92	242	85	119	78
17	91	118	483	e100	97	130	111	82	571	76	108	75
18	99	115	234	e110	101	e120	105	92	645	231	102	1260
19	89	456	182	e105	103	e190	100	152	156	142	96	190
20	84	408	166	e100	106	e150	95	112	122	96	93	116
21	86	154	154	e100	111	e120	92	152	109	83	180	99
22	84	130	153	e98	105	e100	91	116	113	77	133	e90
23	80	121	152	e97	99	90	91	89	112	79	100	e84
24	79	115	303	e97	101	90	136	80	94	77	94	e80
25	79	121	201	e98	99	91	94	75	113	72	91	79
26	81	109	162	e100	93	89	194	89	113	70	88	77
27	1320	106	152	e101	92	90	203	80	88	204	85	76
28	306	238	146	e104	90	86	112	75	82	763	80	2170
29	579	280	144	e102	90	82	99	69	98	137	80	1600
30	202	133	145	e100	---	81	94	66	79	107	266	185
31	161	---	136	e96	---	98	---	e70	---	93	173	---
TOTAL	5063	4802	6989	3521	5999	3417	4086	3436	4958	4208	4896	7487
MEAN	163	160	225	114	207	110	136	111	165	136	158	250
MAX	1320	456	1570	171	1530	298	330	462	645	763	583	2170
MIN	75	106	104	96	90	81	91	66	67	63	80	70
CFSM	2.76	2.70	3.81	1.92	3.49	1.86	2.30	1.87	2.79	2.29	2.67	4.22
IN.	3.18	3.02	4.39	2.21	3.77	2.15	2.57	2.16	3.12	2.64	3.08	4.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

MEAN	66.5	68.4	106	86.6	110	130	95.9	74.1	78.7	48.8	55.0	107
MAX	163	160	246	134	207	203	136	111	169	136	158	250
(WY)	2004	2004	1997	1997	2004	2003	2004	2004	2003	2004	2004	2004
MIN	25.8	27.6	26.6	44.7	32.7	60.3	45.4	43.3	27.7	13.7	10.7	14.0
(WY)	1998	2002	1999	2002	2002	2002	2002	2002	1999	2002	2002	2002

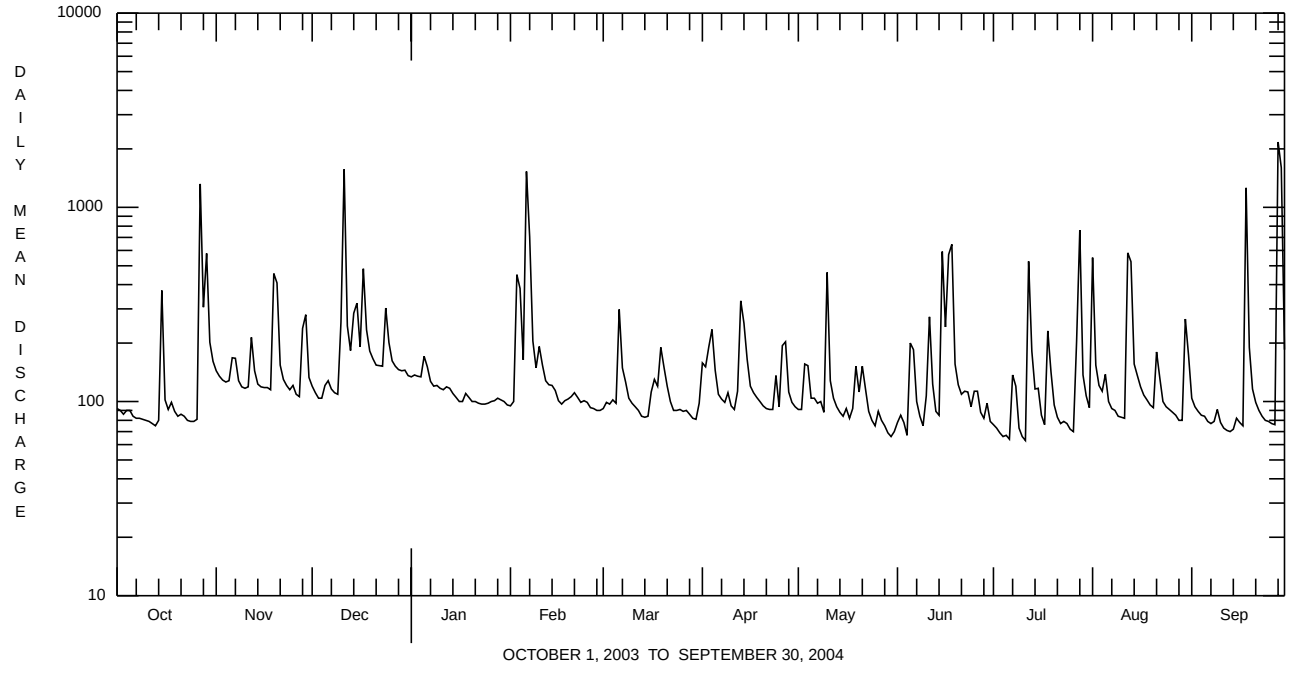
e Estimated.

CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1996 - 2004	
ANNUAL TOTAL	50592		58862			
ANNUAL MEAN	139		161		85.2	
HIGHEST ANNUAL MEAN					161	2004
LOWEST ANNUAL MEAN					31.8	2002
HIGHEST DAILY MEAN	3100	Sep 15	2170	Sep 28	4930	Sep 16 1999
LOWEST DAILY MEAN	**e**20	Jan 31	63	Jul 11	5.4	Aug 15 2002
ANNUAL SEVEN-DAY MINIMUM	**a**24	Jan 25	71	Jun 30	6.1	Aug 10 2002
MAXIMUM PEAK FLOW			**b**9390	Sep 28	**b**14400	Sep 16 1999
MAXIMUM PEAK STAGE			14.07	Sep 28	**c**16.71	Sep 16 1999
INSTANTANEOUS LOW FLOW			60	Jul 6,7	5.0	Aug 15 2002
ANNUAL RUNOFF (CFSM)	2.34		2.72		1.44	
ANNUAL RUNOFF (INCHES)	31.79		36.99		19.54	
10 PERCENT EXCEEDS	241		239		144	
50 PERCENT EXCEEDS	84		104		55	
90 PERCENT EXCEEDS	41		79		23	

a Computed using estimated daily discharges.
b From rating curve extended above 1,180 ft^3/s on basis of runoff comparison with nearby station.
c From floodmark in gage.
e Estimated.



01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)
OCT 2003													
01...	1130	1028	9813	93	11.3	7.8	7.8	357	341	13.2	130	32.2	13.0
DEC													
03...	1200	1028	9813	103	14.3	7.7	7.9	285	302	2.9	120	27.8	11.0
FEB 2004													
24...	1040	1028	9813	98	14.7	7.9	8.0	292	292	4.3	110	26.3	10.3
APR													
06...	1000	1028	9813	111	14.4	7.5	7.9	287	295	4.8	110	26.7	10.3
JUN													
14...	1030	1028	9813	84	9.9	7.7	7.0	311	306	16.4	100	25.2	10.3
AUG													
19...	0940	1028	9813	97	9.3	7.6	7.0	318	309	19.4	120	29.6	10.8

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Copper, water, unfltrd recoverable, µg/L (01042)
OCT 2003													
01...	85	33.3	308	<2	.030	4.68	.120	.07	.089	5.3	3.8	<200	<10
DEC													
03...	61	27.8	114	12	.020	4.92	<.040	.04	.043	5.3	2.1	<200	<10
FEB 2004													
24...	56	26.4	1070	<2	<.020	4.99	<.040	.02	.028	5.3	1.7	<200	<10
APR													
06...	57	26.5	226	<2	<.020	4.36	<.040	.03	.039	4.7	2.7	<200	<10
JUN													
14...	73	25.5	232	10	.030	4.36	<.040	.05	.092	4.7	2.6	<200	<10
AUG													
19...	71	26.0	246	<2	<.020	4.47	<.040	.05	.058	4.6	2.9	<200	10

Date	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, unfltrd recoverable, µg/L (01092)
OCT 2003					
01...	160	<1.0	20	<50	<10
DEC					
03...	140	<1.0	20	<50	<10
FEB 2004					
24...	80	<1.0	20	<50	<10
APR					
06...	180	<1.0	30	<50	<10
JUN					
14...	270	<1.0	30	<50	60
AUG					
19...	150	<1.0	20	<50	70

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/03/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	2
Nematoda (NEMATODES)	3
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	3
Baetis	12
Caenidae	
Caenis	1
Heptageniidae	
Stenonema	4
Isonychiidae	
Isonychia	6
Tricorythidae	
Tricorythodes	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Hydropsyche	37
Potamyia	3
Hydroptilidae	
Leucotrichia	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	10
Oulimnius	2
Stenelmis	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	17
Empididae (DANCE FLIES)	
Hemerodromia	3
Total Organisms	110
Total Taxa	18

CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 39°49'00", long 75°41'31", Chester County, Hydrologic Unit 02040205, on left bank along SR 82 (Creek Road), and 3.0 mi south of the intersection of SR 82 and U.S. Highway 1 at Kennett Square.

DRAINAGE AREA.--28.3 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 196.02 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Some regulation upstream of gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1615	1,430	6.19	July 28	0115	3,290	7.78
Nov. 19	1845	1,340	6.07	Aug. 1	1145	1,520	6.30
Dec. 11	0730	2,120	6.87	Aug. 12	2030	2,730	7.37
Feb. 6	1600	2,880	7.48	Sept. 18	1415	1,750	6.55
July 12	1530	1,300	6.02	Sept. 28	2015	*6,080	*9.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	54	57	57	42	42	56	44	39	28	443	43
2	42	51	53	58	41	45	71	44	38	25	62	40
3	40	50	51	58	288	45	91	89	36	28	47	38
4	42	49	51	58	166	50	138	68	32	27	50	37
5	41	59	58	78	66	46	65	54	90	27	54	36
6	38	85	61	62	1080	158	52	50	76	26	40	36
7	37	70	57	53	299	64	48	52	44	41	38	35
8	37	52	54	51	78	57	46	46	37	37	37	36
9	36	49	54	52	62	48	51	43	35	28	35	44
10	36	48	179	46	78	46	44	174	34	26	35	36
11	36	49	938	47	60	44	43	55	86	26	34	34
12	35	104	100	50	53	42	60	46	43	337	560	33
13	34	58	75	51	52	40	199	42	35	69	329	33
14	49	52	172	49	51	40	124	42	36	45	64	34
15	219	51	148	47	47	41	81	40	151	44	55	34
16	43	51	81	45	43	59	57	40	55	35	49	34
17	39	48	242	45	42	63	52	38	187	32	45	34
18	44	47	97	73	44	57	49	47	147	135	43	540
19	37	340	77	55	45	114	46	69	49	58	42	70
20	36	202	69	46	46	62	45	49	41	39	40	46
21	36	72	65	45	48	52	44	60	37	34	133	41
22	36	61	65	44	45	46	43	49	36	32	59	39
23	34	58	64	42	44	44	52	40	37	35	44	37
24	34	56	153	42	45	43	74	37	34	33	41	36
25	34	59	84	42	44	45	46	36	41	30	40	36
26	35	53	68	44	41	44	141	41	41	29	38	35
27	658	52	64	45	41	44	106	37	33	211	38	34
28	114	139	61	45	41	42	54	35	31	678	37	1390
29	365	125	61	43	41	41	48	33	36	55	36	704
30	79	62	61	43	---	41	46	32	30	43	116	90
31	60	---	58	42	---	53	---	35	---	38	65	---
TOTAL	2449	2306	3478	1558	3073	1658	2072	1567	1647	2331	2749	3715
MEAN	79.0	76.9	112	50.3	106	53.5	69.1	50.5	54.9	75.2	88.7	124
MAX	658	340	938	78	1080	158	199	174	187	678	560	1390
MIN	34	47	51	42	41	40	43	32	30	25	34	33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)

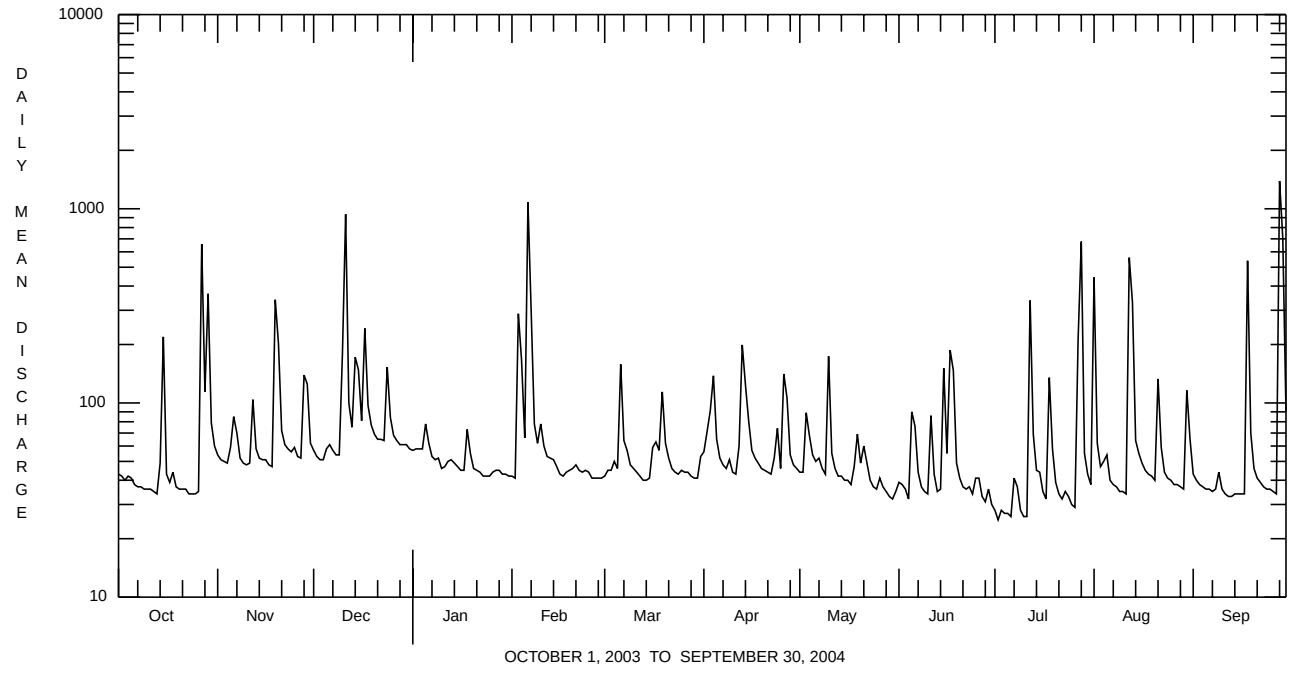
MEAN	30.1	34.4	45.6	47.3	48.6	62.3	46.9	40.9	38.5	29.8	26.3	45.5
MAX	79.0	76.9	128	96.1	106	116	85.5	79.2	112	94.5	88.7	212
(WY)	2004	2004	1997	1996	2004	1994	1993	1989	2003	1989	2004	2003
MIN	10.8	10.9	12.9	22.0	16.6	30.5	21.7	21.7	16.0	12.0	5.84	8.83
(WY)	1995	1999	1999	1992	2002	2002	2002	1999	1995	1995	1995	1995

CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	28910		28603			
ANNUAL MEAN	79.2		78.2		41.6	
HIGHEST ANNUAL MEAN					78.2	2004
LOWEST ANNUAL MEAN					18.9	2002
HIGHEST DAILY MEAN	4150	Sep 15	1390	Sep 28	4150	Sep 15 2003
LOWEST DAILY MEAN	15	Feb 16	25	Jul 2	0.86	Sep 3 1995
ANNUAL SEVEN-DAY MINIMUM	17	Sep 6	27	Jun 30	1.1	Sep 2 1995
MAXIMUM PEAK FLOW			**a**6080	Sep 28	**a**19700	Sep 15 2003
MAXIMUM PEAK STAGE			9.65	Sep 28	**b**15.30	Sep 15 2003
10 PERCENT EXCEEDS	119		124		62	
50 PERCENT EXCEEDS	40		46		28	
90 PERCENT EXCEEDS	22		35		13	

a From rating curve extended above 2,580 ft^3/s from slope-conveyance determination of discharge at gage height 15.30 ft.
b From outside highwater mark.



CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-tance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
01...	1300	1028	9813	44	11.6	7.9	7.7	363	346	13.7	140	34.9	13.7
DEC													
03...	1250	1028	9813	50	14.2	7.9	8.0	348	366	3.8	140	33.0	13.2
FEB 2004													
24...	1120	1028	9813	44	15.7	8.2	8.1	374	369	4.9	140	34.7	13.5
APR													
06...	1050	1028	9813	51	15.2	7.7	8.0	367	368	5.4	140	33.3	13.6
JUN													
14...	1110	1028	9813	36	9.8	7.8	7.0	388	381	16.7	140	32.9	12.7
AUG													
19...	1030	1028	9813	42	9.6	7.8	7.4	389	376	19.8	150	35.4	14.5

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
01...	81	36.6	458	<2	<.020	4.66	<.040	.08	.098	5.1	3.2	<200	<10
DEC													
03...	72	37.6	282	18	<.020	5.36	<.040	.07	.075	5.5	2.1	<200	<10
FEB 2004													
24...	67	37.1	112	2	<.020	5.40	<.040	.06	.074	5.5	2.1	<200	<10
APR													
06...	71	35.5	300	6	<.020	4.53	<.040	.06	.079	5.0	3.0	<200	<10
JUN													
14...	84	35.7	290	8	.040	4.72	<.040	.12	.126	5.1	2.7	220	<10
AUG													
19...	81	33.5	230	2	<.020	4.84	<.040	.16	.176	5.0	2.7	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
01...	200	<1.0	40	<50	<10
DEC					
03...	220	<1.0	40	<50	190
FEB 2004					
24...	110	<1.0	30	<50	<10
APR					
06...	230	<1.0	50	<50	<10
JUN					
14...	360	<1.0	50	<50	80
AUG					
19...	150	<1.0	10	<50	<10

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/08/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	15
Mollusca	
Bivalvia (CLAMS)	
Sphaeriidae	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	4
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	14
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	11
Ephemerellidae	
Serratella	1
Heptageniidae	
Stenonema	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Hydropsyche	39
Potamyia	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	3
Oulimnius	1
Stenelmis	13
Psephenidae (WATER PENNIES)	
Psephenus	4
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	8
Empididae (DANCE FLIES)	
Chelifera	1
Simuliidae (BLACK FLIES)	
Simulium	1
Total Organisms	120
Total Taxa	17

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, on right bank 100 ft upstream from bridge on SR 4007 at Birdell, 0.4 mi downstream from Two Log Run, and 3.0 mi southeast of Honey Brook.

DRAINAGE AREA.--18.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1960 to current year.

REVISED RECORDS.--WDR PA-73-1: 1972(P). WDR PA-99-1: 1972, 1973, 1975, 1976, 1978, 1979, 1982, 1984, 1985, 1987-89, 1996, 1997 (P).

GAGE.--Water-stage recorder and crest-stage gage. Prior to July 1990, water-stage recorder at site 130 ft downstream on right bank at same datum. Datum of gage is 591.20 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except those above 1,000 ft^3/s, and those for estimated daily discharges, which are poor. Some regulation at low flow by pumpage from the Northwestern Chester County Wastewater Treatment plant. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	2030	632	6.16
Nov. 5	2330	546	5.89
Nov. 19	2230	609	6.09
Dec. 11	1045	1,490	7.82
Dec. 17	1245	504	5.75
Feb. 6	1645	1,120	7.19
June 18	0200	646	6.20
July 28	0245	1,410	7.69
Aug. 31	0430	*2,110	*8.85
Sept. 18	1445	1,610	8.01
Sept. 29	0130	1,130	7.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	34	34	31	e20	25	34	22	18	14	182	30
2	21	31	31	34	e20	29	40	23	16	14	38	23
3	20	30	29	33	e21	27	45	39	15	12	26	20
4	25	29	29	33	e100	33	72	37	13	11	23	18
5	22	95	33	53	e50	29	37	26	37	11	30	17
6	20	119	33	39	425	73	27	25	75	11	21	17
7	19	50	31	29	323	35	25	24	24	12	18	17
8	19	34	30	28	65	37	25	22	19	15	17	32
9	19	29	31	27	35	27	26	24	17	12	16	29
10	19	29	60	e25	81	27	22	105	16	10	16	21
11	18	30	757	e22	51	25	21	30	26	9.8	17	17
12	17	42	68	e22	34	23	27	25	20	55	20	17
13	17	39	44	e21	36	21	67	22	16	34	78	17
14	19	29	56	e21	31	20	52	20	16	19	24	17
15	123	27	96	e22	27	21	36	19	21	30	20	17
16	27	26	50	e25	24	23	26	34	19	16	18	18
17	24	27	217	e21	22	27	24	21	45	13	17	18
18	38	26	66	e20	24	37	23	28	179	59	17	512
19	24	136	45	e20	35	50	22	89	23	37	16	49
20	21	180	40	e19	37	68	21	30	19	18	16	28
21	22	42	36	e19	40	53	20	23	18	15	35	24
22	22	34	37	e18	31	30	20	21	17	14	21	23
23	22	31	38	e20	28	27	23	18	18	15	17	21
24	20	31	88	e21	28	25	33	17	17	23	16	19
25	18	41	52	e23	26	25	23	16	15	14	15	18
26	18	32	39	e21	25	24	93	20	14	14	15	18
27	314	30	36	e20	24	24	61	21	13	142	14	18
28	113	86	34	e20	23	22	30	18	13	436	14	116
29	195	136	34	e19	24	21	26	15	18	64	14	341
30	52	38	35	e19	---	21	24	14	14	27	16	40
31	38	---	32	e18	---	23	---	15	---	21	488	---
TOTAL	1368	1543	2241	763	1710	952	1025	863	791	1197.8	1295	1572
MEAN	44.1	51.4	72.3	24.6	59.0	30.7	34.2	27.8	26.4	38.6	41.8	52.4
MAX	314	180	757	53	425	73	93	105	179	436	488	512
MIN	17	26	29	18	20	20	20	14	13	9.8	14	17
CFSM	2.36	2.75	3.87	1.32	3.15	1.64	1.83	1.49	1.41	2.07	2.23	2.80
IN.	2.72	3.07	4.46	1.52	3.40	1.89	2.04	1.72	1.57	2.38	2.58	3.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

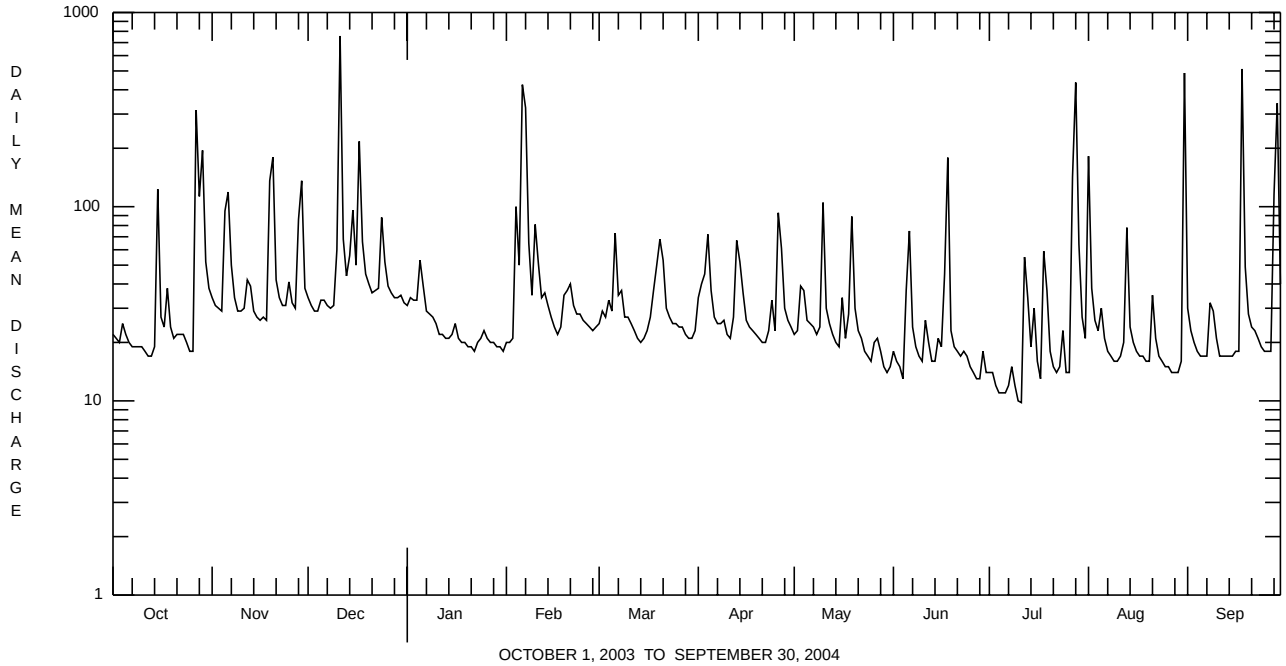
MEAN	17.4	24.7	30.0	34.5	37.3	41.6	32.4	25.5	23.9	20.2	13.1	18.4
MAX	68.5	58.6	107	136	85.1	110	83.8	74.6	96.6	106	41.8	63.1
(WY)	1997	1973	1997	1996	1979	1994	1983	1989	1972	1984	2004	1960
MIN	5.74	6.59	7.65	7.03	6.55	14.1	11.0	8.84	6.46	3.79	2.34	3.62
(WY)	1965	2002	1999	1981	2002	2002	2002	1963	1963	1963	2002	1964

e Estimated.

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	16498.3		15320.8			
ANNUAL MEAN	45.2		41.9		26.4	
HIGHEST ANNUAL MEAN					46.3	1984
LOWEST ANNUAL MEAN					9.24	2002
HIGHEST DAILY MEAN	757	Dec 11	757	Dec 11	1400	Jun 22 1972
LOWEST DAILY MEAN	**e**8.0	Feb 16	9.8	Jul 11	1.0	Aug 21 2002
ANNUAL SEVEN-DAY MINIMUM	9.5	Aug 20	12	Jul 5	1.2	Aug 16 2002
MAXIMUM PEAK FLOW			**a**2110	Aug 31	**a**3800	Jan 19 1996
MAXIMUM PEAK STAGE			8.85	Aug 31	11.62	Jan 19 1996
INSTANTANEOUS LOW FLOW			9.6	Jul 6,10-12	0.83	Aug 14 2002**b**
ANNUAL RUNOFF (CFSM)	2.42		2.24		1.41	
ANNUAL RUNOFF (INCHES)	32.82		30.48		19.21	
10 PERCENT EXCEEDS	87		66		41	
50 PERCENT EXCEEDS	22		24		15	
90 PERCENT EXCEEDS	11		16		6.7	

a From rating curve extended above 1,000 ft^3/s on basis of runoff comparison with nearby stations.
b Also Aug. 19, 20, 2002.
e Estimated.



CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 20...	0830	1028	80020	21	11.9	7.4	7.6	286	282	9.7	29.4	10.9	4.46

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
OCT 20...	12.4	65	22.3	15.8	22.7	<.04	5.75	.014	E.01	45	87

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	10/20/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	18
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	22
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	7
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	22
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	3
Tubificida	
Naididae	3
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	107
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	5
Baetis	39
Ephemerellidae	
Serratella	11
Heptageniidae	
Stenonema	72
Isonychiidae	
Isonychia	1
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
Argia	1
Plecoptera (STONEFLIES)	
Capniidae	1
Taeniopterygidae	
Taeniopteryx	12

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/20/03
Benthic macroinvertebrate	Count
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	3
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	375
Hydropsyche	399
Hydroptilidae	
Hydroptila	21
Leucotrichia	3
Leptoceridae	
Oecetis	2
Philopotamidae	
Chimarra	16
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Ancyronyx	10
Dubiraphia	7
Macronychus	11
Optioservus	80
Oulimnius	34
Stenelmis	1111
Psephenidae (WATER PENNIES)	
Psephenus	6
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	723
Empididae (DANCE FLIES)	
Hemerodromia	89
Simuliidae (BLACK FLIES)	
Simulium	33
Tipulidae (CRANE FLIES)	
Antocha	101
Dicranota	1
Hexatoma	3
Tipula	1
Total Organisms	3353
Total Taxa	36

CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA

LOCATION.--Lat 40°01'38", long 75°50'43", Chester County, Hydrologic Unit 02040205, on right bank 15 ft upstream from SR 4005, 0.2 mi upstream of mouth, 0.6 mi downstream from Chambers Lake, and 1.1 mi northwest of Wagontown.

DRAINAGE AREA.--4.55 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1995 to current year.

REVISED RECORDS.--WDR PA-99-1: 1996-98 (M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 505.81 ft above North American Vertical Datum of 1988.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Chambers Lake (station 01480399) 0.6 mi upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	12	11	8.7	5.1	7.5	8.9	10	4.9	2.4	8.7	6.5
2	4.9	10	9.0	8.8	4.8	8.0	10	9.6	4.6	2.4	8.7	4.2
3	4.3	9.1	7.8	8.8	9.1	8.1	13	13	4.3	2.2	5.5	3.5
4	5.0	8.3	7.4	9.0	20	9.1	16	15	4.0	1.9	4.3	2.9
5	5.4	9.7	8.3	12	14	9.2	16	12	6.9	2.1	4.4	2.3
6	4.7	16	9.8	12	41	15	11	11	18	2.3	3.7	2.0
7	4.4	13	8.8	9.2	69	13	9.4	9.8	11	2.1	3.0	1.9
8	4.3	9.7	7.9	7.6	33	12	8.7	9.4	7.3	2.8	2.5	2.9
9	4.4	7.9	7.6	7.2	17	9.7	8.7	9.5	5.1	2.2	2.2	e4.5
10	4.4	7.2	12	6.5	15	8.7	7.9	39	4.2	1.8	2.1	e3.5
11	4.4	7.1	125	6.1	15	8.0	7.5	20	6.6	1.6	2.1	3.3
12	4.4	9.3	56	6.2	12	7.8	8.2	13	6.7	5.8	2.7	2.7
13	4.2	11	24	6.6	11	6.9	16	9.6	4.7	10	12	2.4
14	4.4	8.2	19	6.4	11	6.4	18	8.1	4.2	5.9	9.0	2.2
15	21	6.9	28	6.5	9.8	6.5	14	7.4	4.9	5.7	5.5	1.8
16	12	6.7	19	5.8	8.5	7.5	10	7.7	4.5	4.1	4.1	1.8
17	7.8	6.7	39	5.5	7.9	8.3	8.9	6.6	5.6	3.5	3.6	1.9
18	7.8	6.6	34	7.7	7.8	8.7	8.2	6.6	14	6.0	3.2	34
19	6.5	17	20	8.7	8.0	12	7.7	13	8.6	9.3	2.9	26
20	5.4	44	15	7.3	8.8	15	7.3	10	5.0	5.6	2.8	12
21	5.4	19	13	6.4	10	17	6.6	8.6	4.0	4.2	3.9	6.3
22	5.1	13	11	6.0	10	12	6.6	7.6	3.6	3.5	4.9	4.2
23	4.6	10	11	5.6	9.1	9.9	7.0	6.3	3.7	3.1	3.9	3.6
24	4.4	9.2	19	5.5	8.9	8.7	11	5.6	3.4	3.0	3.3	3.3
25	4.3	10	19	5.3	8.5	8.3	11	5.0	3.1	2.5	2.7	2.9
26	4.6	9.0	14	5.8	8.0	8.0	25	5.6	3.1	2.3	2.3	2.5
27	65	8.2	12	6.0	7.7	8.0	30	5.5	2.6	7.1	2.1	2.3
28	57	13	10	6.3	7.4	7.8	17	5.1	2.3	21	2.0	12
29	44	24	9.9	5.8	7.3	7.3	12	4.4	3.0	11	1.8	59
30	25	14	10	5.6	---	6.9	11	4.0	2.7	6.3	2.6	18
31	15	---	9.1	5.5	---	7.4	---	4.1	---	4.3	10	---
TOTAL	359.3	355.8	606.6	220.4	404.7	288.7	352.6	302.1	166.6	148.0	132.5	236.4
MEAN	11.6	11.9	19.6	7.11	14.0	9.31	11.8	9.75	5.55	4.77	4.27	7.88
MAX	65	44	125	12	69	17	30	39	18	21	12	59
MIN	4.2	6.6	7.4	5.3	4.8	6.4	6.6	4.0	2.3	1.6	1.8	1.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	5.64	4.29	8.87	6.43	8.44	11.6	9.41	6.25	6.29	2.89	3.16	4.26
MAX	19.2	11.9	30.3	16.2	14.0	17.5	17.1	9.75	25.2	6.23	6.99	11.1
(WY)	1997	2004	1997	1996	2004	2003	1998	2004	2003	1996	2003	2003
MIN	1.15	1.23	1.21	1.57	2.79	1.86	1.40	2.65	1.50	1.33	1.25	1.45
(WY)	1996	1996	1996	1999	1999	2002	2002	1999	1999	1995	1995	1995

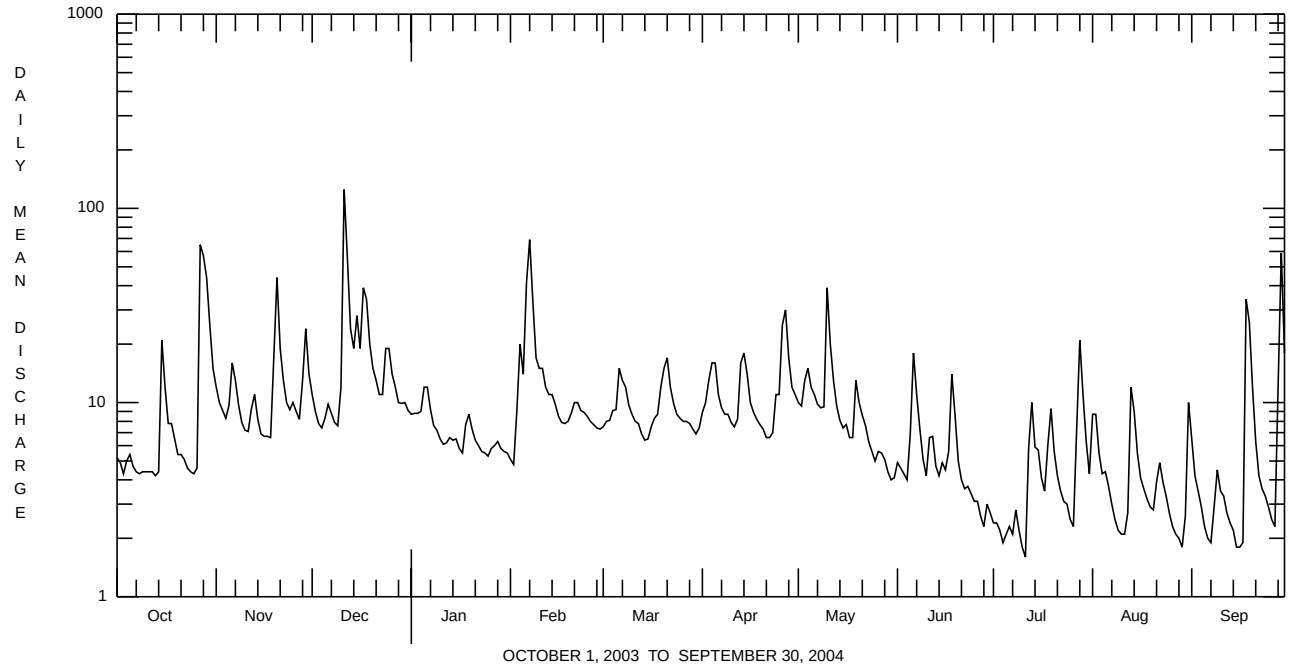
e Estimated.

CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1995 - 2004	
ANNUAL TOTAL	4378.0		3573.7			
ANNUAL MEAN	12.0		9.76		6.67	
HIGHEST ANNUAL MEAN					9.76	2004
LOWEST ANNUAL MEAN					2.83	2002
HIGHEST DAILY MEAN	163	Jun 21	125	Dec 11	250	Oct 19 1996
LOWEST DAILY MEAN	1.8	Sep 12	1.6	Jul 11	0.10	Feb 15 1995
ANNUAL SEVEN-DAY MINIMUM	2.0	Aug 25	2.1	Jul 5	0.27	Apr 18 1995
MAXIMUM PEAK FLOW			191	Dec 11	**a**401	Jan 19 1996
MAXIMUM PEAK STAGE			3.88	Dec 11	4.99	Jan 19 1996
10 PERCENT EXCEEDS	25		17		14	
50 PERCENT EXCEEDS	7.4		7.6		3.6	
90 PERCENT EXCEEDS	3.5		2.7		1.5	

a From rating curve extended above 230 ft^3/s based on a slope-conveyance determination of discharge at gage height 4.99 ft.



CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1996 to current year.

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 27.0°C, June 26, Aug. 10, 2003; mimimum, 0.0°C, several days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 26.0°C, Aug. 1; minimum, 0.5°C, Jan. 10.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	18.0	17.5	17.5	14.5	12.5	13.5	8.0	7.0	7.5	3.5	2.0	2.5
2	18.0	16.5	17.0	15.0	13.5	14.0	7.0	5.5	6.5	3.5	2.5	3.0
3	17.5	15.5	16.5	16.5	14.0	15.0	5.5	5.0	5.5	4.0	3.5	3.5
4	16.5	15.5	15.5	15.5	12.5	14.0	6.0	5.0	5.0	4.0	3.5	4.0
5	16.0	15.0	15.5	15.5	13.5	14.5	5.5	4.5	5.0	4.0	3.5	4.0
6	16.5	14.5	15.5	15.5	14.5	15.5	4.5	3.0	4.0	3.5	2.5	3.5
7	16.0	14.5	15.0	15.0	14.0	14.5	3.0	2.5	3.0	2.5	1.5	2.0
8	17.5	15.0	16.0	14.0	11.5	13.0	2.5	1.5	2.0	2.0	1.0	1.5
9	17.0	15.5	16.0	12.0	10.5	11.5	2.5	2.0	2.5	2.0	1.5	1.5
10	16.5	15.5	16.0	11.5	10.0	10.5	3.5	2.5	3.0	1.5	0.5	1.0
11	16.5	15.5	16.0	11.0	10.0	10.5	4.0	3.0	3.5	2.0	1.0	1.5
12	17.0	15.5	16.0	11.0	10.5	11.0	4.0	3.5	4.0	2.5	2.0	2.0
13	16.5	15.0	16.0	11.0	9.0	10.0	3.5	3.0	3.5	2.5	1.5	2.0
14	16.0	15.0	15.5	9.0	8.0	8.5	3.5	3.5	3.5	2.0	1.5	2.0
15	16.0	15.0	15.5	9.0	8.0	8.5	3.5	2.5	3.0	2.0	1.0	1.5
16	15.5	14.5	15.0	9.0	8.0	8.5	3.0	2.5	2.5	2.0	1.0	1.5
17	15.0	14.0	14.5	10.0	8.5	9.0	3.0	2.5	3.0	2.5	1.0	2.0
18	15.0	14.0	14.5	9.0	8.5	9.0	2.5	2.0	2.5	2.5	1.5	2.0
19	15.0	14.0	14.5	10.0	9.0	9.5	2.0	2.0	2.0	2.0	1.5	1.5
20	15.0	13.5	14.0	10.0	9.5	10.0	2.0	1.5	1.5	2.0	1.5	1.5
21	15.0	13.5	14.0	10.5	9.5	10.0	2.0	1.5	1.5	2.0	1.5	1.5
22	14.0	13.0	13.5	10.5	9.5	10.0	2.0	1.0	1.5	2.5	1.5	2.0
23	13.0	12.0	12.5	10.0	9.0	9.5	3.0	2.0	2.5	1.5	1.0	1.5
24	12.5	11.0	12.0	10.0	9.0	9.5	3.0	2.5	3.0	2.0	1.0	1.5
25	12.5	11.0	11.5	9.5	8.5	9.0	3.0	2.5	2.5	2.0	1.0	1.5
26	13.0	12.0	12.5	9.0	8.5	9.0	2.5	2.0	2.5	2.0	1.0	1.5
27	13.5	13.0	13.0	9.0	8.5	8.5	2.5	2.0	2.5	2.0	1.0	2.0
28	13.0	12.5	13.0	9.0	8.5	9.0	2.5	2.0	2.5	2.0	1.0	1.5
29	13.0	12.5	12.5	8.5	7.5	8.5	3.0	2.5	2.5	2.0	1.0	1.5
30	13.0	12.0	12.5	8.0	7.5	8.0	3.5	2.5	3.0	2.0	1.0	1.5
31	13.0	12.0	12.5	---	---	---	3.5	2.5	3.0	2.0	1.0	1.5
MONTH	18.0	11.0	14.6	16.5	7.5	10.7	8.0	1.0	3.2	4.0	0.5	2.0

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	2.5	1.5	2.0	5.5	4.0	4.5	9.0	8.5	8.5	17.5	14.5	16.0
2	3.0	1.5	2.0	6.0	4.5	5.0	8.5	8.5	8.5	17.5	16.0	16.5
3	2.5	2.0	2.0	6.0	4.0	5.0	9.0	8.5	9.0	16.5	16.0	16.0
4	2.5	2.0	2.0	6.5	5.5	6.0	9.0	8.0	8.5	16.5	15.0	15.5
5	2.5	2.0	2.5	6.0	5.5	5.5	8.0	7.0	7.5	16.0	14.5	15.0
6	2.5	2.0	2.5	7.0	6.0	6.5	8.0	6.0	7.0	17.5	14.0	16.0
7	2.5	1.5	2.0	8.0	6.0	7.0	10.0	7.5	8.5	18.5	15.5	17.0
8	2.0	2.0	2.0	7.5	6.5	7.0	9.0	8.0	8.5	17.5	15.0	16.0
9	2.5	2.0	2.5	7.5	6.0	6.5	10.5	8.0	9.5	18.0	14.5	16.0
10	3.0	2.5	2.5	7.0	6.0	6.5	11.0	8.5	9.5	21.0	18.0	19.0
11	3.0	2.5	3.0	8.0	6.0	7.0	9.5	9.0	9.5	24.0	20.5	22.5
12	3.5	2.5	3.0	7.5	6.0	6.5	9.5	8.5	9.0	24.5	21.5	22.5
13	3.5	3.0	3.0	7.0	5.5	6.0	9.5	8.5	9.0	23.5	21.5	22.5
14	3.5	3.0	3.0	7.0	5.5	6.0	9.5	9.0	9.5	22.5	20.5	21.5
15	3.5	3.0	3.0	8.0	5.5	6.5	11.5	9.0	10.0	23.0	20.5	21.5
16	4.0	3.0	3.5	6.5	5.5	6.0	12.0	9.0	10.5	22.5	21.0	22.0
17	4.0	3.0	3.5	6.5	5.0	6.0	15.0	10.5	12.5	21.5	20.0	20.5
18	4.0	3.0	3.5	7.5	5.0	6.0	16.5	12.0	14.0	22.0	19.5	20.5
19	4.5	3.0	4.0	6.5	5.0	6.0	18.0	12.0	15.5	22.5	21.5	22.0
20	4.5	3.5	4.0	7.0	5.5	6.0	17.5	15.5	16.5	21.5	20.0	20.5
21	4.5	3.5	4.0	7.0	6.0	6.5	16.0	12.5	14.0	21.0	20.0	20.0
22	4.5	3.0	3.5	7.0	5.5	6.0	18.5	14.0	16.0	22.5	20.0	21.0
23	4.5	3.5	4.0	7.5	5.5	6.5	19.5	15.0	17.0	22.5	20.5	21.5
24	4.5	3.5	4.0	8.0	6.0	7.0	18.5	15.0	17.5	23.0	20.5	21.5
25	4.5	3.5	4.0	8.0	6.5	7.0	16.5	14.0	15.5	22.0	20.0	21.0
26	4.5	3.5	4.0	10.0	7.0	8.0	16.0	14.5	15.0	21.0	20.5	20.5
27	5.0	3.5	4.0	10.5	8.5	9.5	16.0	15.0	15.5	21.5	20.0	20.5
28	5.5	3.5	4.0	10.5	7.5	9.0	15.0	13.5	14.0	20.5	19.0	20.0
29	5.5	4.0	4.5	10.5	7.5	8.5	16.0	13.0	14.0	19.0	16.5	18.0
30	---	---	---	8.5	7.0	8.0	16.0	13.5	15.0	18.0	16.0	17.0
31	---	---	---	9.5	8.0	8.5	---	---	---	17.0	16.0	16.5
MONTH	5.5	1.5	3.2	10.5	4.0	6.6	19.5	6.0	11.8	24.5	14.0	19.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	19.0	16.5	17.5	18.0	16.0	17.0	26.0	21.0	23.5	23.5	22.0	22.5
2	19.0	17.0	18.0	19.0	16.0	17.5	25.0	24.0	24.5	22.0	20.0	21.0
3	19.0	17.0	18.0	17.5	15.5	17.0	25.5	23.5	24.5	21.0	19.0	19.5
4	18.0	16.5	17.0	17.5	14.5	15.5	23.5	22.5	23.0	20.5	18.0	19.0
5	20.0	16.0	17.0	18.0	14.5	16.0	23.0	21.0	22.5	18.5	16.5	17.5
6	20.0	19.0	19.5	18.5	15.0	17.0	21.0	18.0	19.5	18.0	16.0	16.5
7	21.5	18.5	20.0	17.0	14.5	15.5	18.0	16.0	17.5	18.0	16.0	16.5
8	22.5	19.0	21.0	19.5	17.0	18.0	18.5	15.5	16.5	19.5	16.0	18.0
9	22.5	20.0	21.5	17.5	15.0	16.5	18.0	15.0	16.5	---	---	---
10	21.5	20.5	21.0	16.5	14.0	15.0	18.0	15.5	16.5	---	---	---
11	21.0	20.0	20.5	16.0	13.5	14.5	17.5	15.5	16.5	20.0	18.0	18.5
12	22.0	19.5	20.5	23.5	13.0	17.5	19.0	16.5	17.5	19.5	17.0	18.0
13	19.5	17.5	18.5	23.5	22.5	23.0	23.5	19.0	22.5	19.5	17.0	18.0
14	19.5	17.5	18.0	22.5	20.5	21.5	23.0	21.5	22.5	18.0	16.5	17.0
15	22.5	18.5	20.0	21.5	20.0	21.0	22.5	20.5	21.5	17.5	16.0	16.5
16	21.5	20.0	20.5	20.0	18.5	19.5	21.5	20.0	20.5	18.0	16.5	17.0
17	24.5	20.0	21.0	20.5	18.0	19.0	20.0	18.5	19.5	18.0	16.5	17.5
18	25.5	24.0	24.5	21.5	17.5	19.5	20.0	18.0	19.0	22.5	18.0	20.5
19	24.5	22.0	23.5	22.5	21.5	21.5	19.5	18.0	18.5	21.5	20.5	21.0
20	22.0	19.5	21.0	22.5	20.5	21.5	20.5	18.0	19.0	21.0	19.5	20.0
21	21.0	18.5	19.5	23.0	20.0	21.5	22.5	18.0	19.5	21.0	19.0	20.0
22	19.5	18.0	19.0	21.5	19.0	20.0	22.0	20.5	21.0	21.0	18.5	19.5
23	20.5	18.5	19.5	19.5	18.5	19.0	21.5	19.0	20.5	20.5	18.5	19.5
24	20.0	18.0	19.0	18.5	17.0	18.0	20.0	18.0	19.5	20.0	18.5	19.5
25	19.5	17.5	18.0	17.5	16.0	17.0	19.0	17.5	18.0	20.0	18.0	19.0
26	19.0	16.5	18.0	18.0	16.0	16.5	18.5	16.5	17.5	19.5	18.0	18.5
27	18.5	16.0	17.0	23.0	15.5	19.0	18.5	16.5	17.0	19.5	17.5	18.5
28	18.0	15.0	16.0	24.5	23.0	23.5	18.5	16.5	17.0	22.0	18.0	19.5
29	19.0	16.0	17.5	25.5	22.5	24.0	18.0	16.0	17.0	22.0	20.5	21.5
30	19.0	16.0	17.5	23.5	22.0	23.0	22.5	15.5	17.5	21.0	20.0	20.5
31	---	---	---	23.0	21.0	22.0	24.5	22.5	24.0	---	---	---
MONTH	25.5	15.0	19.3	25.5	13.0	18.9	26.0	15.0	19.7	23.5	16.0	18.9
YEAR	26.0	0.5	12.3									

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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to December 1951, January 1970 to current year.

GAGE.--Water-stage recorder , crest-stage gage, and V-notch sharp-crested weir. Datum of gage is 306.05 ft above National Geodetic Vertical Datum of 1929. Sept. 10, 1943, to Dec. 31, 1951, nonrecording gage at site 1,100 ft downstream at different datum. Satellite and landline telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion from Rock Run Reservoir (station 01480465) 2.6 mi upstream, capacity, 982 acre-ft, for municipal supply of city of Coatesville.

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^3/s, by slope-area measurement.

COOPERATION.--Records of diversion provided by the Pennsylvania American Water Company.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1800	1,130	5.89
Nov. 20	0300	809	5.50
Dec. 11	1230	*1,710	*6.48
Dec. 17	1730	734	5.40
Feb. 6	2100	1,660	6.44
July 28	0830	1,010	5.75
Aug. 31	1000	1,690	6.46
Sept. 18	1930	1,460	6.24
Sept. 29	0000	1,370	6.15

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	95	79	74	e34	62	75	65	57	30	217	48
2	57	80	69	75	e37	68	91	65	51	30	85	35
3	53	76	63	76	e100	69	126	105	48	28	48	30
4	60	71	62	79	e200	80	147	118	42	26	42	28
5	63	111	71	117	142	74	118	78	84	26	50	27
6	53	252	76	100	653	154	76	69	187	26	39	26
7	51	120	69	69	693	103	69	67	82	28	34	26
8	50	87	66	61	210	91	66	64	60	34	31	33
9	50	71	64	61	106	72	70	64	53	26	29	45
10	50	66	128	e47	134	66	61	248	50	23	28	32
11	50	66	1220	e52	143	64	58	105	78	22	30	28
12	48	101	239	e56	94	61	67	78	67	89	58	25
13	47	100	137	e57	83	55	170	66	51	105	168	24
14	52	72	154	e54	85	53	148	62	51	45	53	23
15	258	65	233	e45	72	53	101	57	75	57	42	25
16	74	63	143	e39	60	59	75	78	59	36	38	25
17	59	64	430	e46	56	67	67	60	75	30	34	25
18	79	62	219	e60	58	79	65	57	275	72	32	655
19	60	190	136	e55	65	125	62	155	58	105	32	162
20	52	418	116	e51	85	139	57	92	44	41	31	49
21	51	121	102	e49	93	150	56	74	40	35	50	39
22	51	91	98	e48	84	86	55	66	38	30	57	35
23	49	78	98	e42	70	70	59	56	40	29	34	e33
24	50	74	191	e40	68	65	91	52	37	38	31	e31
25	47	95	155	e38	67	64	65	49	35	31	29	e30
26	48	74	106	e38	63	63	215	56	34	28	28	e29
27	646	68	93	e40	60	62	198	59	31	113	28	28
28	356	130	85	e38	57	59	98	54	29	486	26	245
29	398	271	84	e36	58	54	78	48	38	118	25	681
30	168	97	85	e36	---	53	69	43	31	49	37	94
31	110	---	78	e35	---	61	---	47	---	40	440	---
TOTAL	3299	3329	4949	1714	3730	2381	2753	2357	1900	1876	1906	2616
MEAN	106	111	160	55.3	129	76.8	91.8	76.0	63.3	60.5	61.5	87.2
MAX	646	418	1220	117	693	154	215	248	275	486	440	681
MIN	47	62	62	35	34	53	55	43	29	22	25	23
(†)	6.6	6.5	6.5	6.2	6.5	5.9	6.0	6.3	6.2	6.3	6.5	6.2

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

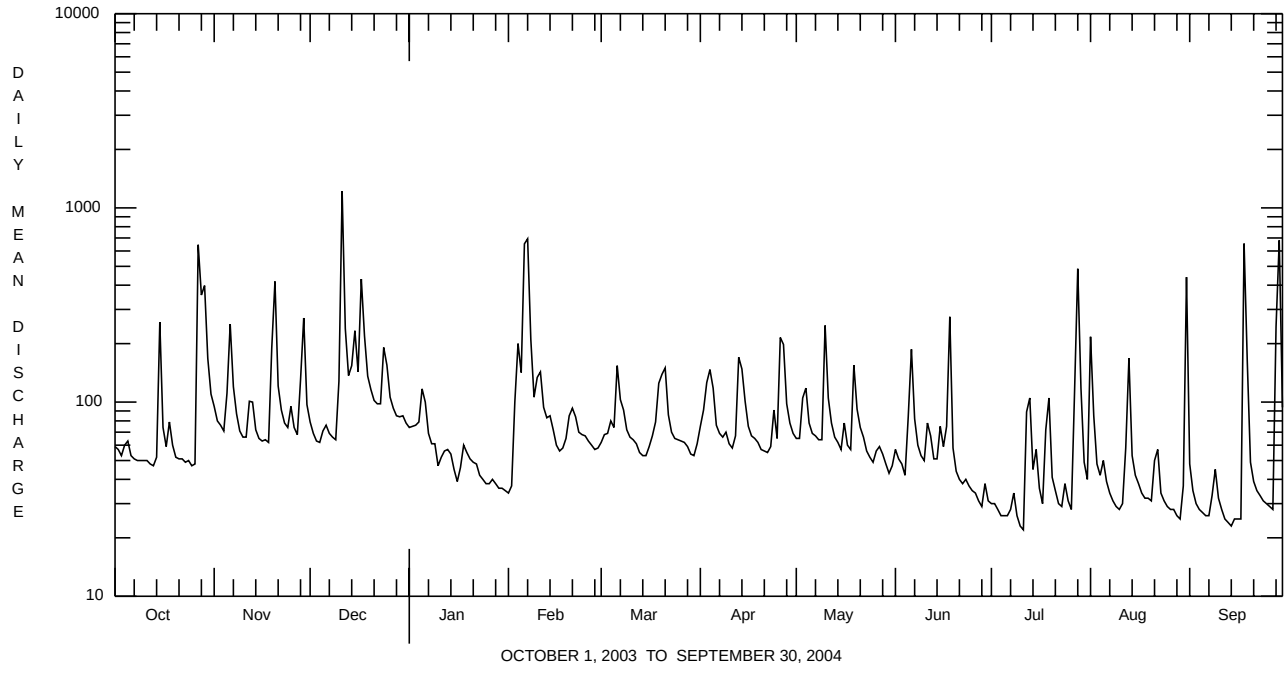
MEAN	38.7	55.2	70.5	76.9	85.5	97.2	85.8	71.7	62.4	47.7	32.6	40.0
MAX	149	114	227	262	179	275	197	159	236	176	82.9	136
(WY)	1997	1973	1997	1979	1971	1994	1983	1989	1972	1984	1971	1979
MIN	11.2	11.1	14.4	15.5	19.6	31.3	25.4	29.6	17.5	9.62	5.43	8.06
(WY)	2002	2002	2002	1981	2002	2002	2002	1999	1999	2002	2002	2002

† Diversion for municipal supply, equivalent in cubic feet per second (includes change in contents from Rock Run Reservoir).
e Estimated.

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	38514		32810			
ANNUAL MEAN	106		89.6		63.7	
HIGHEST ANNUAL MEAN					98.6	1979
LOWEST ANNUAL MEAN					20.7	2002
HIGHEST DAILY MEAN	1430	Jun 21	1220	Dec 11	3400	Jun 22 1972
LOWEST DAILY MEAN	**e**15	Feb 16	22	Jul 11	3.0	Aug 23 2002
ANNUAL SEVEN-DAY MINIMUM	**a**23	Feb 11	25	Sep 11	3.2	Aug 17 2002
MAXIMUM PEAK FLOW			1710	Dec 11	**b**8100	Jun 29 1973
MAXIMUM PEAK STAGE			6.48	Dec 11	10.08	Jun 29 1973
10 PERCENT EXCEEDS	206		154		113	
50 PERCENT EXCEEDS	63		62		42	
90 PERCENT EXCEEDS	30		30		15	

a Computed using estimated daily discharges.
b From rating curve extended above 7,800 ft^3/s on basis of slope-area measurement at gage height 9.92 ft.
e Estimated.



CHRISTINA RIVER BASIN

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1970-72, 1995 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: January 1995 to current year.

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 29.0°C, July 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.5°C, July 31, Aug. 3, 4; minimum 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	14.5	13.0	13.5	14.0	11.0	12.5	7.5	5.5	6.5	5.0	3.0	4.0
2	13.5	11.5	12.5	15.0	12.5	13.5	5.5	3.0	4.5	6.0	4.0	5.0
3	12.5	10.0	11.5	15.5	13.0	14.0	3.5	2.0	3.0	7.5	5.5	6.5
4	12.5	10.0	11.5	16.0	13.0	14.5	4.0	1.5	3.0	8.0	7.0	7.5
5	13.0	10.0	11.5	15.5	14.5	15.0	4.0	1.5	3.0	7.0	6.0	6.5
6	13.0	10.0	11.5	15.5	14.5	15.0	3.0	0.5	1.5	6.0	2.5	4.5
7	12.5	9.5	11.0	14.5	12.0	13.5	2.0	1.0	1.5	2.5	0.5	1.0
8	14.5	11.5	12.5	12.0	8.5	10.5	2.5	0.5	1.5	1.0	0.0	0.5
9	15.5	12.5	14.0	8.5	6.5	7.5	3.5	1.0	2.5	2.0	0.0	1.0
10	15.5	14.0	14.5	7.5	5.0	6.5	4.5	3.0	4.0	0.0	0.0	0.0
11	16.0	14.0	15.0	8.5	5.5	7.0	7.5	3.5	6.0	0.0	0.0	0.0
12	16.0	13.5	15.0	11.0	8.5	10.0	6.0	4.0	5.0	1.0	0.0	0.5
13	15.5	14.0	15.0	11.0	7.5	9.5	4.0	3.0	3.5	2.0	0.5	1.5
14	14.5	12.5	13.5	7.5	6.0	7.0	3.5	2.5	3.5	1.0	0.0	0.5
15	15.0	12.5	14.0	8.5	7.0	7.5	4.0	2.5	3.0	0.5	0.0	0.0
16	13.5	11.0	12.5	9.0	6.5	8.0	4.5	2.5	3.5	0.5	0.0	0.0
17	13.0	12.0	12.5	10.5	9.0	9.5	4.5	3.5	4.0	0.5	0.0	0.0
18	12.5	10.5	11.5	10.0	8.0	9.0	3.5	2.5	3.0	0.5	0.0	0.5
19	13.0	11.0	11.5	13.5	10.0	11.5	3.5	2.0	3.0	1.0	0.0	0.5
20	12.0	9.5	11.0	12.0	9.0	11.0	3.5	2.0	3.0	1.0	0.0	0.5
21	14.0	11.0	12.5	10.5	8.0	9.0	3.5	2.0	2.5	0.5	0.0	0.0
22	13.5	10.5	12.5	10.5	8.0	9.0	4.5	2.0	3.5	1.0	0.0	0.5
23	10.5	8.5	9.5	10.5	8.0	9.0	6.0	4.0	5.0	0.5	0.0	0.0
24	9.0	6.5	8.0	11.5	9.0	10.0	7.5	5.5	6.5	0.0	0.0	0.0
25	10.0	6.5	8.5	10.0	7.0	8.0	6.5	4.0	5.0	0.0	0.0	0.0
26	13.0	10.0	11.5	7.5	5.5	6.5	4.5	3.0	3.5	0.0	0.0	0.0
27	14.5	13.0	14.0	8.5	6.0	7.5	4.5	3.0	3.5	0.0	0.0	0.0
28	13.0	11.0	12.0	10.5	8.5	9.5	4.5	2.0	3.5	0.5	0.0	0.0
29	12.0	11.0	11.5	9.5	6.0	8.0	5.0	2.5	3.5	0.5	0.0	0.0
30	12.0	10.0	11.0	7.5	6.0	6.5	6.0	3.5	5.0	0.5	0.0	0.0
31	12.5	9.5	11.0	---	---	---	5.5	3.5	4.5	0.0	0.0	0.0
MONTH	16.0	6.5	12.2	16.0	5.0	9.8	7.5	0.5	3.7	8.0	0.0	1.3

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.0	7.5	4.0	6.0	10.0	8.5	9.0	20.0	15.0	17.0
2	0.5	0.0	0.0	9.5	6.0	7.5	9.0	8.0	8.5	19.0	17.0	18.0
3	0.5	0.0	0.5	10.0	6.0	8.0	9.0	7.5	8.5	18.0	13.0	15.0
4	1.0	0.0	0.5	9.0	8.0	8.5	8.0	6.0	7.0	16.0	11.5	13.5
5	1.0	0.0	0.5	9.0	8.0	8.5	9.0	4.5	6.0	15.0	11.0	13.0
6	1.0	0.0	0.5	10.0	8.5	9.0	10.0	4.0	7.0	17.5	11.5	14.5
7	2.0	0.5	1.0	10.5	7.0	9.0	13.5	7.5	10.0	18.0	14.0	16.0
8	2.0	0.0	0.5	8.5	7.0	8.0	11.0	8.0	9.5	17.5	14.5	16.0
9	3.0	0.0	1.0	7.0	5.5	6.5	13.5	8.5	10.5	19.0	13.0	15.5
10	4.5	1.5	2.5	7.5	5.0	6.0	13.5	7.5	10.5	19.5	16.5	18.0
11	3.0	1.0	2.0	9.0	4.0	6.5	11.5	8.5	9.5	22.0	17.5	19.5
12	3.5	1.5	2.5	8.0	5.5	6.5	9.5	8.0	8.5	22.5	18.5	20.5
13	4.0	1.0	2.5	7.5	3.5	5.5	9.5	7.5	8.0	23.0	18.5	20.5
14	4.5	2.0	3.0	6.0	3.0	4.5	10.0	9.0	9.5	22.0	18.5	20.5
15	3.0	1.0	2.0	10.0	5.0	7.5	13.5	8.0	10.5	22.0	18.5	20.5
16	1.5	0.0	0.5	7.0	2.5	4.0	14.0	7.5	10.5	22.0	18.5	20.5
17	2.5	0.0	1.0	5.5	2.5	4.0	16.5	9.5	12.5	21.5	18.0	20.0
18	4.0	1.0	2.5	7.5	3.5	5.5	19.5	12.0	15.5	21.5	18.5	20.0
19	5.5	1.5	3.5	6.5	3.5	5.0	20.5	14.0	17.0	20.0	18.5	19.0
20	6.0	2.5	4.0	8.5	3.0	5.5	20.5	15.5	18.0	18.5	17.5	18.0
21	6.5	4.0	5.0	8.5	6.0	7.5	19.0	15.0	17.0	18.5	17.5	18.0
22	6.0	3.0	4.5	7.5	3.5	5.5	20.0	15.0	17.5	22.0	17.5	19.5
23	6.0	2.0	4.0	8.0	2.5	5.0	21.0	16.0	18.0	23.5	19.0	21.0
24	4.5	3.5	4.0	9.5	3.5	6.5	19.5	15.0	17.0	24.0	20.0	22.0
25	5.0	1.5	3.0	9.5	7.5	8.5	16.5	13.0	14.0	23.5	20.0	21.5
26	4.5	1.5	3.0	14.0	8.5	10.5	13.5	12.5	13.0	21.5	19.5	20.0
27	5.5	2.0	3.5	13.0	10.5	12.0	16.0	12.5	14.0	21.0	19.0	20.0
28	6.5	2.0	4.0	15.0	10.5	12.0	15.5	10.5	12.5	21.0	19.0	20.0
29	7.5	2.5	5.0	14.0	9.5	11.5	18.0	10.5	14.0	19.5	17.0	18.0
30	---	---	---	10.5	8.0	9.0	19.5	13.0	16.0	18.0	14.5	16.0
31	---	---	---	9.5	8.0	8.5	---	---	---	17.0	16.0	16.5
MONTH	7.5	0.0	2.3	15.0	2.5	7.4	21.0	4.0	12.0	24.0	11.0	18.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	19.0	15.5	17.0	21.5	18.5	20.0	24.0	22.0	23.0	22.0	19.5	21.0
2	19.5	15.5	17.5	23.5	19.0	21.0	25.0	23.0	24.0	22.0	19.0	20.5
3	20.5	16.5	18.5	23.0	19.5	21.5	25.5	23.0	24.0	21.5	18.5	20.0
4	19.0	16.0	18.0	22.5	19.5	21.0	25.5	22.0	23.5	21.5	18.5	20.0
5	18.0	15.0	16.0	24.5	21.0	22.5	23.0	21.5	22.5	20.5	19.0	19.5
6	15.5	15.0	15.0	24.5	21.0	22.5	21.5	18.5	19.5	20.5	17.5	19.0
7	19.0	15.0	17.0	23.5	20.0	21.5	18.5	16.5	18.0	21.5	18.5	20.0
8	21.5	16.5	19.0	24.0	20.5	22.0	20.5	16.0	18.0	20.5	19.5	20.0
9	23.0	18.5	21.0	22.5	20.0	21.5	21.5	17.0	19.0	22.0	20.5	21.0
10	22.0	20.0	21.0	23.0	18.5	20.5	22.0	18.5	20.0	22.0	19.5	20.5
11	21.0	17.5	18.5	23.5	19.5	21.5	22.0	20.0	21.0	21.0	18.5	19.5
12	20.0	16.0	18.0	22.5	20.0	21.0	22.5	20.0	21.0	20.0	17.5	19.0
13	18.0	16.0	17.0	21.5	20.0	20.5	21.5	20.5	21.0	21.0	18.0	19.5
14	19.0	16.5	17.5	20.5	19.5	20.0	21.0	19.5	20.5	20.0	18.5	19.0
15	21.0	18.0	19.5	21.0	18.5	20.0	21.5	19.5	20.5	19.0	17.5	18.5
16	21.5	19.0	20.0	21.0	18.5	20.0	22.0	19.5	20.5	19.5	18.5	19.0
17	22.0	20.0	21.0	22.5	19.0	20.5	21.5	18.5	20.0	20.0	18.5	19.0
18	23.0	21.0	22.0	21.0	19.0	20.0	22.0	19.5	20.5	20.0	18.0	19.0
19	22.5	20.5	21.5	21.0	19.0	20.0	22.5	20.0	21.0	18.0	16.0	17.0
20	21.0	18.0	19.5	23.0	19.0	21.0	24.0	20.5	22.0	17.0	14.5	15.5
21	20.5	16.0	18.5	23.5	19.5	21.5	23.0	20.5	22.0	18.0	14.5	16.0
22	20.0	18.0	19.0	24.0	20.5	22.0	21.0	18.5	20.0	18.5	15.0	16.5
23	21.5	18.5	20.0	23.0	21.5	22.0	21.0	17.0	19.0	20.0	16.0	17.5
24	22.0	18.0	20.0	21.5	20.0	21.0	21.5	18.5	20.0	19.5	17.0	18.5
25	21.5	19.0	20.5	20.5	19.5	20.0	22.0	19.5	20.5	19.0	16.5	18.0
26	21.5	19.0	20.0	22.5	18.5	20.5	21.5	19.0	20.0	18.5	17.0	18.0
27	20.5	17.0	19.0	21.5	20.0	20.5	23.0	20.0	21.5	19.0	16.0	17.5
28	20.5	17.0	18.5	22.0	21.0	21.5	24.0	20.0	22.0	19.0	18.0	18.5
29	21.0	17.5	19.5	23.5	21.0	22.0	24.0	21.0	22.5	19.0	18.0	18.5
30	21.5	17.0	19.5	24.0	21.0	22.5	22.5	21.5	22.0	18.5	17.0	18.0
31	---	---	---	25.5	22.0	23.5	22.5	21.0	22.0	---	---	---
MONTH	23.0	15.0	19.0	25.5	18.5	21.1	25.5	16.0	21.0	22.0	14.5	18.8
YEAR	25.5	0.0	12.3									

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 SR 15068 at Modena, and 300 ft upstream from Dennis Run.

DRAINAGE AREA.--55.0 mi^2.

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 and crest-stage gage. Elevation of gage is 265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight regulation from Rock Run Reservoir 5.6 mi upstream, capacity, 982 acre-ft, and by Lukens Steel Company. Diversion from Rock Run Reservoir for municipal supply of city of Coatesville reenters creek upstream from gage. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by the Pennsylvania American Water Company.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	1800	1,430	6.11
Dec. 11	1600	*2,360	*7.27
Feb. 6	2330	1,580	6.32
July 28	0900	1,080	5.56
Aug. 31	1100	1,600	6.34
Sept. 18	1130	1,700	6.48
Sept. 28	2230	1,950	6.79

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	138	118	117	e55	96	112	90	72	48	291	82
2	84	122	108	114	e80	100	129	90	64	48	129	58
3	77	115	99	117	191	106	154	132	61	47	78	52
4	78	110	98	117	276	112	153	145	56	45	70	48
5	89	190	108	137	178	111	154	105	101	43	83	45
6	81	323	117	156	714	179	114	97	185	45	61	46
7	73	165	108	127	806	139	107	90	101	55	55	44
8	70	129	102	106	284	124	103	91	74	54	52	56
9	68	110	99	100	147	109	108	94	65	45	49	80
10	66	106	174	89	142	102	99	306	65	40	48	54
11	65	106	1290	82	162	98	96	130	99	39	55	49
12	62	144	318	84	137	94	104	102	84	114	131	44
13	57	140	191	88	124	89	175	89	63	146	256	41
14	73	110	219	89	124	88	184	82	68	81	94	42
15	342	99	305	87	118	88	137	79	148	93	72	43
16	101	95	196	86	103	94	115	102	89	60	63	45
17	82	95	472	84	98	103	108	79	108	51	57	46
18	106	92	345	89	100	109	104	77	333	106	56	850
19	81	261	200	104	101	161	101	168	97	132	54	223
20	68	502	172	101	110	162	97	111	74	67	53	81
21	68	165	156	93	127	180	94	109	65	55	88	62
22	65	134	147	88	122	122	93	89	62	51	91	55
23	63	120	145	81	107	105	104	77	64	50	57	49
24	60	117	193	77	106	100	129	68	57	58	52	47
25	57	136	215	e70	103	98	104	65	57	52	49	44
26	59	114	159	e70	101	98	267	74	55	48	47	41
27	820	107	140	e65	94	97	248	75	50	139	49	41
28	433	177	130	e65	95	95	125	67	50	551	46	418
29	496	338	125	e60	93	88	104	60	58	149	44	782
30	226	138	127	e55	---	86	96	57	51	79	73	154
31	155	---	121	e50	---	95	---	59	---	64	485	---
TOTAL	4313	4698	6497	2848	4998	3428	3818	3059	2576	2655	2888	3722
MEAN	139	157	210	91.9	172	111	127	98.7	85.9	85.6	93.2	124
MAX	820	502	1290	156	806	180	267	306	333	551	485	850
MIN	57	92	98	50	55	86	93	57	50	39	44	41
CFSM	2.53	2.85	3.81	1.67	3.13	2.01	2.31	1.79	1.56	1.56	1.69	2.26
IN.	2.92	3.18	4.39	1.93	3.38	2.32	2.58	2.07	1.74	1.80	1.95	2.52
(†)	0	0	0	0	0	0	0	0	0	-0.2	-0.2	-0.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

MEAN	57.1	73.0	95.4	101	108	127	116	93.5	86.2	67.6	48.2	59.7
MAX	190	157	306	330	235	308	241	213	302	236	123	186
(WY)	1997	2004	1997	1979	1971	1994	1983	1989	1972	1984	1971	1979
MIN	20.0	17.8	21.5	20.1	30.2	43.0	34.7	41.5	28.4	15.4	11.8	20.6
(WY)	2002	2002	1999	1981	2002	1985	2002	1999	1999	2002	2002	2002

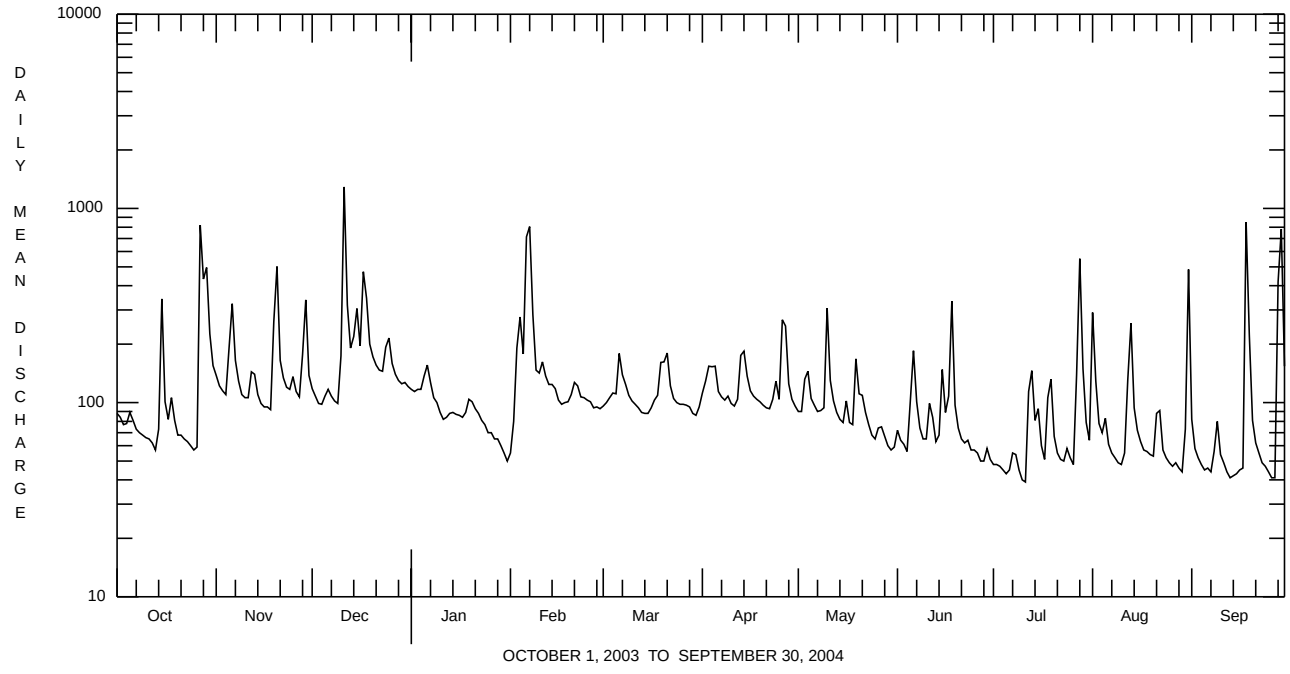
† Change in contents from Rock Run Reservoir, equivalent in cubic feet per second.
e Estimated.

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1970 - 2004	
ANNUAL TOTAL	52859		45500			
ANNUAL MEAN	145		124		86.1	
HIGHEST ANNUAL MEAN					130	1979
LOWEST ANNUAL MEAN					29.7	2002
HIGHEST DAILY MEAN	1820	Jun 21	1290	Dec 11	4010	Jun 22 1972
LOWEST DAILY MEAN	**e**27	Feb 16	39	Jul 11	7.4	Aug 23 2002
ANNUAL SEVEN-DAY MINIMUM	**a**31	Feb 11	44	Sep 11	8.1	Aug 17 2002
MAXIMUM PEAK FLOW			2360	Dec 11	**b**9600	Jun 29 1973
MAXIMUM PEAK STAGE			7.27	Dec 11	12.47	Jun 29 1973
ANNUAL RUNOFF (CFSM)	2.63		2.26		1.56	
ANNUAL RUNOFF (INCHES)	35.75		30.77		21.26	
10 PERCENT EXCEEDS	284		191		149	
50 PERCENT EXCEEDS	99		97		57	
90 PERCENT EXCEEDS	44		50		25	

a Computed using estimated daily discharges.
b From rating curve extended above 7,800 ft^3/s on basis of slope-area measurement at gage height 11.48 ft.
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 1977, August 1981 to current year.
pH: May 1971 to October 1977, August 1981 to current year.
WATER TEMPERATURES: May 1971 to October 1977, August 1981 to current year.
DISSOLVED OXYGEN: May 1971 to October 1977, August 1981 to current year.

INSTRUMENTATION.--Water-quality monitor May 1971 to October 1977, August 1981 to current year.

REMARKS.--Specific conductance record rated good. pH record rated good. Water temperature record rated good. Dissolved oxygen record rated good except for periods Feb. 25 to Mar. 23, Apr. 7-26, May 11-27, June 23 to July 1, and Aug. 16-30, which are poor. Data collection discontinued during winter months since 1981 water year. Other interruptions in the record were due to malfunctions of the equipment.

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, 5.9, July 14, 1991.
WATER TEMPERATURE: Maximum, 33.5°C, July 19, 1977; minimum, 0.0°C, many days during winters.
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 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)
MAR 2004									
09...	1150	1028	1028	107	15.0	8.6	301	7.4	82
11...	1245	1028	1028	98	15.9	9.0	302	7.9	26
23...	1230	1028	1028	98	14.2	8.4	292	6.3	18
APR									
07...	0940	1028	1028	106	12.1	8.0	295	8.6	110
20...	1330	1028	1028	97	12.0	9.0	300	18.3	53
MAY									
04...	1100	1028	1028	155	10.4	7.8	248	12.7	1600
11...	1400	1028	1028	125	9.2	7.8	263	21.0	2500
25...	1200	1028	1028	65	8.5	7.7	327	21.8	1200
JUN									
01...	1220	1028	1028	71	9.5	7.7	305	19.0	590
16...	1010	1028	1028	88	9.8	7.8	303	19.9	2100
23...	1530	1028	1028	67	8.5	8.3	336	22.4	860
JUL									
01...	1200	1028	1028	47	9.2	7.9	326	21.1	490
13...	1230	1028	1028	85	8.4	7.7	241	20.9	E130000
22...	1335	1028	1028	48	9.1	8.1	343	23.3	1200
AUG									
04...	1300	1028	1028	65	8.4	7.7	322	24.5	2100
18...	1200	1028	1028	58	10.6	7.9	340	21.4	560
26...	1200	1028	1028	48	9.5	7.7	352	21.0	540
SEP									
07...	1215	1028	1028	45	9.5	8.0	355	20.9	470
22...	1515	1028	1028	55	9.6	8.1	332	19.6	570

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 09...	1200	1028	80020	67	11.1	8.9	8.1	325	342	14.5	29.9	9.89	4.52

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)
OCT 09...	18.0	62	32.5	11.0	28.8	<.04	4.00	.008	.03	47	<2	63	<.2

Date	Chromium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Manganese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
OCT 09...	4.9	3.4	55	<1	23.6	<.02	19.8	E1.2	3

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	10/09/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	6
Nematoda (NEMATODES)	13
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	1
Lymnaeidae	
Fossaria	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	6
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	27
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	5
Baetis	4
Heptageniidae	
Stenonema	1
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
Argia	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	2
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	105
Hydropsyche	243
Hydroptilidae	
Leucotrichia	23
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	28
Oulimnius	5
Stenelmis	31
Psephenidae (WATER PENNIES)	
Psephenus	2

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/09/03
Benthic macroinvertebrate	Count
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	121
Empididae (DANCE FLIES)	
Hemerodromia	51
Simuliidae	
Simulium	23
Tipulidae (CRANE FLIES)	
Antocha	1
Total Organisms	702
Total Taxa	22

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	326	311	319	284	267	275	---	---	---	---	---	---
2	334	317	323	292	279	286	---	---	---	---	---	---
3	335	316	325	289	281	286	---	---	---	---	---	---
4	327	297	312	298	283	290	---	---	---	---	---	---
5	317	288	303	298	150	269	---	---	---	---	---	---
6	325	308	314	248	192	221	---	---	---	---	---	---
7	334	307	316	288	248	265	---	---	---	---	---	---
8	338	310	324	295	283	289	---	---	---	---	---	---
9	333	319	327	304	289	297	---	---	---	---	---	---
10	338	322	330	304	290	297	---	---	---	---	---	---
11	339	321	329	312	295	304	---	---	---	---	---	---
12	339	322	331	311	266	282	---	---	---	---	---	---
13	347	317	331	289	276	282	---	---	---	---	---	---
14	349	172	329	298	289	293	---	---	---	---	---	---
15	260	172	221	300	285	294	---	---	---	---	---	---
16	290	260	276	301	287	295	---	---	---	---	---	---
17	309	279	294	302	287	295	---	---	---	---	---	---
18	299	279	286	311	293	303	---	---	---	---	---	---
19	308	293	301	312	153	267	---	---	---	---	---	---
20	315	300	308	228	170	197	---	---	---	---	---	---
21	338	305	320	260	228	247	---	---	---	---	---	---
22	340	325	332	280	259	270	---	---	---	---	---	---
23	344	330	336	287	273	280	---	---	---	---	---	---
24	349	326	336	291	275	284	---	---	---	---	---	---
25	336	321	327	285	267	275	---	---	---	---	---	---
26	334	315	324	291	278	284	---	---	---	---	---	---
27	326	152	187	296	282	289	---	---	---	---	---	---
28	235	171	202	289	207	263	---	---	---	---	---	---
29	235	178	200	228	187	206	---	---	---	---	---	---
30	243	197	225	263	228	246	---	---	---	---	---	---
31	273	229	250	---	---	---	---	---	---	---	---	---
MONTH	349	152	298	312	150	274	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	304	277	289	304	278	290	303	291	297
2	---	---	---	313	288	295	288	274	281	304	291	298
3	---	---	---	301	282	290	282	253	267	300	240	263
4	---	---	---	---	---	---	278	217	255	273	232	252
5	---	---	---	---	---	---	277	239	258	288	272	280
6	---	---	---	304	249	280	303	275	285	293	272	283
7	---	---	---	296	279	288	314	289	300	283	251	269
8	---	---	---	294	269	280	316	301	308	296	266	278
9	---	---	---	301	280	291	314	288	298	298	179	277
10	---	---	---	---	---	---	309	295	302	250	184	217
11	---	---	---	309	294	301	312	297	305	275	237	254
12	---	---	---	309	291	297	307	267	294	297	272	284
13	---	---	---	303	290	297	281	241	256	311	289	298
14	---	---	---	303	289	298	282	241	262	315	300	308
15	---	---	---	310	287	295	297	239	277	312	300	306
16	---	---	---	734	298	418	302	255	282	312	277	291
17	---	---	---	516	346	375	299	238	270	312	288	299
18	---	---	---	349	305	320	313	256	297	321	300	309
19	---	---	---	692	292	409	316	285	305	313	216	252
20	---	---	---	330	262	301	329	294	311	293	242	266
21	---	---	---	268	243	257	309	295	302	306	216	284
22	---	---	---	290	264	272	317	302	307	314	293	302
23	---	---	---	308	282	292	318	241	296	315	300	309
24	---	---	---	317	291	301	285	255	271	326	302	315
25	---	---	---	318	295	305	294	275	284	327	306	320
26	306	285	295	311	288	295	286	179	239	323	305	310
27	305	290	298	309	296	303	246	203	222	316	302	308
28	300	285	295	307	284	296	280	245	261	316	303	310
29	299	279	290	311	290	298	294	273	282	331	308	319
30	---	---	---	311	292	301	317	282	296	335	313	324
31	---	---	---	307	290	296	---	---	---	336	307	318
MONTH	306	279	294	734	243	305	329	179	282	336	179	290

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	319	290	307	341	316	332	---	---	---	295	206	255
2	332	304	319	341	316	328	---	---	---	329	295	311
3	333	303	319	335	310	324	---	---	---	347	316	331
4	329	308	320	335	314	327	---	---	---	351	329	341
5	329	208	291	---	---	---	334	282	316	360	331	346
6	246	185	219	---	---	---	350	325	335	368	329	349
7	302	246	272	366	207	334	346	318	332	382	343	365
8	329	298	310	336	303	323	345	327	338	368	264	341
9	---	---	---	348	321	336	367	325	343	334	288	310
10	---	---	---	361	330	347	369	344	356	336	313	324
11	301	218	271	360	331	345	372	274	346	---	---	---
12	---	---	---	352	189	283	346	118	309	---	---	---
13	---	---	---	281	182	241	261	157	225	---	---	---
14	---	---	---	322	188	289	319	260	291	---	---	---
15	---	---	---	337	267	299	334	312	321	369	341	357
16	327	224	300	341	324	334	347	322	334	364	334	353
17	330	147	300	361	333	346	347	326	337	370	345	359
18	234	159	196	359	251	319	363	333	349	360	111	200
19	---	---	---	302	243	284	366	338	351	270	149	218
20	---	---	---	337	302	321	365	349	357	311	270	289
21	---	---	---	346	324	334	356	194	310	333	305	317
22	338	321	331	350	321	335	315	254	293	349	323	335
23	344	322	332	352	330	342	346	299	322	364	336	348
24	334	304	323	345	310	328	360	329	345	368	346	358
25	331	316	325	344	317	332	369	335	353	364	345	357
26	331	310	320	361	317	341	374	342	359	366	339	354
27	331	312	323	354	216	294	376	346	359	363	338	351
28	339	311	326	---	---	---	364	341	354	370	118	294
29	341	298	315	---	---	---	372	344	360	237	145	184
30	337	301	317	302	264	283	375	198	336	286	237	261
31	---	---	---	327	299	312	261	118	189	---	---	---
MONTH	344	147	302	366	182	319	376	118	327	382	111	316

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	8.0	7.7	7.8	7.3	7.2	7.3	---	---	---	---	---	---
2	8.1	7.6	7.7	7.4	7.2	7.3	---	---	---	---	---	---
3	8.1	7.7	7.8	7.4	7.3	7.3	---	---	---	---	---	---
4	8.1	7.7	7.7	7.6	7.3	7.4	---	---	---	---	---	---
5	8.3	7.6	7.8	7.6	7.3	7.4	---	---	---	---	---	---
6	8.5	7.6	7.8	7.3	7.1	7.2	---	---	---	---	---	---
7	8.7	7.6	7.8	7.6	7.2	7.4	---	---	---	---	---	---
8	8.8	7.6	7.8	7.8	7.6	7.6	---	---	---	---	---	---
9	8.9	7.5	7.8	7.8	7.6	7.6	---	---	---	---	---	---
10	8.8	7.5	7.7	7.8	7.6	7.6	---	---	---	---	---	---
11	8.9	7.6	7.8	7.8	7.6	7.6	---	---	---	---	---	---
12	8.9	7.5	7.8	7.7	7.5	7.6	---	---	---	---	---	---
13	8.7	7.5	7.8	7.8	7.5	7.6	---	---	---	---	---	---
14	8.7	7.5	7.8	7.9	7.6	7.7	---	---	---	---	---	---
15	7.9	7.3	7.4	7.9	7.6	7.6	---	---	---	---	---	---
16	7.6	7.3	7.4	8.0	7.5	7.6	---	---	---	---	---	---
17	7.6	7.4	7.5	8.1	7.5	7.6	---	---	---	---	---	---
18	7.7	7.4	7.6	7.9	7.5	7.6	---	---	---	---	---	---
19	7.8	7.5	7.6	8.3	7.5	7.6	---	---	---	---	---	---
20	8.0	7.5	7.6	7.6	7.4	7.4	---	---	---	---	---	---
21	8.3	7.6	7.7	7.6	7.5	7.5	---	---	---	---	---	---
22	8.3	7.5	7.7	7.7	7.5	7.5	---	---	---	---	---	---
23	8.5	7.6	7.8	7.8	7.5	7.5	---	---	---	---	---	---
24	8.4	7.6	7.8	7.8	7.5	7.6	---	---	---	---	---	---
25	8.6	7.6	7.8	7.8	7.5	7.6	---	---	---	---	---	---
26	8.4	7.5	7.6	7.8	7.6	7.6	---	---	---	---	---	---
27	7.6	7.2	7.3	7.8	7.5	7.6	---	---	---	---	---	---
28	7.3	7.2	7.3	7.6	7.4	7.5	---	---	---	---	---	---
29	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---	---	---	---
30	7.3	7.2	7.3	7.6	7.4	7.5	---	---	---	---	---	---
31	7.3	7.2	7.3	---	---	---	---	---	---	---	---	---
MAX	8.9	7.7	7.8	8.3	7.6	7.7	---	---	---	---	---	---
MIN	7.3	7.2	7.3	7.3	7.1	7.2	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	9.1	7.6	8.1	8.4	7.4	7.6	8.3	7.6	7.8
2	---	---	---	9.2	7.6	8.1	8.0	7.5	7.6	8.1	7.6	7.7
3	---	---	---	9.3	7.6	8.2	8.2	7.4	7.6	7.8	7.6	7.7
4	---	---	---	---	---	---	7.8	7.5	7.5	8.1	7.6	7.7
5	---	---	---	---	---	---	8.0	7.5	7.6	8.1	7.6	7.7
6	---	---	---	8.1	7.6	7.7	8.2	7.5	7.6	8.3	7.6	7.8
7	---	---	---	8.9	7.7	7.9	9.1	7.4	7.9	8.3	7.6	7.7
8	---	---	---	9.0	7.6	7.8	9.0	7.5	7.9	8.6	7.6	7.8
9	---	---	---	9.1	7.6	8.0	9.4	7.6	8.1	8.6	7.6	7.8
10	---	---	---	---	---	---	9.4	7.6	8.3	7.6	7.1	7.2
11	---	---	---	9.2	7.6	8.0	8.8	7.6	7.9	8.1	7.0	7.3
12	---	---	---	9.3	7.6	8.1	9.0	7.6	7.8	8.2	7.5	7.6
13	---	---	---	9.3	7.7	8.2	8.0	7.6	7.7	8.4	7.5	7.7
14	---	---	---	9.3	7.7	8.3	8.1	7.6	7.7	8.4	7.5	7.6
15	---	---	---	9.5	7.7	8.3	8.9	7.7	8.0	8.4	7.4	7.6
16	---	---	---	8.5	7.7	7.9	8.9	7.6	8.0	8.0	7.3	7.5
17	---	---	---	9.2	7.7	8.2	9.3	7.6	8.2	8.0	7.3	7.4
18	---	---	---	9.4	7.8	8.2	9.3	7.7	8.1	7.7	7.3	7.3
19	---	---	---	8.7	7.8	8.0	9.3	7.7	8.1	7.3	7.1	7.2
20	---	---	---	8.8	7.8	7.9	9.3	7.7	8.0	7.5	7.2	7.4
21	---	---	---	8.6	7.7	7.9	9.2	7.5	8.1	7.7	7.4	7.4
22	---	---	---	8.7	7.8	8.0	9.1	7.5	7.9	7.7	7.3	7.4
23	---	---	---	9.1	7.7	8.0	9.0	7.5	7.8	7.6	7.3	7.4
24	---	---	---	9.3	7.6	8.1	8.5	7.5	7.7	7.6	7.2	7.4
25	---	---	---	9.3	7.6	8.0	8.0	7.5	7.6	8.1	7.2	7.6
26	8.8	7.7	7.9	9.4	7.6	8.2	8.0	7.5	7.5	7.9	7.5	7.7
27	8.8	7.7	7.8	9.2	7.6	8.0	7.6	7.5	7.5	8.1	7.6	7.7
28	8.8	7.7	7.8	9.3	7.5	8.0	7.7	7.5	7.6	8.0	7.6	7.7
29	9.0	7.6	8.0	9.1	7.5	7.9	7.7	7.5	7.5	8.1	7.6	7.8
30	---	---	---	9.0	7.5	7.8	8.3	7.4	7.6	8.1	7.6	7.7
31	---	---	---	8.7	7.4	7.7	---	---	---	7.7	7.4	7.6
MAX	9.0	7.7	8.0	9.5	7.8	8.3	9.4	7.7	8.3	8.6	7.6	7.8
MIN	8.8	7.6	7.8	8.1	7.4	7.7	7.6	7.4	7.5	7.3	7.0	7.2

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.4	7.6	8.8	7.6	8.0	---	---	---	7.6	7.4	7.5
2	8.0	7.5	7.6	8.7	7.6	8.0	---	---	---	7.8	7.5	7.7
3	8.1	7.5	7.7	8.7	7.6	8.0	---	---	---	8.0	7.7	7.8
4	8.2	7.6	7.8	8.6	7.6	8.0	---	---	---	8.2	7.7	7.8
5	7.7	7.5	7.6	---	---	---	8.4	7.8	7.9	8.1	7.7	7.8
6	7.5	7.3	7.4	---	---	---	8.5	7.8	8.0	8.4	7.7	7.9
7	7.6	7.3	7.4	---	---	---	8.7	7.8	8.1	8.6	7.6	7.8
8	7.7	7.4	7.5	8.2	7.5	7.8	8.9	7.8	8.2	7.9	7.6	7.6
9	---	---	---	8.4	7.6	7.8	9.0	7.7	8.2	8.0	7.6	7.6
10	---	---	---	8.4	7.6	7.9	9.3	7.6	8.3	8.1	7.6	7.7
11	7.9	7.6	7.8	8.5	7.6	7.9	9.2	7.6	7.9	---	---	---
12	---	---	---	7.8	7.5	7.6	9.0	7.6	7.9	---	---	---
13	---	---	---	7.8	7.4	7.6	7.7	7.5	7.6	---	---	---
14	---	---	---	8.4	7.6	7.8	7.9	7.6	7.7	---	---	---
15	---	---	---	8.0	7.6	7.8	8.1	7.6	7.7	8.2	7.7	7.8
16	8.0	7.7	7.8	8.1	7.7	7.8	8.2	7.6	7.8	8.2	7.6	7.8
17	8.2	7.7	7.8	8.2	7.7	7.8	8.5	7.6	7.9	8.0	7.6	7.7
18	7.7	7.4	7.5	7.8	7.6	7.7	9.1	7.6	8.0	8.0	7.3	7.5
19	---	---	---	7.7	7.4	7.5	9.0	7.7	8.0	7.5	7.3	7.5
20	---	---	---	7.4	7.2	7.3	9.2	7.6	8.2	7.6	7.5	7.6
21	---	---	---	8.3	7.4	7.5	8.4	7.6	7.7	7.7	7.6	7.6
22	8.2	7.7	7.9	8.6	7.7	7.9	8.2	7.6	7.7	8.0	7.6	7.6
23	8.5	7.7	7.9	8.3	7.7	7.8	8.3	7.6	7.7	8.0	7.7	7.8
24	8.7	7.8	8.0	8.2	7.7	7.8	8.4	7.5	7.8	8.2	7.7	7.8
25	8.8	7.7	8.0	8.2	7.7	7.8	8.6	7.6	7.8	8.4	7.7	7.8
26	8.8	7.7	8.1	8.2	7.7	7.8	8.8	7.6	7.9	8.5	7.7	7.8
27	8.8	7.7	8.1	7.8	7.5	7.6	8.9	7.6	8.0	8.6	7.6	7.9
28	8.8	7.7	8.1	---	---	---	8.9	7.6	8.1	8.0	7.4	7.7
29	8.6	7.6	8.0	---	---	---	8.8	7.6	8.0	7.4	7.4	7.4
30	8.7	7.7	8.0	8.0	7.7	7.8	8.5	7.6	7.7	7.5	7.4	7.5
31	---	---	---	8.2	7.8	7.8	7.7	7.3	7.4	---	---	---
MAX	8.8	7.8	8.1	8.8	7.8	8.0	9.3	7.8	8.3	8.6	7.7	7.9
MIN	7.5	7.3	7.4	7.4	7.2	7.3	7.7	7.3	7.4	7.4	7.3	7.4

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	15.5	14.0	14.5	14.5	12.0	13.5	---	---	---	---	---	---
2	14.5	13.0	14.0	15.5	13.5	14.5	---	---	---	---	---	---
3	13.5	11.5	12.5	16.0	13.5	15.0	---	---	---	---	---	---
4	13.0	11.5	12.5	16.0	14.0	15.0	---	---	---	---	---	---
5	13.5	11.5	12.5	17.0	15.0	15.5	---	---	---	---	---	---
6	14.0	11.0	12.5	18.0	15.0	16.0	---	---	---	---	---	---
7	13.5	11.0	12.5	15.0	13.0	14.0	---	---	---	---	---	---
8	15.5	12.5	14.0	13.0	10.0	11.5	---	---	---	---	---	---
9	16.0	13.5	15.0	10.0	8.0	9.0	---	---	---	---	---	---
10	16.5	15.0	15.5	8.5	6.5	7.5	---	---	---	---	---	---
11	17.0	15.0	16.0	10.0	7.0	8.5	---	---	---	---	---	---
12	17.0	14.5	15.5	11.5	10.0	11.0	---	---	---	---	---	---
13	16.5	14.5	15.5	12.0	8.5	10.5	---	---	---	---	---	---
14	16.0	14.0	15.0	8.5	7.0	8.0	---	---	---	---	---	---
15	16.0	13.5	14.5	9.5	8.0	9.0	---	---	---	---	---	---
16	14.0	12.0	13.0	10.0	8.0	9.0	---	---	---	---	---	---
17	13.5	13.0	13.0	11.5	10.0	10.5	---	---	---	---	---	---
18	13.0	11.5	12.5	11.0	9.5	10.0	---	---	---	---	---	---
19	13.5	11.5	12.5	15.0	11.0	12.5	---	---	---	---	---	---
20	13.0	11.0	12.0	12.5	10.0	11.5	---	---	---	---	---	---
21	14.5	12.0	13.0	11.0	9.0	10.0	---	---	---	---	---	---
22	14.5	12.0	13.5	11.0	9.0	10.0	---	---	---	---	---	---
23	12.0	10.0	10.5	11.0	9.5	10.5	---	---	---	---	---	---
24	10.5	8.5	9.5	12.0	10.0	11.0	---	---	---	---	---	---
25	11.0	8.5	10.0	11.0	8.0	9.0	---	---	---	---	---	---
26	14.0	11.0	12.5	8.5	7.0	8.0	---	---	---	---	---	---
27	15.0	13.5	14.5	9.5	7.5	8.5	---	---	---	---	---	---
28	13.5	11.5	12.5	11.5	9.5	10.5	---	---	---	---	---	---
29	12.5	11.5	12.0	10.0	7.5	8.5	---	---	---	---	---	---
30	12.5	10.5	11.5	8.5	7.0	7.5	---	---	---	---	---	---
31	13.0	10.5	12.0	---	---	---	---	---	---	---	---	---
MONTH	17.0	8.5	13.1	18.0	6.5	10.8	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	8.5	5.5	7.5	10.5	9.5	10.0	19.5	15.0	17.5
2	---	---	---	10.5	7.5	9.0	10.0	9.0	9.5	19.0	17.0	18.0
3	---	---	---	10.5	8.0	9.5	9.5	8.5	9.0	18.5	13.0	15.5
4	---	---	---	---	---	---	9.0	7.0	8.0	16.0	12.0	14.0
5	---	---	---	---	---	---	9.0	5.0	7.0	15.0	12.0	13.5
6	---	---	---	10.5	9.5	10.0	10.0	5.0	7.5	17.5	12.5	15.0
7	---	---	---	11.0	8.0	9.5	13.5	8.5	11.0	18.0	14.5	16.5
8	---	---	---	9.5	8.0	9.0	12.5	9.5	10.5	17.5	15.0	16.5
9	---	---	---	8.0	7.0	7.5	13.5	9.5	11.0	20.0	14.0	16.5
10	---	---	---	---	---	---	13.0	9.0	11.0	20.5	17.0	18.5
11	---	---	---	9.0	5.5	7.5	12.0	9.5	10.5	22.5	18.5	20.5
12	---	---	---	8.5	6.5	7.5	10.0	9.0	9.5	23.0	19.5	21.0
13	---	---	---	8.0	4.5	6.5	10.5	8.0	9.0	23.5	19.5	21.5
14	---	---	---	7.0	4.5	6.0	11.0	9.5	10.0	23.0	19.5	21.0
15	---	---	---	10.5	6.5	8.0	13.5	8.5	11.0	22.5	20.0	21.5
16	---	---	---	9.0	4.0	6.0	14.0	8.5	11.5	23.0	20.0	21.5
17	---	---	---	6.0	4.0	5.0	16.0	10.0	13.0	22.5	19.5	21.0
18	---	---	---	8.0	5.0	6.5	18.5	13.0	15.5	22.5	20.0	21.0
19	---	---	---	7.5	4.5	6.0	19.5	14.5	17.0	21.0	19.5	20.5
20	---	---	---	9.0	4.0	6.5	19.5	16.0	18.0	20.0	18.5	19.5
21	---	---	---	9.5	7.0	8.0	18.5	15.0	17.0	20.5	19.0	19.5
22	---	---	---	8.0	5.0	6.5	19.0	15.5	17.5	23.0	19.0	20.5
23	---	---	---	8.0	4.0	6.0	19.5	16.5	18.0	24.0	20.0	22.0
24	---	---	---	9.5	5.0	7.5	19.0	15.0	17.0	24.5	21.0	23.0
25	---	---	---	10.0	8.5	9.5	17.0	13.5	14.5	24.0	21.0	22.5
26	5.5	3.5	4.5	13.5	9.5	11.5	14.0	13.0	13.5	22.5	20.5	21.0
27	6.5	4.0	5.0	13.5	11.5	12.5	16.5	13.0	14.5	22.0	20.0	21.0
28	7.5	4.0	5.5	14.5	11.0	12.5	15.5	11.0	13.5	22.5	20.0	21.0
29	8.0	4.5	6.5	14.0	10.0	12.0	17.5	11.5	14.5	21.0	18.5	20.0
30	---	---	---	11.5	9.0	9.5	19.0	14.0	16.5	20.0	17.0	18.5
31	---	---	---	10.0	9.0	9.5	---	---	---	18.5	18.0	18.0
MONTH	8.0	3.5	5.4	14.5	4.0	8.3	19.5	5.0	12.5	24.5	12.0	19.3

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	17.5	19.0	23.0	20.0	21.5	---	---	---	23.0	20.5	21.5
2	21.5	17.5	19.5	24.5	20.5	22.5	---	---	---	23.0	20.0	21.5
3	22.0	18.5	20.0	24.5	21.0	22.5	---	---	---	23.0	20.0	21.5
4	20.5	18.5	19.5	24.5	21.0	22.5	---	---	---	23.0	20.0	21.5
5	19.5	16.5	18.0	---	---	---	24.5	22.0	23.0	21.5	20.0	20.5
6	17.5	16.5	17.0	---	---	---	22.0	20.0	21.0	21.5	18.5	20.0
7	21.0	17.0	18.5	24.0	20.5	22.5	20.0	18.0	19.0	23.0	20.0	21.0
8	23.0	18.5	20.5	25.0	21.0	23.0	21.5	17.5	19.5	22.0	21.0	21.5
9	---	---	---	23.5	20.5	22.0	23.0	18.5	20.5	23.5	21.5	22.0
10	---	---	---	23.5	19.5	21.5	23.5	20.0	21.5	23.0	20.5	21.5
11	22.0	17.5	19.5	24.5	20.5	22.5	24.0	21.0	22.5	---	---	---
12	---	---	---	23.0	20.5	21.5	23.5	21.0	22.0	---	---	---
13	---	---	---	22.5	20.0	21.0	22.5	21.5	22.0	---	---	---
14	---	---	---	21.0	20.0	20.5	22.0	20.5	21.0	---	---	---
15	---	---	---	21.5	19.0	20.5	22.5	20.5	21.5	20.5	19.0	20.0
16	22.0	19.5	20.5	22.0	19.0	20.5	23.5	20.5	21.5	21.0	19.5	20.0
17	23.0	20.0	21.5	23.0	19.5	21.0	22.5	20.0	21.5	21.0	20.0	20.5
18	23.5	21.0	22.5	21.5	19.5	20.5	23.0	20.5	21.5	22.5	18.5	20.0
19	---	---	---	22.0	19.5	20.5	23.5	21.0	22.0	19.0	17.5	18.0
20	---	---	---	23.5	19.5	21.5	25.0	21.5	23.0	18.5	16.0	17.5
21	---	---	---	24.0	20.5	22.0	24.0	21.5	23.0	19.0	16.0	17.5
22	21.0	19.5	20.0	24.5	21.0	22.5	22.5	20.0	21.0	20.0	17.0	18.5
23	23.0	20.0	21.0	23.0	22.0	22.5	22.5	18.5	20.5	21.0	17.5	19.0
24	23.5	19.5	21.5	22.5	20.5	21.5	23.0	20.0	21.5	21.0	18.5	20.0
25	22.5	20.5	21.5	21.0	20.0	20.5	23.5	21.0	22.0	20.5	18.5	19.5
26	23.0	20.0	21.5	23.5	19.5	21.5	23.0	20.0	21.5	20.0	18.5	19.5
27	22.0	18.5	20.5	22.0	20.5	21.5	24.0	21.0	22.5	20.5	18.0	19.5
28	22.0	18.5	20.5	---	---	---	25.0	21.5	23.0	21.0	19.5	20.0
29	22.5	19.5	21.0	---	---	---	25.0	22.0	23.5	19.5	19.0	19.5
30	23.0	19.0	21.0	25.0	21.5	23.0	24.5	22.5	23.0	19.5	18.5	19.0
31	---	---	---	26.0	22.5	24.0	23.0	22.0	22.5	---	---	---
MONTH	23.5	16.5	20.2	26.0	19.0	21.7	25.0	17.5	21.7	23.5	16.0	20.0

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.6	9.5	10.0	10.5	9.4	9.9	---	---	---	---	---	---
2	10.9	9.6	10.2	10.2	9.4	9.7	---	---	---	---	---	---
3	11.3	10.0	10.5	10.4	9.2	9.7	---	---	---	---	---	---
4	11.2	10.0	10.4	10.5	9.1	9.8	---	---	---	---	---	---
5	11.6	10.0	10.6	9.8	8.2	9.3	---	---	---	---	---	---
6	11.9	9.8	10.7	9.6	8.9	9.3	---	---	---	---	---	---
7	12.4	9.8	10.9	10.7	9.5	10.1	---	---	---	---	---	---
8	12.3	9.3	10.5	11.6	10.5	11.2	---	---	---	---	---	---
9	12.3	9.0	10.3	12.6	11.5	12.0	---	---	---	---	---	---
10	12.2	8.9	10.0	12.8	11.8	12.3	---	---	---	---	---	---
11	12.2	8.9	10.1	12.6	11.1	11.9	---	---	---	---	---	---
12	12.0	8.8	10	11.3	10.5	10.9	---	---	---	---	---	---
13	11.7	8.8	9.9	11.5	10.3	11.0	---	---	---	---	---	---
14	11.9	8.7	9.9	12.5	11.5	12.0	---	---	---	---	---	---
15	9.4	8.8	9.1	12.4	11.3	11.8	---	---	---	---	---	---
16	10.2	9.3	9.8	12.7	11.0	11.7	---	---	---	---	---	---
17	10.2	9.4	9.8	12.2	10.8	11.3	---	---	---	---	---	---
18	10.7	9.6	10.2	12.4	10.9	11.5	---	---	---	---	---	---
19	10.8	9.7	10.2	11.2	9.4	10.5	---	---	---	---	---	---
20	11.7	9.8	10.5	10.9	10.1	10.5	---	---	---	---	---	---
21	11.3	9.3	10.3	11.4	10.7	11.1	---	---	---	---	---	---
22	11.4	9.3	10.1	11.7	10.6	11.1	---	---	---	---	---	---
23	12.4	10.0	11.1	11.7	10.7	11.1	---	---	---	---	---	---
24	12.7	10.7	11.5	11.3	10.2	10.8	---	---	---	---	---	---
25	13.1	10.3	11.6	12.2	10.3	11.4	---	---	---	---	---	---
26	11.9	9.3	10.5	12.5	11.2	11.8	---	---	---	---	---	---
27	9.5	8.9	9.3	12.4	10.8	11.6	---	---	---	---	---	---
28	10.1	9.5	9.9	10.8	9.9	10.5	---	---	---	---	---	---
29	10.2	9.9	10.0	11.6	10.5	11.0	---	---	---	---	---	---
30	10.8	10.1	10.4	12.0	11.2	11.6	---	---	---	---	---	---
31	10.7	9.8	10.3	---	---	---	---	---	---	---	---	---
MONTH	13.1	8.7	10.3	12.8	8.2	10.9	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	14.2	10.8	12.3	12.1	9.6	10.5	9.9	8.0	9.0
2	---	---	---	13.8	10.2	11.7	12.0	10.0	10.6	9.5	8.0	8.6
3	---	---	---	13.9	10.0	11.7	12.1	10.3	11.0	9.6	8.0	9.0
4	---	---	---	---	---	---	11.6	10.4	10.9	10.4	9.1	9.8
5	---	---	---	---	---	---	12.7	10.8	11.8	10.5	8.9	9.8
6	---	---	---	11.8	10.3	10.9	13.3	10.1	11.9	10.5	8.5	9.5
7	---	---	---	13.7	10.9	12.0	13.0	9.1	11.1	10.4	8.3	9.1
8	---	---	---	14.0	11.0	12.3	13.1	9.1	10.9	10.6	8.3	9.4
9	---	---	---	15.2	11.8	13.3	13.6	9.4	11.3	---	---	---
10	---	---	---	---	---	---	14.1	9.3	11.4	---	---	---
11	---	---	---	15.8	11.2	13.5	12.9	9.2	10.9	---	---	---
12	---	---	---	15.7	11.2	13.3	13.8	10.4	11.6	9.3	7.5	8.3
13	---	---	---	16.0	12.1	13.8	11.9	10.4	11.2	9.7	7.5	8.5
14	---	---	---	16.5	11.9	14.1	11.7	10.5	11.0	9.9	7.5	8.6
15	---	---	---	15.4	10.8	13.0	12.9	9.8	11.4	10.2	7.6	8.7
16	---	---	---	14.5	10.8	12.8	13.2	9.5	11.3	9.9	7.3	8.4
17	---	---	---	15.7	12.3	13.8	13.3	8.6	10.9	10.5	7.5	8.7
18	---	---	---	15.3	11.6	13.3	12.9	7.9	10.3	10.0	7.3	8.3
19	---	---	---	14.5	11.7	13.0	12.6	7.4	9.7	8.6	6.7	7.9
20	---	---	---	14.5	11.1	12.9	12.1	7.3	9.2	9.5	8.1	8.9
21	---	---	---	12.9	11.2	11.8	11.8	7.3	9.2	9.8	7.6	8.8
22	---	---	---	14.1	11.5	12.6	12.1	7.9	9.4	9.7	7.4	8.6
23	---	---	---	14.5	10.9	12.7	11.6	7.9	9.5	9.5	7.2	8.2
24	---	---	---	14.0	10.0	12.0	11.0	8.5	9.6	9.4	6.2	8.0
25	---	---	---	13.8	10.0	11.4	10.6	8.9	9.7	8.5	6.2	7.5
26	14.2	11.6	12.8	13.7	8.8	11.1	10.0	9.5	9.7	8.7	6.7	7.9
27	14.1	11.5	12.6	12.7	8.8	10.4	---	---	---	9.2	7.6	8.2
28	14.2	11.2	12.5	13.2	8.8	10.6	---	---	---	9.1	7.6	8.1
29	14.1	10.8	12.4	13.3	8.9	10.8	---	---	---	9.7	7.8	8.7
30	---	---	---	13.6	9.3	11.2	---	---	---	10.3	8.2	9.2
31	---	---	---	13.1	9.8	11.0	---	---	---	9.4	8.2	8.6
MONTH	14.2	10.8	12.6	16.5	8.8	12.3	14.1	7.3	10.6	10.6	6.2	8.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	9.9	8.1	8.8	9.5	7.6	8.4	---	---	---	8.3	7.7	8.0
2	9.6	8.0	8.7	---	---	---	---	---	---	8.5	7.7	8.1
3	9.5	8.0	8.7	---	---	---	---	---	---	8.7	7.8	8.2
4	9.9	8.3	9.1	---	---	---	---	---	---	9.2	7.8	8.4
5	9.4	8.4	8.9	---	---	---	8.8	7.0	8.1	9.4	7.9	8.6
6	9.4	8.7	9.1	---	---	---	9.6	8.0	8.8	10.2	8.3	9.2
7	8.9	7.9	8.6	9.5	6.7	7.8	10.4	8.4	9.3	10.1	7.7	8.8
8	8.8	7.3	8.1	8.5	6.8	7.6	11.0	8.4	9.6	8.7	7.6	8.0
9	---	---	---	8.9	7.1	7.9	11.3	7.9	9.4	8.6	7.7	8.0
10	---	---	---	9.3	7.3	8.2	11.6	7.6	9.3	9.1	7.8	8.3
11	10.0	8.1	9.4	9.5	7.1	8.1	11.7	6.8	8.6	---	---	---
12	---	---	---	8.2	7.1	7.6	10.8	7.2	8.7	---	---	---
13	---	---	---	8.4	7.8	8.1	8.3	7.9	8.1	---	---	---
14	---	---	---	8.7	7.9	8.2	9.0	8.0	8.4	---	---	---
15	---	---	---	8.8	8.0	8.4	9.5	7.9	8.6	9.5	7.8	8.5
16	10.0	8.8	9.5	9.0	8.0	8.4	9.8	8.0	8.7	9.2	7.8	8.4
17	10.0	8.4	9.1	9.3	7.8	8.4	10.6	8.0	9.1	9.1	7.7	8.3
18	9.0	8.1	8.7	8.7	7.8	8.3	11.1	7.8	9.2	8.5	7.4	8.1
19	---	---	---	---	---	---	11.1	7.6	8.8	9.0	8.2	8.6
20	---	---	---	---	---	---	11.1	7.4	8.9	9.4	8.6	9.0
21	---	---	---	---	---	---	10.2	7.1	8.0	9.5	8.5	9.0
22	8.6	7.6	8.1	9.0	7.3	8.1	9.5	7.8	8.5	9.8	8.6	9.1
23	8.6	7.6	8.0	8.6	7.3	7.9	10.0	7.4	8.6	10.0	8.7	9.3
24	9.1	7.6	8.3	9.0	7.6	8.2	10.0	7.0	8.2	10.1	8.7	9.3
25	9.4	7.8	8.5	9.2	8.1	8.5	9.8	6.9	8.1	10.5	8.7	9.4
26	9.6	7.9	8.7	9.2	7.4	8.3	10.3	7.1	8.7	11.0	8.7	9.5
27	9.8	8.3	9.0	8.3	7.4	7.8	9.7	7.7	8.7	11.5	8.5	9.7
28	10.0	8.4	9.1	---	---	---	9.0	7.5	8.1	9.7	8.3	8.7
29	9.6	8.3	8.9	---	---	---	8.8	7.5	8.1	8.9	8.6	8.7
30	9.7	8.2	8.9	8.4	7.7	8.1	9.2	7.3	8.3	9.1	8.7	8.9
31	---	---	---	8.4	7.4	7.9	8.0	7.5	7.7	---	---	---
MONTH	10.0	7.3	8.8	9.5	6.7	8.1	11.7	6.8	8.6	11.5	7.4	8.7

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
SEP 2004										
09...	1304	1028	1028	76	1.00	9.4	7.9	323	22.3	5.0
09...	1305	1028	1028	--	1.00	9.4	7.8	323	22.3	10.0
09...	1306	1028	1028	--	1.00	9.4	7.8	324	22.3	15.0
09...	1307	1028	1028	--	1.00	9.4	7.8	324	22.3	20.0
09...	1308	1028	1028	--	1.00	9.4	7.8	324	22.3	25.0
09...	1309	1028	1028	--	1.00	9.4	7.8	325	22.3	30.0
09...	1310	1028	1028	--	1.00	9.5	7.9	324	22.3	35.0
09...	1311	1028	1028	--	1.00	9.6	7.9	324	22.3	40.0
09...	1312	1028	1028	--	.50	9.5	7.9	323	22.3	45.0
09...	1313	1028	1028	--	.50	9.5	7.9	311	22.3	50.0
09...	1314	1028	1028	--	.50	9.5	7.9	313	22.4	54.0
09...	1315	1028	1028	--	.00	--	--	--	--	56.0

CHRISTINA RIVER BASIN

01480638 BROAD RUN AT NORTHBROOK, PA

LOCATION.--Lat 39°55'49", long 75°41'06", Chester County, Hydrologic Unit 02040205, on right bank 50 ft upstream from Northbrook Road and 2.2 mi south of Marshelton.

DRAINAGE AREA.--6.39 mi^2.

PERIOD OF RECORD.--December 2002 to April 30, 2004. (discontinued)

GAGE.--Water-stage recorder, crest-stage gage. Elevation of gage is 190.78 ft above NAVD of 1988.

REMARKS.--Records fair except those for estimated daily discharges and those above 100 ft^3/s, which are poor. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	33	22	18	e8.9	11	13	---	---	---	---	---
2	19	31	20	19	e9.0	11	14	---	---	---	---	---
3	18	30	19	19	30	11	15	---	---	---	---	---
4	19	28	19	19	25	12	20	---	---	---	---	---
5	17	34	21	22	15	12	13	---	---	---	---	---
6	16	34	21	17	59	19	11	---	---	---	---	---
7	15	28	20	16	50	14	11	---	---	---	---	---
8	15	24	19	e15	25	14	11	---	---	---	---	---
9	14	23	18	e14	21	12	11	---	---	---	---	---
10	14	22	26	e13	21	12	10	---	---	---	---	---
11	14	22	65	14	17	12	10	---	---	---	---	---
12	14	28	38	15	16	11	12	---	---	---	---	---
13	13	22	32	15	15	10	25	---	---	---	---	---
14	14	21	40	14	15	10	19	---	---	---	---	---
15	35	20	36	e13	13	10	15	---	---	---	---	---
16	19	19	31	e12	12	12	13	---	---	---	---	---
17	18	19	46	e12	12	12	13	---	---	---	---	---
18	19	18	35	e10	13	12	12	---	---	---	---	---
19	17	35	33	e11	13	19	13	---	---	---	---	---
20	16	38	31	e12	13	15	13	---	---	---	---	---
21	16	27	28	e12	13	13	13	---	---	---	---	---
22	16	25	27	e12	12	12	13	---	---	---	---	---
23	15	24	26	e10	12	11	16	---	---	---	---	---
24	14	23	35	e10	12	11	19	---	---	---	---	---
25	14	23	26	e9.4	11	11	14	---	---	---	---	---
26	14	22	23	e9.5	11	11	23	---	---	---	---	---
27	73	21	21	e9.6	11	11	20	---	---	---	---	---
28	42	33	21	e9.7	10	11	15	---	---	---	---	---
29	56	29	20	e9.4	10	10	13	---	---	---	---	---
30	39	23	20	e9.1	---	11	e12	---	---	---	---	---
31	36	---	19	e8.9	---	13	---	---	---	---	---	---
TOTAL	682	779	858	409.6	504.9	376	432	---	---	---	---	---
MEAN	22.0	26.0	27.7	13.2	17.4	12.1	14.4	---	---	---	---	---
MAX	73	38	65	22	59	19	25	---	---	---	---	---
MIN	13	18	18	8.9	8.9	10	10	---	---	---	---	---
CFSM	3.44	4.06	4.33	2.07	2.72	1.90	2.25	---	---	---	---	---
IN.	3.97	4.54	4.99	2.38	2.94	2.19	2.51	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

MEAN	22.0	26.0	24.7	12.6	14.9	17.5	13.7	9.63	27.3	11.2	9.56	29.9
MAX	22.0	26.0	27.7	13.2	17.4	23.0	14.4	9.63	27.3	11.2	9.56	29.9
(WY)	2004	2004	2004	2004	2004	2003	2004	2003	2003	2003	2003	2003
MIN	22.0	26.0	13.3	12.0	12.3	12.1	13.0	9.63	27.3	11.2	9.56	29.9
(WY)	2004	2004	2003	2003	2003	2004	2003	2003	2003	2003	2003	2003

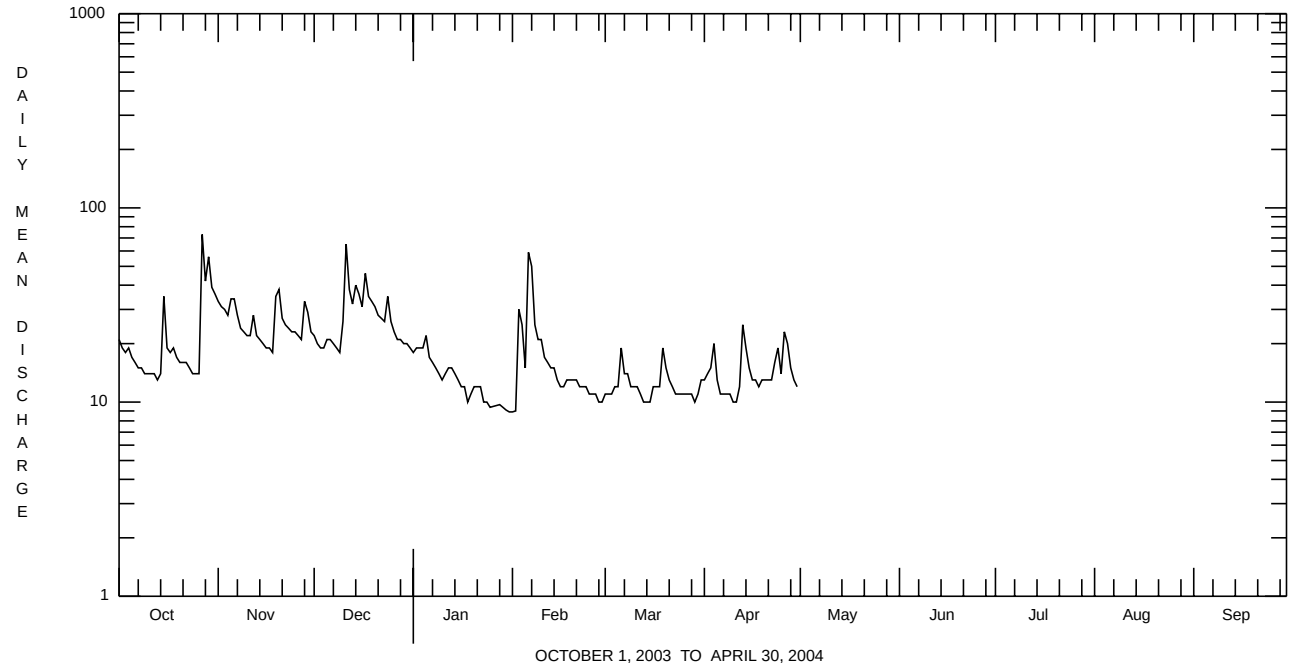
e Estimated.

CHRISTINA RIVER BASIN

01480638 BROAD RUN AT NORTHBROOK, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	6794.4		4041.5			
ANNUAL MEAN	18.6		19.0		17.5	
HIGHEST ANNUAL MEAN					19.0	2004
LOWEST ANNUAL MEAN					16.3	2003
HIGHEST DAILY MEAN	277	Sep 15	73	Oct 27	277	Sep 15 2003
LOWEST DAILY MEAN	5.6	Aug 25	**e**8.9	Jan 31,Feb 1	5.6	Aug 25 2003
ANNUAL SEVEN-DAY MINIMUM	5.9	Aug 23	9.2	Jan 27	5.9	Aug 23 2003
MAXIMUM PEAK FLOW			**a**114	Feb 6	**a**4700	Sep 15 2003
MAXIMUM PEAK STAGE			5.67	Feb 6	8.04	Sep 15 2003
INSTANTANEOUS LOW FLOW			8.3	Feb 1	5.2	Aug 25 2003
ANNUAL RUNOFF (CFSM)	2.91		2.97		2.73	
ANNUAL RUNOFF (INCHES)	39.55		23.53		37.12	
10 PERCENT EXCEEDS	34		33		31	
50 PERCENT EXCEEDS	15		15		14	
90 PERCENT EXCEEDS	6.6		11		7.1	

a From rating curve extended above 76 ft^3/s on basis of slope-area measurement at gage height 8.04 ft.
e Estimated.



OCTOBER 1, 2003 TO APRIL 30, 2004

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 3.0 mi northeast of Glenmoore.

DRAINAGE AREA.--8.57 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR PA-74-1: 1967(M), 1971-72(P) WDR PA-93-1: 1992.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 27	2000	177	2.45
Dec. 11	1545	*265	*2.74
Feb. 6	2345	252	2.70
July 12	2100	163	2.40
Aug. 13	0330	142	2.33
Sept. 18	1430	207	2.55
Sept. 28	2330	195	2.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	16	16	e7.0	14	16	10	8.4	3.7	16	27
2	9.6	17	14	16	e7.5	15	20	10	7.6	3.4	19	8.9
3	8.8	16	12	17	e10	17	33	22	5.8	3.2	11	6.3
4	10	16	12	17	e35	18	38	29	4.9	3.0	8.9	5.4
5	11	25	13	29	e30	17	41	14	13	3.1	11	5.0
6	9.9	57	14	30	e85	33	15	12	49	4.4	8.8	4.9
7	8.6	37	16	14	e170	28	13	12	23	4.3	7.1	4.7
8	8.2	21	14	11	e65	18	12	12	8.7	5.0	6.0	5.2
9	8.2	15	14	e10	e20	15	14	10	6.4	3.9	5.2	7.5
10	8.2	14	25	e8.5	e20	13	12	12	5.5	3.3	4.8	7.8
11	8.0	14	194	e8.0	e19	12	11	9.8	7.5	2.8	4.9	6.2
12	7.8	21	109	e9.0	e18	11	14	8.3	8.5	62	13	5.0
13	7.4	23	32	e9.5	e16	9.6	52	7.6	7.0	117	90	4.6
14	8.1	16	35	e9.0	e15	9.0	46	7.1	6.0	45	39	4.3
15	50	13	70	e9.0	e13	9.4	23	7.0	6.1	41	12	4.2
16	36	13	41	e8.5	e11	11	15	16	5.7	22	8.7	4.5
17	13	13	79	e8.0	e9.5	12	13	11	13	8.9	7.8	5.0
18	14	13	90	e10	e10	15	12	8.4	17	16	6.9	116
19	13	33	35	e11	14	26	11	24	9.9	27	6.5	143
20	10	111	26	e10	18	30	11	21	6.1	15	6.2	33
21	8.8	47	22	e9.5	21	49	10	12	4.7	8.5	e10	10
22	8.6	20	22	e9.0	20	24	10	9.3	4.6	6.3	e16	8.0
23	8.3	16	23	e8.0	16	14	12	7.8	5.4	6.0	e10	6.8
24	7.9	15	53	e8.0	15	12	22	6.8	4.9	7.3	6.6	6.2
25	7.8	18	56	e7.5	14	12	14	6.0	4.3	7.2	5.8	6.1
26	8.3	16	26	e7.0	13	12	44	7.2	4.1	6.3	5.1	5.9
27	111	14	21	e7.0	12	12	70	8.1	3.5	11	5.0	5.8
28	133	25	19	e6.5	12	11	19	7.6	3.2	70	4.9	41
29	87	62	17	e6.5	13	10	12	6.4	5.6	52	4.7	154
30	72	27	19	e6.0	---	9.8	11	5.5	4.1	15	8.8	68
31	29	---	17	e6.0	---	13	---	6.1	---	8.9	45	---
TOTAL	742.5	768	1156	341.5	729.0	511.8	646	346.0	263.5	592.5	414.7	720.3
MEAN	24.0	25.6	37.3	11.0	25.1	16.5	21.5	11.2	8.78	19.1	13.4	24.0
MAX	133	111	194	30	170	49	70	29	49	117	90	154
MIN	7.4	13	12	6.0	7.0	9.0	10	5.5	3.2	2.8	4.7	4.2
CFSM	2.79	2.99	4.35	1.29	2.93	1.93	2.51	1.30	1.02	2.23	1.56	2.80
IN.	3.22	3.33	5.02	1.48	3.16	2.22	2.80	1.50	1.14	2.57	1.80	3.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	7.60	11.1	14.7	14.1	16.7	21.3	19.0	14.9	11.4	8.51	5.92	7.53
MAX	25.3	25.6	49.9	35.9	44.8	58.4	47.4	36.7	46.0	34.0	22.1	29.2
(WY)	1997	2004	1997	1978	1971	1994	1983	1989	2003	1984	1971	2003
MIN	1.71	2.45	2.07	1.19	3.75	6.58	4.84	4.97	2.30	0.83	0.58	0.88
(WY)	2002	2002	1981	1981	2002	1981	1985	1969	1999	2002	2002	1980

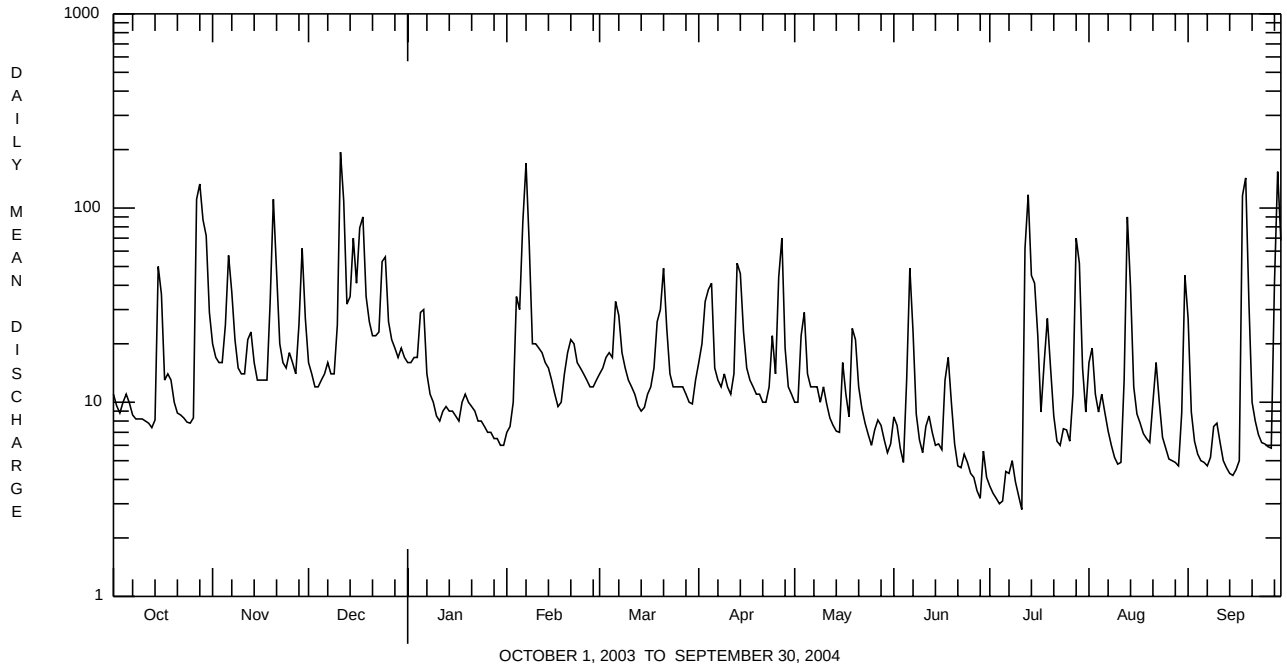
e Estimated.

CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	8558.0		7231.8			
ANNUAL MEAN	23.4		19.8		12.7	
HIGHEST ANNUAL MEAN					23.2	1984
LOWEST ANNUAL MEAN					4.37	2002
HIGHEST DAILY MEAN	252	Jun 21	194	Dec 11	444	Jun 22 1972
LOWEST DAILY MEAN	**e**2.0	Feb 17	2.8	Jul 11	0.21	Aug 20 2002
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 25	3.6	Jun 30	0.24	Aug 16 2002
MAXIMUM PEAK FLOW			265	Dec 11	**a**946	Jun 22 1972
MAXIMUM PEAK STAGE			2.74	Dec 11	4.68	Jun 22 1972
INSTANTANEOUS LOW FLOW			2.6	Jul 5,11,12	0.21	Aug 6 1999**b**
ANNUAL RUNOFF (CFSM)	2.74		2.31		1.48	
ANNUAL RUNOFF (INCHES)	37.15		31.39		20.15	
10 PERCENT EXCEEDS	54		42		25	
50 PERCENT EXCEEDS	14		12		7.7	
90 PERCENT EXCEEDS	5.0		5.2		2.1	

a From rating curve extended above 903 ft^3/s based on straight-line extension.
b Also Aug. 19-22, 2002.
e Estimated.



01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV 18...	1200	1028	80020	13	11.7	7.3	7.5	177	186	7.7	12.9	5.05	2.38

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
NOV 18...	11.5	29	22.2	15.9	12.3	.06	1.28	.017	E.01	22	253

01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	11/18/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	13
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	8
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	5
Crustacea	
Copepoda	1
Podocopa	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	4
Ephemerellidae	
Dannella	11
Ephemerella	14
Eurylophella	6
Serratella	166
Heptageniidae	
Stenacron	3
Stenonema	21
Leptophlebiidae	
Paraleptophlebia	46
Odonata	
Gomphidae (DRAGONFLIES)	4
Plecoptera (STONEFLIES)	
Capniidae	
Allocapnia	181
Chloroperlidae	
Sweltsa	2
Peltoperlidae	
Tallaperla	1
Perlidae	
Acroneuria	27
Paragnetina	30
Taeniopterygidae	
Taenionema	240
Taeniopteryx	118

01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	11/18/03
Benthic macroinvertebrate	Count
Hemiptera	
Veliidae	
Rhagovelia	1
Megaloptera	
Sialidae	
Sialis	1
Trichoptera (CADDISFLIES)	
Apataniidae	
Apatania	3
Brachycentridae	
Micrasema	3
Hydropsychidae	
Cheumatopsyche	14
Diplectrona	63
Hydropsyche	140
Philopotamidae	
Chimarra	61
Dolophilodes	9
Polycentropodidae	
Neureclipsis	2
Psychomyiidae	
Lype	2
Psychomyia	2
Rhyacophilidae	
Rhyacophila	10
Uenoidae	
Neophylax	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Ancyronyx	1
Dubiraphia	2
Macronychus	4
Optioservus	13
Oulimnius	15
Promoresia	13
Stenelmis	48
Psephenidae (WATER PENNIES)	
Ectopria	1
Psephenus	8
Ptilodactylidae	
Anchytarsus	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	67
Empididae (DANCE FLIES)	
Hemerodromia	2
Simuliidae (BLACK FLIES)	
Prosimulium	273
Simulium	10
Tipulidae (CRANE FLIES)	
Dicranota	7
Hexatoma	1
Tipula	4
Total Organisms	1690
Total Taxa	54

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^2.

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated since November 1973 by Marsh Creek Reservoir (station 01480684). Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	175	62	65	20	22	28	47	21	13	43	32
2	26	155	62	64	20	17	31	47	21	13	46	31
3	24	82	60	65	21	17	37	45	20	12	42	29
4	25	38	60	65	21	16	43	44	19	11	38	26
5	25	39	60	65	20	15	44	45	21	11	37	24
6	25	52	60	65	14	16	41	45	34	11	32	21
7	25	88	60	62	6.2	15	40	45	38	11	28	20
8	26	78	60	60	62	15	39	44	36	12	25	19
9	26	73	60	58	84	15	38	43	33	11	23	19
10	26	72	46	57	78	15	37	43	30	10	21	18
11	25	70	28	57	76	15	36	44	29	9.7	19	17
12	24	70	86	57	72	15	36	46	29	29	21	16
13	24	118	111	57	67	15	44	41	26	78	67	15
14	24	162	85	57	64	15	52	37	24	81	75	15
15	28	159	81	57	62	15	52	34	24	82	63	14
16	24	157	101	57	60	15	61	34	23	76	82	14
17	26	121	74	57	59	15	59	33	22	64	85	14
18	27	57	91	57	59	16	57	31	30	58	73	48
19	28	39	122	57	59	17	55	34	30	60	64	94
20	27	3.4	110	57	60	20	46	37	26	55	30	93
21	40	7.6	103	57	60	25	23	37	23	47	8.8	81
22	49	11	97	57	59	30	24	35	21	38	13	72
23	47	38	91	57	60	31	24	32	20	31	14	63
24	46	62	91	57	60	30	23	29	19	29	14	54
25	45	60	92	57	60	31	23	27	17	26	14	46
26	45	59	88	57	59	30	26	26	16	24	14	40
27	37	59	82	57	59	30	43	26	14	24	14	36
28	93	60	77	57	59	29	49	25	13	39	14	53
29	109	61	74	57	48	27	47	22	14	44	13	155
30	105	62	70	57	---	24	47	20	14	43	15	163
31	136	---	67	42	---	26	---	19	---	39	28	---
TOTAL	1290	2288.0	2411	1808	1508.2	634	1205	1117	707	1091.7	1075.8	1342
MEAN	41.6	76.3	77.8	58.3	52.0	20.5	40.2	36.0	23.6	35.2	34.7	44.7
MAX	136	175	122	65	84	31	61	47	38	82	85	163
MIN	24	3.4	28	42	6.2	15	23	19	13	9.7	8.8	14
(†)	+17.9	-21.8	+3.2	-26.0	+7.0	+14.6	+11.8	-6.5	0.0	+3.2	-1.6	+16.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004, BY WATER YEAR (WY)

MEAN	19.7	24.4	43.1	41.5	33.9	39.1	42.0	33.5	25.5	21.1	15.5	19.4
MAX	59.5	76.3	148	128	72.4	119	140	83.4	97.9	81.6	36.7	79.4
(WY)	1997	2004	1997	1979	1996	1994	1983	1989	2003	1984	2003	2003
MIN	3.39	3.50	3.01	7.30	0.86	0.83	0.84	0.72	4.06	5.18	6.42	6.47
(WY)	1981	1979	1974	1981	1989	1974	1974	1974	1976	1983	1981	1981

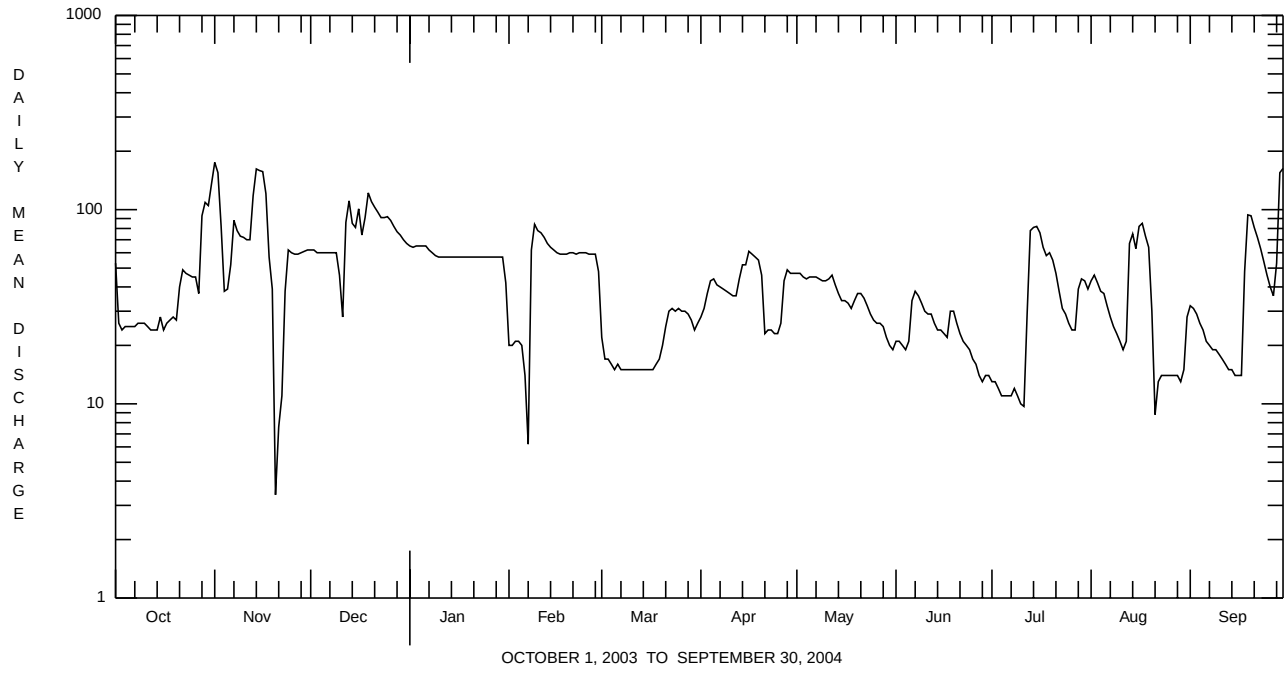
† Change in contents from Marsh Creek Reservoir, equivalent in cubic feet per second.

CHRISTINA RIVER BASIN

01480685 MARSH CREEK NEAR DOWNINGTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1973 - 2004	
ANNUAL TOTAL	19866.5		16477.7			
ANNUAL MEAN	54.4		45.0		29.8	
HIGHEST ANNUAL MEAN					52.9	1984
LOWEST ANNUAL MEAN					10.8	2002
HIGHEST DAILY MEAN	391	Sep 17	175	Nov 1	462	Jun 18 1982
LOWEST DAILY MEAN	1.1	Apr 20	3.4	Nov 20	0.18	Mar 25 2002
ANNUAL SEVEN-DAY MINIMUM	9.1	Apr 20	11	Jul 5	0.28	Mar 20 2002
MAXIMUM PEAK FLOW			199	Oct 31,Sep 30	**a**560	Dec 14 1983
MAXIMUM PEAK STAGE			2.93	Oct 31,Sep 30	3.70	Dec 14 1983
10 PERCENT EXCEEDS	106		81		66	
50 PERCENT EXCEEDS	46		39		16	
90 PERCENT EXCEEDS	14		15		6.6	

a From rating curve extended above 300 ft^3/s.



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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948-57. October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 30, 1966, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) 1.9 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	274	142	145	e70	80	98	104	66	34	209	82
2	75	241	132	145	e60	83	120	101	59	34	112	67
3	70	162	124	145	e130	82	156	150	52	32	88	60
4	79	108	121	146	207	95	219	153	47	30	79	53
5	77	214	129	192	118	83	146	112	103	29	83	49
6	70	251	137	161	674	165	111	107	200	32	64	45
7	68	207	129	136	587	103	102	106	98	33	56	42
8	68	167	124	125	249	97	97	105	79	38	50	43
9	67	150	122	123	193	79	100	95	68	30	46	56
10	66	145	177	e105	210	73	90	137	62	27	43	46
11	65	143	1040	110	193	71	87	102	85	26	42	40
12	63	171	398	120	158	67	99	96	73	341	97	38
13	61	206	245	121	148	63	238	86	59	208	337	36
14	67	237	265	115	144	61	197	79	56	143	138	35
15	267	230	323	111	131	61	144	74	63	183	110	35
16	88	226	234	103	117	69	133	97	56	124	125	37
17	78	190	514	111	113	74	124	76	78	102	126	37
18	101	116	287	135	116	84	118	73	202	156	109	718
19	80	277	257	131	123	135	113	135	75	147	96	250
20	73	369	228	116	135	154	102	103	60	99	60	153
21	85	121	207	110	148	174	73	92	53	83	63	129
22	96	102	198	110	139	109	73	84	48	67	57	112
23	90	119	191	101	127	92	78	72	53	61	43	96
24	86	140	316	104	125	88	107	66	45	65	40	84
25	84	150	232	99	122	88	80	62	43	54	39	75
26	84	133	193	e100	117	85	259	69	42	49	39	67
27	934	127	178	e100	116	85	200	74	37	103	39	62
28	388	214	168	e102	115	82	131	61	34	315	37	595
29	544	267	163	e100	106	74	115	54	48	144	36	726
30	256	153	159	e95	---	70	110	49	37	98	82	262
31	244	---	149	e80	---	83	---	52	---	80	185	---
TOTAL	4582	5610	7282	3697	4991	2809	3820	2826	2081	2967	2730	4130
MEAN	148	187	235	119	172	90.6	127	91.2	69.4	95.7	88.1	138
MAX	934	369	1040	192	674	174	259	153	202	341	337	726
MIN	61	102	121	80	60	61	73	49	34	26	36	35

e Estimated.

CHRISTINA RIVER BASIN

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.1	76.9	114	118	112	140	129	105	79.0	65.1	45.8	62.8
MAX	199	187	385	361	242	380	365	246	308	257	93.7	217
(WY)	1997	2004	1997	1979	1979	1994	1983	1989	2003	1984	2003	2003
MIN	23.2	24.9	23.5	17.5	29.5	35.7	28.9	49.2	29.6	19.7	17.8	17.1
(WY)	1981	2002	1981	1981	2002	1985	1985	1976	1985	2002	2002	1980

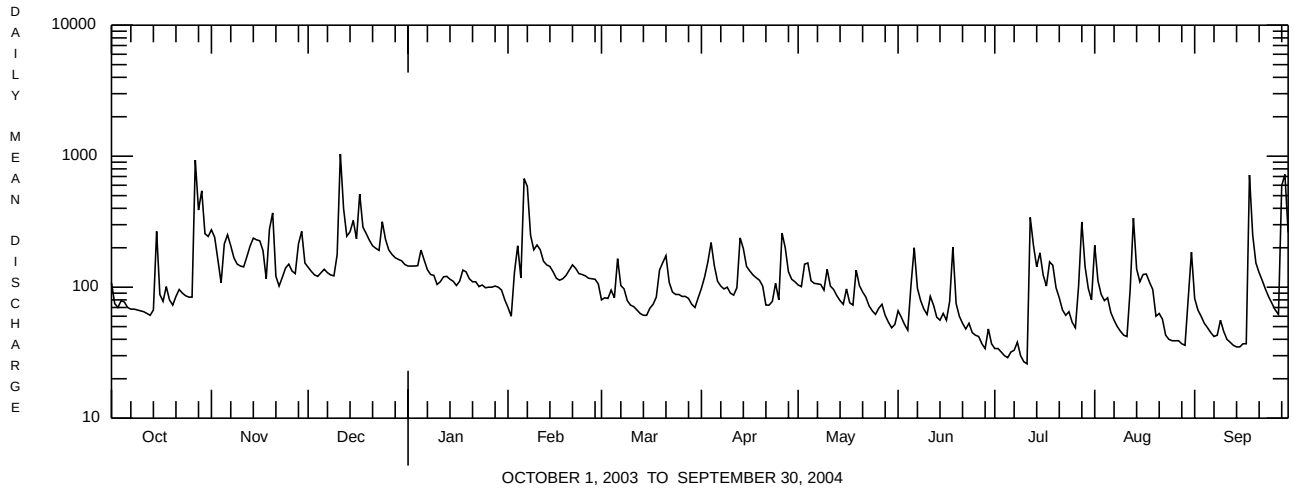
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	58740		47525			
ANNUAL MEAN	161		130		92.2	
HIGHEST ANNUAL MEAN					150	1984
LOWEST ANNUAL MEAN					35.0	2002
HIGHEST DAILY MEAN	1330	Sep 15	1040	Dec 11	2020	Jan 26 1978
LOWEST DAILY MEAN	**e**34	Jan 22	26	Jul 11	9.1	Sep 13 2002
ANNUAL SEVEN-DAY MINIMUM	**a**37	Jan 22	31	Jul 5	11	Sep 8 2002
MAXIMUM PEAK FLOW			2630	Sep 28	**b**5410	Sep 16 1999
MAXIMUM PEAK STAGE			6.72	Sep 28	9.59	Sep 16 1999
INSTANTANEOUS LOW FLOW			25	Jul 11,12	7.4	Sep 13 2002
10 PERCENT EXCEEDS	293		233		178	
50 PERCENT EXCEEDS	121		102		59	
90 PERCENT EXCEEDS	52		46		25	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.3	76.4	92.0	81.4	139	129	123	98.8	99.8	63.1	56.5	45.2
MAX	120	168	245	168	286	195	238	144	306	128	147	148
(WY)	1972	1973	1973	1973	1971	1972	1973	1973	1972	1972	1971	1971
MIN	24.8	27.6	32.0	33.3	51.6	70.0	64.3	43.2	30.3	18.3	15.3	20.1
(WY)	1970	1966	1966	1969	1969	1969	1969	1969	1966	1966	1966	1970

SUMMARY STATISTICS	WATER YEARS 1966 - 1973	
ANNUAL TOTAL ANNUAL MEAN	87.0	
HIGHEST ANNUAL MEAN	139	1973
LOWEST ANNUAL MEAN	51.6	1969
HIGHEST DAILY MEAN	3220	Jun 22 1972
LOWEST DAILY MEAN	7.2	Sep 12 1966
ANNUAL SEVEN DAY MINIMUM	8.0	Sep 7 1966
MAXIMUM PEAK FLOW	**b**8070	Jun 22 1972
MAXIMUM PEAK STAGE	**c**12.06	Jun 22 1972
INSTANTANEOUS LOW FLOW	7.2	Sep 2,3,11-13,1966
ANNUAL RUNOFF (CFSM)	1.44	
ANNUAL RUNOFF (INCHES)	19.51	
10 PERCENT EXCEEDS	163	
50 PERCENT EXCEEDS	56	
90 PERCENT EXCEEDS	23	

a Computed using estimated daily discharges.
b From rating curve extended above 5,000 ft^3/s.
c From floodmark.
e Estimated.



OCTOBER 1, 2003 TO SEPTEMBER 30, 2004

01480700 EAST BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV 24...	1200	1028	80020	139	11.3	7.8	7.2	182	186	10.7	15.1	5.16	2.25

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)
NOV 24...	8.94	42	19.4	12.8	13.5	.06	1.79	E.007	<.02	21	<2	22	<.2

Date	Chromium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Manganese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
NOV 24...	<.8	E.9	131	<1	51.3	<.02	<1.8	E1.2	E3

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	11/18/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	20
Nematoda (NEMATODES)	1
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	10
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	2
Tubificida	
Tubificidae	10
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	55
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	2
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
Caenis	2
Ephemerellidae	
Serratella	6
Heptageniidae	
Stenonema	24
Isonychiidae	
Isonychia	1
Odonata	
Gomphidae (DRAGONFLIES)	
Lanthus	3
Plecoptera (STONEFLIES)	
Capniidae	
Allocapnia	13
Nemouridae	1
Perlidae	
Acroneuria	5
Agnetina	1
Taeniopterygidae	
Strophopteryx	11
Taeniopteryx	11

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	11/18/03
Benthic macroinvertebrate	Count
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	6
Nigronia	1
Trichoptera (CADDISFLIES)	
Apataniidae	
Apatania	7
Brachycentridae	
Micrasema	11
Glossosomatidae	
Glossosoma	11
Hydropsychidae	
Cheumatopsyche	33
Diplectrona	1
Hydropsyche	451
Hydroptilidae	
Leucotrichia	4
Philopotamidae	
Chimarra	1
Dolophilodes	1
Polycentropodidae	
Neureclipsis	2
Polycentropus	1
Uenoidae	
Neophylax	8
Lepidoptera	
Pyralidae(MOTHS)	
Petrophila	1
Coleoptera (BEETLES)	
Dryopidae	
Helichus	1
Elmidae (RIFFLE BEETLES)	
Dubiraphia	5
Optioservus	130
Oulimnius	17
Promoresia	8
Stenelmis	12
Psephenidae (WATER PENNIES)	
Psephenus	27
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	410
Empididae (DANCE FLIES)	
Hemerodromia	22
Simuliidae (BLACK FLIES)	
Prosimulium	4
Simulium	8
Tipulidae (CRANE FLIES)	
Antocha	22
Tipula	1
Total Organisms	1387
Total Taxa	47

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 (U.S. 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^2.

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 and crest-stage gage. Elevation of gage is 195 ft above National Geodetic Vertical Datum of 1929, from topographic map. Feb. 1 to Apr. 10, and June 25 to Nov. 17, 1972, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 7.5 mi upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	413	255	256	e120	146	167	183	127	80	412	129
2	185	373	240	255	e115	147	197	182	119	78	187	110
3	173	293	226	250	e200	150	261	262	108	75	143	99
4	185	214	223	258	391	167	341	271	99	71	132	93
5	182	394	239	326	227	153	249	196	164	71	141	89
6	168	506	247	282	1330	275	191	189	328	75	111	85
7	161	354	235	237	985	190	180	184	164	77	100	82
8	158	295	227	219	415	177	174	187	137	95	94	83
9	156	265	221	219	308	153	178	174	122	71	90	97
10	153	257	292	194	316	144	162	283	115	65	85	87
11	152	257	1890	e180	308	139	158	187	168	63	83	78
12	146	318	639	e190	250	134	177	174	140	509	191	76
13	143	321	414	e200	233	126	401	159	113	350	750	74
14	147	355	458	e185	229	124	341	149	111	210	211	70
15	538	344	552	e165	213	125	240	143	152	280	170	71
16	168	341	396	e170	192	140	219	174	117	184	172	73
17	147	314	851	e185	186	151	207	146	123	152	178	75
18	179	213	482	e195	187	158	199	139	337	258	159	1350
19	149	502	416	e200	192	257	190	217	141	245	148	431
20	134	728	380	e190	206	242	181	177	118	156	118	239
21	143	274	351	e175	221	280	147	162	107	133	130	202
22	160	233	337	e165	214	190	144	154	101	117	121	178
23	152	238	328	e170	199	165	163	138	105	110	92	157
24	143	265	513	e160	193	157	212	127	97	114	87	142
25	141	281	395	e150	190	158	160	119	98	100	84	128
26	143	251	332	e155	183	152	390	129	97	94	83	118
27	1950	241	313	e155	179	152	358	136	86	154	82	111
28	703	383	296	e160	177	148	224	120	81	471	81	1230
29	944	478	286	e165	174	141	199	110	102	207	79	1900
30	445	278	279	e155	---	134	188	103	85	151	161	427
31	387	---	264	e145	---	153	---	106	---	132	263	---
TOTAL	8961	9979	12577	6111	8333	5128	6598	5180	3962	4948	4938	8084
MEAN	289	333	406	197	287	165	220	167	132	160	159	269
MAX	1950	728	1890	326	1330	280	401	283	337	509	750	1900
MIN	134	213	221	145	115	124	144	103	81	63	79	70
CFSM	3.22	3.70	4.51	2.19	3.20	1.84	2.45	1.86	1.47	1.78	1.77	3.00
IN.	3.71	4.13	5.20	2.53	3.45	2.12	2.73	2.14	1.64	2.05	2.04	3.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	96.8	118	175	180	178	219	206	167	129	108	78.5	107
MAX	304	333	577	527	409	525	594	410	477	421	177	396
(WY)	1997	2004	1997	1979	1979	1994	1983	1989	2003	1984	1996	2003
MIN	36.7	41.8	40.8	30.9	49.2	61.6	53.1	75.9	45.5	32.5	28.6	29.5
(WY)	2002	2002	1981	1981	2002	1985	1985	1999	1999	2002	1999	1980

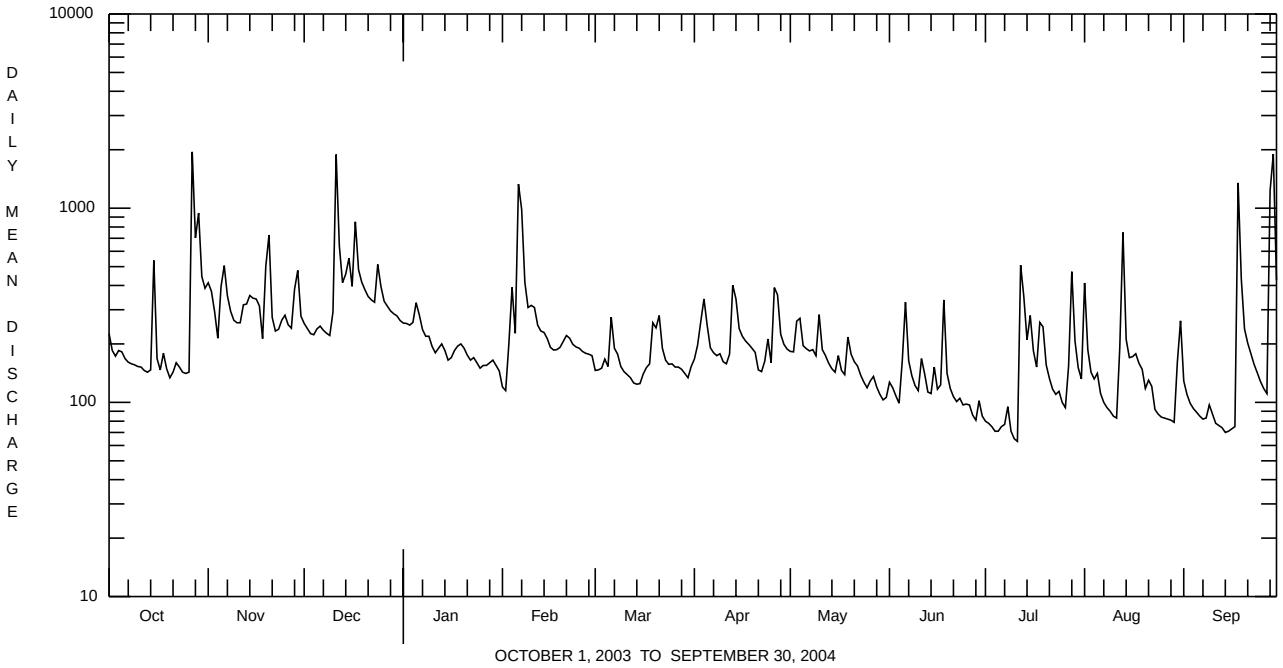
e Estimated.

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	98981		84799			
ANNUAL MEAN	271		232		147	
HIGHEST ANNUAL MEAN					257	1984
LOWEST ANNUAL MEAN					57.0	2002
HIGHEST DAILY MEAN	3000	Sep 15	1950	Oct 27	3080	Sep 16 1999
LOWEST DAILY MEAN	59	Aug 29	63	Jul 11	19	Sep 14 2002
ANNUAL SEVEN-DAY MINIMUM	68	Aug 23	74	Jul 5	22	Sep 9 2002
MAXIMUM PEAK FLOW			**a**5670	Sep 28	**b**8160	Jun 22 1972
MAXIMUM PEAK STAGE			12.83	Sep 28	**c**14.79	Sep 16 1999
ANNUAL RUNOFF (CFSM)	3.02		2.58		1.63	
ANNUAL RUNOFF (INCHES)	40.96		35.09		22.17	
10 PERCENT EXCEEDS	476		390		281	
50 PERCENT EXCEEDS	186		176		96	
90 PERCENT EXCEEDS	92		94		41	

a From rating curve extended above 3,600 ft^3/s on basis of runoff comparison with nearby stations.
b From rating curve extended above 3,600 ft^3/s on basis of slope-area measurement of peak flow at gage height 13.40 ft.
c Discharge, 7,200 ft^3/s on basis of runoff comparison with nearby stations.



CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1965 to September 1966, October 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1972 to current year.
pH: February 1972 to current year.
WATER TEMPERATURES: February 1972 to current year.
DISSOLVED OXYGEN: February 1972 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1972.

REMARKS.--Specific conductance record rated good. pH record rated good. Water temperature record rated good. Dissolved oxygen record rated fair, except for periods Oct. 5-10, Mar. 4-23, Apr. 10-26, and June 12 to July 13, which are poor. Data collection discontinued during winter months since 1981 water year. Other interruptions in the record were due to malfunctions of the equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 891 microsiemens, Mar. 5, 2001; minimum, 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, many days during winters.
DISSOLVED OXYGEN: Maximum, 19.4 mg/L, Mar. 18, 1989; minimum, 0.8 mg/L, July 23, 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)
MAR									
09...	1300	1028	1028	151	15.0	8.0	307	7.8	9
11...	1310	1028	1028	139	15.7	8.1	300	8.9	5
23...	1330	1028	1028	160	14.2	7.9	310	7.8	4
APR									
07...	1035	1028	1028	184	11.3	7.7	290	9.4	53
20...	1450	1028	1028	180	10.3	8.2	282	18.3	120
MAY									
04...	1200	1028	1028	249	10.4	7.7	253	13.0	460
11...	1500	1028	1028	173	10.6	7.8	287	20.2	290
25...	1300	1028	1028	117	8.6	7.6	302	22.9	2500
JUN									
01...	1345	1028	1028	120	9.0	7.7	307	19.7	450
16...	1100	1028	1028	104	7.4	7.0	306	16.5	820
23...	1450	1028	1028	107	9.8	7.9	311	22.8	240
JUL									
01...	1300	1028	1028	75	9.8	7.9	331	22.2	250
13...	1330	1028	1028	235	7.5	7.4	215	22.3	3700
22...	1245	1028	1028	125	9.5	7.7	298	23.6	820
AUG									
04...	1350	1028	1028	129	8.4	7.9	297	26.0	490
18...	1315	1028	1028	157	9.0	7.7	268	21.4	210
26...	1305	1028	1028	86	9.6	7.9	352	21.9	390
SEP									
07...	1325	1028	1028	79	9.3	7.8	327	22.3	550
22...	1420	1028	1028	178	9.0	7.6	262	20.2	300

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 22...	1300	1028	80020	164	10.5	7.7	7.8	268	300	13.6	24.9	8.91	3.41

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)
OCT 22...	16.2	66	29.1	12.4	16.0	<.04	2.63	E.006	.09	17	<2	85	<.2

Date	Chromium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Manganese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
OCT 22...	<.8	1.8	69	<1	15.0	<.02	E1.3	E1.3	4

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2.

Date	10/22/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	4
Nematoda (NEMATODES)	2
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	12
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
Corbicula fluminea	4
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	12
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	30
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	12
Baetis	5
Ephemerellidae	
Serratella	3
Heptageniidae	
Stenonema	10
Plecoptera (STONEFLIES)	
Perlidae	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
Corydalus	2

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/22/03
Benthic macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Brachycentridae	
Micrasema	1
Glossosomatidae	
Glossosoma	2
Hydropsychidae	
Cheumatopsyche	201
Hydropsyche	201
Hydroptilidae	
Leucotrichia	7
Philopotamidae	
Chimarra	12
Rhyacophilidae	
Rhyacophila	1
Lepidoptera	
Pyralididae (MOTHS)	
Petrophila	3
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Ancyronyx	2
Optioservus	282
Oulimnius	7
Stenelmis	106
Hydrophilidae	
Berosus	1
Psephenidae (WATER PENNIES)	
Psephenus	23
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	221
Empididae (DANCE FLIES)	
Hemerodromia	23
Simuliidae	
Simulium	47
Tipulidae (CRANE FLIES)	
Antocha	12
Total Organisms	1249
Total Taxa	30

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	294	281	288	---	---	---	---	---	---	---	---	---
3	301	294	296	---	---	---	---	---	---	---	---	---
4	297	283	290	---	---	---	---	---	---	---	---	---
5	292	281	285	---	---	---	---	---	---	---	---	---
6	296	292	293	---	---	---	---	---	---	---	---	---
7	303	290	295	---	---	---	---	---	---	---	---	---
8	303	289	297	---	---	---	---	---	---	---	---	---
9	300	293	296	---	---	---	---	---	---	---	---	---
10	300	286	294	---	---	---	---	---	---	---	---	---
11	305	285	300	261	253	256	---	---	---	---	---	---
12	303	289	296	259	244	249	---	---	---	---	---	---
13	310	294	303	253	227	243	---	---	---	---	---	---
14	310	268	297	233	227	230	---	---	---	---	---	---
15	268	167	200	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	268	260	264	---	---	---	---	---	---
19	---	---	---	268	143	236	---	---	---	---	---	---
20	---	---	---	229	143	176	---	---	---	---	---	---
21	295	275	287	259	229	247	---	---	---	---	---	---
22	283	275	277	269	259	264	---	---	---	---	---	---
23	285	274	279	274	253	266	---	---	---	---	---	---
24	281	274	278	256	250	253	---	---	---	---	---	---
25	283	277	279	257	243	250	---	---	---	---	---	---
26	---	---	---	257	248	253	---	---	---	---	---	---
27	---	---	---	257	251	254	---	---	---	---	---	---
28	---	---	---	256	180	239	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	310	167	286	274	143	245	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	294	278	285	306	287	298	285	276	279
2	---	---	---	293	281	286	298	276	289	289	282	285
3	---	---	---	292	284	288	296	273	281	285	245	266
4	---	---	---	328	290	305	288	226	268	269	236	251
5	---	---	---	308	301	304	281	239	265	283	268	274
6	---	---	---	328	274	294	288	281	285	283	276	278
7	---	---	---	299	280	293	305	277	289	283	277	280
8	---	---	---	309	294	300	295	290	292	283	272	276
9	---	---	---	310	296	302	292	281	287	284	272	280
10	---	---	---	311	299	303	298	282	291	284	232	253
11	---	---	---	304	298	301	295	281	291	287	268	275
12	---	---	---	306	289	300	292	257	285	291	269	280
13	---	---	---	307	302	305	258	231	241	292	278	285
14	---	---	---	307	303	304	264	233	246	292	286	289
15	---	---	---	305	297	302	276	264	269	292	285	288
16	---	---	---	575	301	362	275	270	272	291	271	279
17	---	---	---	681	518	610	277	273	275	292	284	287
18	---	---	---	518	409	452	280	274	276	296	288	291
19	---	---	---	624	397	494	280	275	278	294	252	265
20	---	---	---	481	334	393	286	276	279	277	254	264
21	---	---	---	334	275	285	298	286	295	283	277	280
22	---	---	---	307	291	300	297	290	293	288	278	282
23	---	---	---	312	300	308	302	267	296	302	283	291
24	---	---	---	303	298	300	291	262	274	302	292	296
25	---	---	---	309	299	304	298	290	293	304	299	302
26	---	---	---	303	293	299	294	180	253	305	288	298
27	276	270	273	302	296	299	251	190	222	305	280	296
28	274	270	271	303	297	300	274	251	263	311	302	306
29	285	267	271	305	299	301	280	272	275	322	308	313
30	---	---	---	310	296	303	284	273	279	325	314	319
31	---	---	---	306	293	301	---	---	---	323	302	316
MONTH	285	267	272	681	274	325	306	180	277	325	232	285

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	315	298	305	339	329	333	293	149	226	276	234	260
2	---	---	---	352	336	341	269	222	253	292	276	283
3	---	---	---	355	340	346	290	268	278	302	280	292
4	---	---	---	356	328	343	301	290	296	308	300	304
5	327	242	298	362	336	350	296	276	283	311	303	308
6	260	192	224	354	340	348	309	291	298	319	305	311
7	285	259	275	358	325	352	318	308	312	340	315	325
8	299	285	292	337	289	315	326	311	317	350	336	341
9	304	289	297	361	332	343	328	315	322	341	304	317
10	314	304	309	361	338	348	331	319	327	334	305	316
11	314	257	290	366	343	355	337	324	331	342	315	330
12	315	284	300	367	130	255	335	145	306	340	319	332
13	320	306	311	249	138	203	224	125	170	339	330	334
14	329	307	322	265	217	252	263	224	246	350	333	337
15	312	260	290	252	210	228	276	257	265	361	330	346
16	320	306	312	271	252	261	280	254	270	361	346	352
17	326	282	319	281	264	273	267	262	265	361	344	353
18	282	157	211	281	216	256	280	264	271	356	106	212
19	308	258	282	264	212	240	291	270	280	234	149	196
20	310	295	303	282	263	273	353	286	301	262	233	243
21	321	308	313	299	277	283	357	257	327	---	---	---
22	321	313	316	312	295	301	321	266	291	---	---	---
23	329	310	316	313	303	308	332	319	325	284	251	269
24	334	324	328	317	284	307	338	323	333	291	283	285
25	337	319	331	322	304	313	356	321	336	298	280	287
26	333	317	326	322	309	318	359	335	350	298	282	291
27	339	326	332	324	210	299	358	342	350	310	297	302
28	343	320	335	230	159	187	359	337	350	315	103	263
29	340	310	323	264	225	242	359	337	349	206	98	154
30	330	319	324	283	261	271	359	190	312	---	---	---
31	---	---	---	296	283	288	235	185	210	---	---	---
MONTH	343	157	303	367	130	295	359	125	295	361	98	294

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
3	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
4	7.6	7.4	7.4	---	---	---	---	---	---	---	---	---
5	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
6	7.6	7.4	7.4	---	---	---	---	---	---	---	---	---
7	7.7	7.4	7.4	---	---	---	---	---	---	---	---	---
8	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
9	7.6	7.3	7.3	---	---	---	---	---	---	---	---	---
10	7.7	7.2	7.3	---	---	---	---	---	---	---	---	---
11	7.8	7.3	7.4	7.4	7.3	7.3	---	---	---	---	---	---
12	7.8	7.3	7.4	7.3	7.2	7.2	---	---	---	---	---	---
13	7.5	7.3	7.3	7.4	7.2	7.3	---	---	---	---	---	---
14	7.7	7.3	7.3	7.3	7.2	7.3	---	---	---	---	---	---
15	7.3	7.0	7.0	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	7.4	7.2	7.3	---	---	---	---	---	---
19	---	---	---	7.4	7.0	7.3	---	---	---	---	---	---
20	---	---	---	7.1	7.0	7.1	---	---	---	---	---	---
21	7.6	7.3	7.3	7.2	7.1	7.2	---	---	---	---	---	---
22	7.5	7.3	7.3	7.3	7.2	7.2	---	---	---	---	---	---
23	7.6	7.3	7.4	7.4	7.2	7.3	---	---	---	---	---	---
24	7.5	7.3	7.3	7.4	7.2	7.3	---	---	---	---	---	---
25	7.5	7.3	7.3	7.4	7.2	7.3	---	---	---	---	---	---
26	---	---	---	7.4	7.3	7.3	---	---	---	---	---	---
27	---	---	---	7.4	7.3	7.3	---	---	---	---	---	---
28	---	---	---	7.3	7.2	7.3	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	7.8	7.4	7.5	7.4	7.3	7.3	---	---	---	---	---	---
MIN	7.3	7.0	7.0	7.1	7.0	7.1	---	---	---	---	---	---

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	7.8	7.5	7.6	8.3	7.4	7.6	7.5	7.2	7.3	7.6	7.2	7.3
2	---	---	---	8.2	7.4	7.6	7.5	7.3	7.4	7.7	7.3	7.4
3	---	---	---	8.3	7.4	7.6	7.6	7.4	7.5	7.7	7.3	7.4
4	---	---	---	8.4	7.4	7.6	7.9	7.4	7.6	7.8	7.3	7.4
5	7.6	7.6	7.6	8.2	7.4	7.5	7.9	7.5	7.6	7.5	7.3	7.4
6	7.6	7.5	7.5	8.0	7.3	7.5	8.0	7.6	7.7	7.6	7.3	7.4
7	7.7	7.5	7.6	8.2	7.4	7.5	8.1	7.6	7.7	7.9	7.3	7.4
8	7.7	7.5	7.5	7.9	7.3	7.5	8.0	7.6	7.7	7.6	7.4	7.4
9	7.7	7.4	7.5	8.0	7.4	7.5	8.1	7.5	7.6	7.7	7.4	7.5
10	7.8	7.4	7.5	8.1	7.4	7.6	8.2	7.5	7.7	7.7	7.4	7.4
11	7.6	7.5	7.5	8.2	7.4	7.6	8.1	7.5	7.6	7.7	7.4	7.4
12	7.7	7.5	7.5	7.5	7.1	7.3	8.0	7.3	7.5	7.8	7.4	7.4
13	7.7	7.4	7.6	7.5	7.1	7.3	7.3	7.1	7.2	7.8	7.4	7.4
14	7.6	7.3	7.4	7.6	7.4	7.5	7.4	7.3	7.4	7.7	7.3	7.4
15	7.5	7.2	7.3	7.6	7.3	7.4	7.6	7.3	7.5	7.7	7.3	7.4
16	7.8	7.3	7.5	7.6	7.4	7.5	7.7	7.4	7.4	7.7	7.3	7.4
17	7.7	7.4	7.5	7.7	7.4	7.5	7.7	7.4	7.5	7.6	7.3	7.4
18	7.4	7.2	7.3	7.5	7.4	7.4	7.8	7.5	7.5	7.4	7.0	7.2
19	7.6	7.3	7.4	7.6	7.4	7.4	7.7	7.4	7.5	7.3	7.1	7.2
20	7.6	7.4	7.4	7.7	7.4	7.5	7.8	7.4	7.5	7.4	7.3	7.3
21	7.6	7.4	7.4	7.8	7.4	7.5	7.7	7.4	7.5	---	---	---
22	7.6	7.4	7.5	7.9	7.4	7.6	7.7	7.4	7.5	---	---	---
23	8.0	7.4	7.5	7.7	7.4	7.6	7.9	7.5	7.6	7.3	7.2	7.3
24	8.0	7.5	7.6	7.7	7.3	7.4	7.9	7.5	7.6	7.3	7.2	7.2
25	8.0	7.4	7.6	7.8	7.4	7.5	8.0	7.5	7.6	7.3	7.2	7.2
26	8.0	7.4	7.6	7.9	7.4	7.5	8.1	7.4	7.6	7.4	7.2	7.2
27	8.0	7.5	7.6	7.6	7.4	7.5	8.1	7.5	7.6	7.5	7.3	7.3
28	8.2	7.5	7.6	7.4	7.2	7.3	8.3	7.5	7.6	7.4	7.1	7.3
29	8.0	7.5	7.6	7.7	7.4	7.5	8.2	7.5	7.6	7.2	7.0	7.2
30	8.2	7.4	7.6	7.7	7.4	7.5	7.8	7.2	7.5	---	---	---
31	---	---	---	7.8	7.4	7.5	7.3	7.2	7.2	---	---	---
MAX	8.2	7.6	7.6	8.4	7.4	7.6	8.3	7.6	7.7	7.9	7.4	7.5
MIN	7.4	7.2	7.3	7.4	7.1	7.3	7.3	7.1	7.2	7.2	7.0	7.2

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	15.5	13.5	14.0	---	---	---	---	---	---	---	---	---
3	14.0	12.0	13.0	---	---	---	---	---	---	---	---	---
4	13.5	12.0	13.0	---	---	---	---	---	---	---	---	---
5	13.5	12.0	13.0	---	---	---	---	---	---	---	---	---
6	13.5	12.0	13.0	---	---	---	---	---	---	---	---	---
7	13.5	11.5	13.0	---	---	---	---	---	---	---	---	---
8	15.5	13.0	14.0	---	---	---	---	---	---	---	---	---
9	15.5	14.0	15.0	---	---	---	---	---	---	---	---	---
10	16.5	15.5	15.5	---	---	---	---	---	---	---	---	---
11	17.0	15.0	16.0	10.5	8.0	9.5	---	---	---	---	---	---
12	17.0	15.5	16.0	12.0	10.5	11.5	---	---	---	---	---	---
13	17.0	15.0	16.0	12.5	9.5	11.0	---	---	---	---	---	---
14	15.5	14.0	15.0	10.0	8.5	9.5	---	---	---	---	---	---
15	16.0	14.0	15.0	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	11.5	10.0	11.0	---	---	---	---	---	---
19	---	---	---	14.5	11.5	13.0	---	---	---	---	---	---
20	---	---	---	14.0	11.0	12.5	---	---	---	---	---	---
21	14.5	12.5	13.5	11.5	9.5	10.5	---	---	---	---	---	---
22	14.5	12.5	14.0	11.5	10.0	10.5	---	---	---	---	---	---
23	12.5	10.5	11.0	11.5	10.0	11.0	---	---	---	---	---	---
24	11.0	9.0	10.0	12.5	11.0	11.5	---	---	---	---	---	---
25	12.0	9.5	10.5	11.5	9.0	10.0	---	---	---	---	---	---
26	---	---	---	9.5	8.0	9.0	---	---	---	---	---	---
27	---	---	---	10.0	8.5	9.5	---	---	---	---	---	---
28	---	---	---	12.0	10.0	11.0	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	17.0	9.0	13.7	14.5	8.0	10.7	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	8.5	6.0	7.5	11.5	9.5	10.5	19.0	15.0	17.0
2	---	---	---	10.0	7.5	8.5	11.0	9.5	10.0	18.5	16.5	17.5
3	---	---	---	10.5	7.5	9.5	10.0	9.0	9.5	18.0	13.5	15.5
4	---	---	---	10.0	9.0	9.5	9.5	7.0	8.5	15.5	12.0	14.0
5	---	---	---	10.0	9.0	9.5	9.5	5.5	7.5	15.0	12.0	13.5
6	---	---	---	11.0	9.5	10.0	10.5	6.0	8.5	17.0	13.0	15.0
7	---	---	---	11.0	8.5	10.0	13.5	9.0	11.0	17.5	14.5	16.0
8	---	---	---	10.0	8.0	9.0	12.5	10.0	10.5	17.5	15.0	16.0
9	---	---	---	8.5	7.5	8.0	13.5	9.5	11.5	18.0	14.0	16.0
10	---	---	---	8.0	7.0	7.5	13.5	9.5	11.5	19.5	16.5	18.0
11	---	---	---	9.5	6.0	8.0	12.5	10.0	10.5	20.5	17.0	19.0
12	---	---	---	9.0	7.0	8.0	10.5	9.0	10.0	22.5	19.0	21.0
13	---	---	---	8.5	5.5	7.0	10.5	8.5	9.0	23.0	19.0	21.0
14	---	---	---	7.5	5.5	6.5	11.0	10.5	10.5	22.5	19.5	21.0
15	---	---	---	11.0	7.0	8.5	13.5	9.0	11.0	23.0	19.5	21.5
16	---	---	---	9.0	4.5	6.5	14.0	9.0	11.5	22.5	20.0	21.0
17	---	---	---	6.5	4.5	5.5	15.5	10.5	13.0	22.5	19.5	21.0
18	---	---	---	8.5	5.5	7.0	17.5	12.5	15.0	22.0	19.5	21.0
19	---	---	---	8.0	5.0	6.5	18.5	13.5	16.5	21.0	19.5	20.0
20	---	---	---	9.0	4.5	7.0	18.5	15.0	17.0	20.0	18.5	19.5
21	---	---	---	9.5	7.5	8.5	18.0	15.0	16.5	20.0	19.0	19.5
22	---	---	---	8.0	5.5	7.0	19.5	15.0	17.0	22.5	19.0	20.5
23	---	---	---	8.5	4.5	6.5	19.0	16.5	17.5	23.5	20.5	22.0
24	---	---	---	10.0	5.5	8.0	19.0	15.0	17.0	24.5	21.5	23.0
25	---	---	---	10.0	8.5	9.5	17.0	14.0	15.0	24.5	21.5	23.0
26	---	---	---	13.5	9.5	11.5	14.0	13.0	13.5	22.5	20.5	21.0
27	6.5	4.0	5.5	13.0	11.5	12.5	16.0	13.0	14.5	22.0	20.0	21.0
28	7.5	4.0	6.0	14.5	11.5	12.5	15.0	11.5	13.5	22.5	20.5	21.0
29	8.0	4.5	6.5	14.0	10.5	12.0	17.0	11.5	14.5	21.5	18.5	20.0
30	---	---	---	11.5	9.5	10.0	18.5	13.5	16.0	19.5	17.0	18.5
31	---	---	---	10.0	9.0	9.5	---	---	---	18.5	17.5	18.0
MONTH	8.0	4.0	6.0	14.5	4.5	8.6	19.5	5.5	12.6	24.5	12.0	19.1

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.5	17.0	18.5	23.5	20.0	21.5	25.0	23.5	24.0	23.0	20.5	22.0
2	---	---	---	25.0	21.0	22.5	26.0	23.5	24.5	23.0	20.5	22.0
3	---	---	---	25.0	21.5	23.0	26.5	24.5	25.0	23.5	20.5	22.0
4	---	---	---	25.5	21.0	23.0	26.5	24.0	25.5	23.0	20.5	22.0
5	19.5	16.5	18.0	26.0	22.5	24.0	25.0	23.0	24.0	22.0	20.5	21.5
6	17.0	16.0	16.5	26.5	22.5	24.0	23.0	21.0	22.0	22.0	19.5	20.5
7	20.0	16.5	18.0	26.0	21.5	23.5	21.0	19.5	20.5	23.0	20.5	21.5
8	22.5	18.5	20.5	25.5	22.5	23.5	22.5	18.5	20.5	22.5	21.5	22.0
9	24.0	20.0	22.0	24.5	21.5	23.0	23.5	19.5	21.5	23.5	22.0	22.5
10	23.5	21.5	22.5	25.0	20.5	22.5	24.0	21.0	22.5	23.5	21.0	22.0
11	22.5	18.5	20.5	25.5	21.5	23.5	24.0	22.0	23.0	22.5	20.5	21.5
12	21.5	17.5	19.5	23.5	21.0	22.5	23.5	22.0	22.5	22.0	19.5	20.5
13	20.0	18.0	18.5	23.5	21.0	22.0	22.5	22.0	22.0	23.5	20.0	21.5
14	20.5	18.5	19.0	23.0	22.0	22.5	22.5	21.5	22.0	22.0	20.5	21.0
15	22.5	19.5	21.0	23.0	21.0	22.0	23.5	21.5	22.5	20.5	19.5	20.5
16	22.5	21.0	21.5	23.0	21.0	22.0	24.0	21.5	22.5	21.5	20.0	21.0
17	23.5	21.5	22.5	24.0	21.0	22.5	22.5	20.0	21.0	21.5	20.5	21.0
18	24.0	21.5	22.5	23.0	20.5	21.5	22.0	20.0	21.0	21.5	19.0	20.0
19	24.0	22.0	23.0	22.5	20.5	21.0	22.0	20.5	21.0	19.0	17.5	18.5
20	23.0	19.5	21.0	24.0	21.0	22.5	23.5	20.5	22.0	19.5	17.0	18.5
21	22.5	18.5	20.5	24.5	21.5	23.0	23.0	21.5	22.5	---	---	---
22	21.5	20.0	21.0	25.0	22.0	23.5	22.5	19.5	21.0	---	---	---
23	23.0	20.5	21.5	24.0	23.0	23.5	22.5	19.0	20.5	21.0	19.0	20.0
24	24.0	20.0	22.0	23.5	22.0	22.5	22.5	20.0	21.5	21.0	19.5	20.5
25	23.0	21.0	22.0	22.0	21.5	21.5	23.0	21.0	22.0	20.5	19.0	20.0
26	23.0	21.0	21.5	24.5	20.5	22.5	23.0	20.5	21.5	20.0	19.0	19.5
27	22.5	19.0	20.5	23.0	22.0	22.5	24.0	21.0	22.5	20.5	18.5	19.5
28	22.5	19.0	20.5	23.0	21.5	22.5	25.0	22.0	23.5	20.5	19.0	20.0
29	23.0	19.5	21.0	24.5	22.0	23.0	25.5	22.5	24.0	19.5	19.0	19.0
30	23.5	19.0	21.0	25.5	22.5	24.0	24.0	23.0	23.0	---	---	---
31	---	---	---	26.5	23.5	25.0	23.5	22.0	23.0	---	---	---
MONTH	24.0	16.0	20.6	26.5	20.0	22.8	26.5	18.5	22.4	23.5	17.0	20.8

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	10.9	9.5	10.3	---	---	---	---	---	---	---	---	---
3	11.6	10.4	10.9	---	---	---	---	---	---	---	---	---
4	11.2	10.3	10.8	---	---	---	---	---	---	---	---	---
5	11.5	10.2	10.7	---	---	---	---	---	---	---	---	---
6	11.3	10.0	10.6	---	---	---	---	---	---	---	---	---
7	11.6	9.7	10.6	---	---	---	---	---	---	---	---	---
8	11.2	9.2	10.0	---	---	---	---	---	---	---	---	---
9	11.6	8.9	10	---	---	---	---	---	---	---	---	---
10	10.9	8.7	9.4	---	---	---	---	---	---	---	---	---
11	11.0	8.6	9.5	11.4	10.2	10.9	---	---	---	---	---	---
12	10.9	8.4	9.4	10.4	9.7	10.1	---	---	---	---	---	---
13	10.4	8.4	9.1	10.4	9.6	9.9	---	---	---	---	---	---
14	10.9	8.5	9.3	10.8	9.9	10.4	---	---	---	---	---	---
15	9.1	8.4	8.8	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	10.9	9.9	10.4	---	---	---	---	---	---
19	---	---	---	9.9	8.6	9.5	---	---	---	---	---	---
20	---	---	---	9.5	8.8	9.3	---	---	---	---	---	---
21	10.0	8.7	9.3	10.5	9.5	10	---	---	---	---	---	---
22	9.7	8.6	9.0	10.5	9.5	10	---	---	---	---	---	---
23	10.5	9.1	9.8	10.5	9.5	9.9	---	---	---	---	---	---
24	10.8	9.6	10.1	10.1	9.1	9.6	---	---	---	---	---	---
25	10.8	9.4	10.0	10.6	9.1	9.9	---	---	---	---	---	---
26	---	---	---	10.8	9.8	10.2	---	---	---	---	---	---
27	---	---	---	10.7	9.5	10.1	---	---	---	---	---	---
28	---	---	---	9.5	8.7	9.2	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.6	8.4	9.9	11.4	8.6	10.0	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	14.4	11.6	12.8	12.4	9.9	10.8	10.6	7.8	9.1
2	---	---	---	14.0	11.3	12.4	11.8	9.8	10.7	10.0	7.7	8.6
3	---	---	---	14.5	11.1	12.5	12.2	10.4	11.2	9.6	7.7	8.7
4	---	---	---	14.1	11.0	12.2	11.6	10.4	11.1	10.6	8.7	9.7
5	---	---	---	14.0	11.4	12.4	12.8	11.1	11.9	10.9	8.7	9.7
6	---	---	---	12.3	11.4	11.7	12.9	10.3	11.8	10.8	8.4	9.6
7	---	---	---	14.5	11.7	12.9	11.8	9.2	10.7	10.7	8.2	9.2
8	---	---	---	14.8	11.7	13.1	11.7	9.2	10.5	11.0	8.2	9.5
9	---	---	---	15.8	12.7	13.8	11.8	9.5	10.7	11.3	8.0	9.7
10	---	---	---	15.7	12.6	13.9	11.9	9.5	10.7	10.0	7.8	8.7
11	---	---	---	15.3	11.7	13.6	11.5	9.6	10.6	10.6	7.1	8.8
12	---	---	---	15.1	11.6	13.2	12.0	10.6	11.2	10.0	6.9	8.1
13	---	---	---	15.5	12.4	13.8	11.3	10.4	11.1	10.1	6.8	8.2
14	---	---	---	16.0	12.4	14.1	11.1	10.4	10.7	10.2	6.8	8.2
15	---	---	---	15.1	10.9	13.0	11.7	10.2	10.9	10.0	6.9	8.2
16	---	---	---	14.2	10.9	12.8	11.7	10.1	10.9	9.8	6.5	7.9
17	---	---	---	15.7	12.5	14.1	11.4	9.5	10.6	9.9	7.0	8.1
18	---	---	---	15.2	11.6	13.3	11.1	8.8	10.1	9.8	7.0	8.1
19	---	---	---	14.7	11.5	12.9	10.7	8.2	9.5	8.4	6.8	7.6
20	---	---	---	14.6	11.2	13.0	10.3	7.8	8.9	9.4	7.5	8.3
21	---	---	---	13.0	11.1	11.8	10.2	7.8	8.8	8.9	7.4	8.1
22	---	---	---	14.0	11.3	12.5	10.4	8.1	9.0	9.2	7.0	8.1
23	---	---	---	14.3	11.3	12.7	10.4	8.1	9.1	8.8	6.6	7.6
24	---	---	---	14.1	10.4	12.3	10.4	8.3	9.3	8.8	6.6	7.5
25	---	---	---	13.4	10.3	11.6	10.4	8.7	9.6	8.8	6.3	7.5
26	---	---	---	13.5	9.0	11.2	9.8	9.1	9.3	8.6	6.7	7.5
27	14.0	11.9	12.7	12.6	9.0	10.4	10.3	8.8	9.5	8.9	7.2	7.9
28	13.9	11.9	12.8	13.1	9.0	10.6	11.1	8.9	10	8.8	7.0	7.7
29	14.3	11.7	12.9	13.0	9.1	10.7	11.1	8.5	9.9	9.1	7.0	8.0
30	---	---	---	13.4	9.3	11.2	10.6	8.0	9.3	9.7	7.5	8.5
31	---	---	---	12.9	10.2	11.3	---	---	---	8.3	7.4	7.8
MONTH	14.3	11.7	12.8	16.0	9.0	12.5	12.9	7.8	10.3	11.3	6.3	8.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	9.2	7.4	8.1	10.0	6.9	8.1	7.6	7.1	7.3	8.8	7.1	7.8
2	---	---	---	9.8	6.7	7.9	8.1	6.9	7.5	9.1	7.2	8.0
3	---	---	---	10.0	6.5	8.0	8.4	6.8	7.5	9.2	7.3	8.0
4	---	---	---	10.1	6.7	8.1	8.6	6.8	7.5	9.4	7.2	8.1
5	8.4	7.5	8.0	9.8	6.3	7.8	8.9	6.7	7.7	8.6	7.2	7.9
6	8.8	8.3	8.6	9.6	6.1	7.5	9.3	7.5	8.3	9.6	7.4	8.4
7	8.9	7.5	8.4	9.9	6.4	7.6	10.1	7.9	8.9	9.4	7.0	8.1
8	8.6	7.0	7.8	9.3	6.4	7.6	10.3	7.9	9.0	8.8	7.0	7.6
9	8.4	6.6	7.5	9.5	6.6	7.8	10.2	7.6	8.7	8.8	6.9	7.6
10	8.2	6.5	7.3	9.9	6.8	8.1	10.4	7.4	8.6	9.3	7.4	8.1
11	8.0	6.6	7.4	10.0	6.6	8.0	10.3	7.1	8.3	9.6	7.3	8.2
12	8.6	7.1	7.9	7.2	6.4	6.8	10.0	7.2	8.2	9.9	7.4	8.3
13	8.7	7.1	7.9	7.7	7.1	7.4	7.7	7.2	7.5	9.6	7.1	8.1
14	8.3	7.0	7.7	---	---	---	8.3	7.2	7.8	9.6	7.0	8.1
15	8.0	6.5	7.1	---	---	---	8.4	7.2	7.8	9.7	7.3	8.2
16	8.5	6.5	7.4	8.2	7.1	7.7	8.3	7.1	7.6	9.5	7.2	8.1
17	8.5	6.8	7.4	8.5	7.3	7.8	9.2	7.3	8.2	9.5	6.9	7.8
18	7.4	6.8	7.2	8.1	7.3	7.7	9.3	7.7	8.4	8.7	6.8	7.8
19	8.1	6.9	7.4	8.7	7.8	8.3	9.2	7.6	8.2	9.2	8.7	9.0
20	8.6	7.0	7.9	9.0	7.7	8.3	9.4	7.2	8.3	9.6	8.8	9.2
21	9.1	7.5	8.2	9.3	7.6	8.4	8.5	6.9	7.4	---	---	---
22	9.0	7.4	8.1	9.8	7.6	8.5	9.3	7.3	8.1	---	---	---
23	10.0	7.5	8.4	9.3	7.6	8.3	9.7	7.6	8.4	---	---	---
24	9.9	7.8	8.6	9.9	7.6	8.6	9.7	7.4	8.3	---	---	---
25	10.0	7.4	8.5	10.2	8.1	8.9	10.0	7.3	8.3	---	---	---
26	9.7	7.4	8.3	10.6	7.6	9.0	10.1	7.2	8.3	---	---	---
27	9.9	7.6	8.6	9.4	7.5	8.2	10.1	7.1	8.3	---	---	---
28	10.2	7.7	8.7	8.4	7.7	8.2	10.5	7.0	8.3	---	---	---
29	9.7	7.4	8.3	8.9	7.5	8.1	10.3	6.8	8.1	---	---	---
30	10.1	7.1	8.4	9.0	7.4	8.1	9.2	6.7	7.6	---	---	---
31	---	---	---	8.9	7.1	7.9	7.6	6.9	7.3	---	---	---
MONTH	10.2	6.5	8.0	10.6	6.1	8.0	10.5	6.7	8.1	9.9	6.8	8.1

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
SEP										
09...	1106	1028	1028	106	1.00	8.8	7.6	323	22.1	5
09...	1107	1028	1028	--	1.00	8.8	7.6	323	22.1	10
09...	1108	1028	1028	--	1.00	8.8	7.5	324	22.1	15
09...	1109	1028	1028	--	1.00	8.7	7.5	324	22.1	20
09...	1110	1028	1028	--	1.00	8.7	7.5	323	22.1	25
09...	1111	1028	1028	--	1.00	8.6	7.5	323	22.1	30
09...	1112	1028	1028	--	1.00	8.7	7.5	321	22.0	35
09...	1113	1028	1028	--	1.00	8.7	7.5	321	22.0	40
09...	1114	1028	1028	--	1.00	8.7	7.5	320	22.0	45
09...	1115	1028	1028	--	.50	8.7	7.5	318	22.0	48
09...	1116	1028	1028	--	--	--	--	--	--	50

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA
(Pennsylvania Water-Quality Network Station)

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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to September 1953, October 1962 to current year. Prior to October 1911, monthly discharge only, 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), WDR PA-98-1: 1996-97 (M).

GAGE.--Water-stage recorder and crest-stage gage. 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.--No estimated daily discharges. Records good. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 17 mi upstream. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 14.64 ft, gage datum, discharge, about 16,400 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	1210	820	800	444	451	517	540	383	260	1980	468
2	488	1070	743	788	423	457	599	532	376	254	843	331
3	449	942	692	786	1090	478	909	750	346	246	471	298
4	464	775	670	774	1940	503	979	933	315	237	397	279
5	481	843	727	993	998	508	947	602	423	233	479	268
6	418	1940	795	945	3820	956	599	561	1100	237	370	264
7	394	1220	725	732	5600	773	545	533	541	231	320	256
8	384	930	681	666	1730	602	522	552	411	321	303	265
9	375	804	665	673	980	528	542	501	360	245	288	332
10	363	759	782	582	944	490	501	1230	336	218	273	293
11	356	748	6110	599	1110	462	475	680	508	212	266	253
12	339	1050	2880	628	764	440	500	558	474	1040	536	242
13	324	931	1430	626	684	410	1280	506	355	1210	2140	232
14	323	884	1480	598	674	399	1240	472	337	462	645	227
15	1840	834	2060	583	625	401	809	449	769	651	492	231
16	572	807	1390	492	554	448	658	517	691	422	440	239
17	428	792	2590	612	534	538	606	465	482	356	431	237
18	494	631	1980	718	536	526	572	462	1410	646	393	3220
19	419	1200	1420	730	539	891	547	643	523	886	368	2650
20	363	3150	1290	577	585	826	528	595	398	434	347	623
21	356	1110	1180	534	610	851	477	502	350	346	424	500
22	372	878	1120	534	609	598	462	511	330	307	501	433
23	354	803	1080	488	546	517	485	433	333	298	322	386
24	332	816	1590	511	534	493	826	398	314	321	300	355
25	318	882	1450	472	532	488	527	372	318	295	284	332
26	320	779	1100	497	506	474	972	387	355	274	279	314
27	3900	727	1010	516	491	472	1460	409	289	432	273	304
28	4060	953	936	525	480	460	742	375	268	2340	264	3480
29	3090	1890	904	516	481	430	608	342	306	676	256	10100
30	1720	947	897	489	---	412	565	323	281	434	350	1460
31	1260	---	833	466	---	497	---	330	---	364	1150	---
TOTAL	25926	31305	42030	19450	29363	16779	20999	16463	13682	14888	16185	28872
MEAN	836	1044	1356	627	1013	541	700	531	456	480	522	962
MAX	4060	3150	6110	993	5600	956	1460	1230	1410	2340	2140	10100
MIN	318	631	665	466	423	399	462	323	268	212	256	227

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	284	341	489	533	555	669	615	510	413	331	248	323
MAX	924	1044	1634	1664	1308	1713	1509	1097	1459	1153	562	1237
(WY)	1997	2004	1997	1979	1979	1994	1983	1989	2003	1975	1996	2003
MIN	99.5	105	112	106	144	195	183	249	153	88.8	64.0	80.2
(WY)	2002	2002	1999	1981	2002	1981	2002	1999	1999	2002	2002	2002

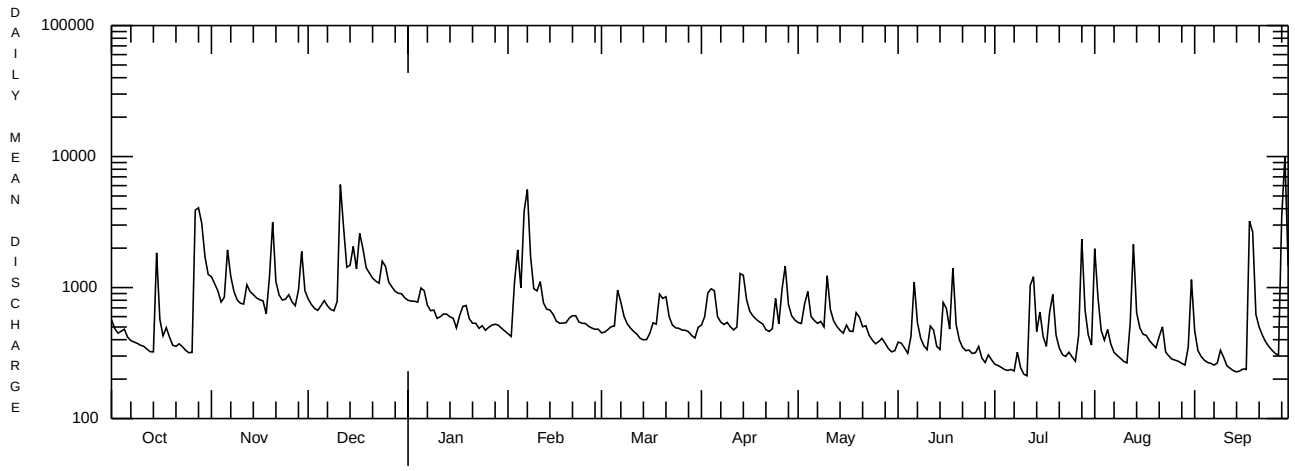
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	314769		275942			
ANNUAL MEAN	862		754		442	
HIGHEST ANNUAL MEAN					754	2004
LOWEST ANNUAL MEAN					152	2002
HIGHEST DAILY MEAN	10300	Jun 21	10100	Sep 29	10600	Jan 26 1978
LOWEST DAILY MEAN	202	Sep 12	212	Jul 11	33	Aug 22 2002
ANNUAL SEVEN-DAY MINIMUM	**a**230	Feb 13	237	Sep 11	36	Aug 17 2002
MAXIMUM PEAK FLOW			**b**16300	Sep 29	**b**26900	Sep 17 1999
MAXIMUM PEAK STAGE			13.62	Sep 29	17.15	Sep 17 1999
INSTANTANEOUS LOW FLOW			208	Jul 11	8.4	Sep 13 1980
10 PERCENT EXCEEDS	1630		1250		827	
50 PERCENT EXCEEDS	572		524		300	
90 PERCENT EXCEEDS	289		297		124	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911-1953, 1963-1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	219	301	348	444	570	605	530	435	364	309	278	230
MAX	666	625	827	1020	1130	1366	1043	946	1144	802	1089	1050
(WY)	1972	1972	1973	1936	1971	1920	1973	1952	1972	1919	1933	1971
MIN	67.7	98.3	114	145	214	247	226	175	149	91.1	82.1	59.4
(WY)	1964	1942	1966	1966	1934	1931	1963	1926	1963	1963	1930	1932

SUMMARY STATISTICS	WATER YEARS 1911-1953 1963-1973	
ANNUAL MEAN	385	
HIGHEST ANNUAL MEAN	625	1928
LOWEST ANNUAL MEAN	218	1932
HIGHEST DAILY MEAN	9590	Aug 24 1933
LOWEST DAILY MEAN	42	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	45	Sep 7 1966
MAXIMUM PEAK FLOW	**c**23800	Jun 22 1972
MAXIMUM PEAK STAGE	16.56	Jun 22 1972
INSTANTANEOUS LOW FLOW	4.9	Oct 2 1942
ANNUAL RUNOFF (CFSM)	1.34	
ANNUAL RUNOFF (INCHES)	18.23	
10 PERCENT EXCEEDS	700	
50 PERCENT EXCEEDS	274	
90 PERCENT EXCEEDS	118	

a Computed using estimated daily discharges.
b From rating curve extended above 13,200 ft^3/s on basis of area-velocity study at gage height 16.56 ft.
c From rating curve extended above 9,000 ft^3/s on basis of area-velocity study.



CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 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 TEMPERATURES: October 1964 to current year.
DISSOLVED OXYGEN: October 1971 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1963 to September 1978.

INSTRUMENTATION.--Water-quality monitor since August 1971.

REMARKS.--Specific conductance record rated good except for period Oct. 28 to Nov. 18, which is fair. pH record rated good except for period Nov. 5 to Dec. 1, which is poor. Water temperature record rated fair. Dissolved oxygen record rated fair except for period Oct. 28 to Nov. 5, which is poor. Data collection discontinued during winter months since 1981 water year. Other interruptions in the record were due to malfunctions of the equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 689 microsiemens, Mar. 6, 2001; 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 4, 2002; minimum, 0.0°C, many days during winters.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 5, 1976; minimum, 3.0 mg/L, June 21, 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)
MAR									
09...	1500	1028	1028	472	14.1	7.8	292	8.4	34
11...	1145	1028	1028	415	14.7	7.7	283	7.1	13
23...	1445	1028	1028	462	13.2	7.7	291	7.1	.0
APR									
07...	1200	1028	1028	507	11.3	7.6	273	9.9	40
20...	1150	1028	1028	492	9.5	7.6	271	17.7	37
MAY									
04...	1400	1028	1028	743	10.2	7.5	238	13.9	1400
11...	1620	1028	1028	605	8.8	7.3	247	20.5	1600
25...	1430	1028	1028	330	8.6	7.5	283	23.4	140
JUN									
01...	1450	1028	1028	338	10.2	7.7	288	19.4	240
16...	1215	1028	1028	578	6.1	7.2	218	22.2	E15000
23...	1315	1028	1028	338	8.4	7.6	287	20.8	250
JUL									
01...	1415	1028	1028	261	10.7	8.2	281	21.7	110
13...	1100	1028	1028	994	7.7	7.3	197	20.7	V12000
22...	1510	1028	1028	300	8.4	7.6	286	23.7	220
AUG									
04...	1530	1028	1028	389	8.4	7.6	286	25.1	260
18...	1435	1028	1028	393	8.4	7.6	281	21.7	120
26...	1400	1028	1028	278	9.1	7.8	313	21.7	130
SEP									
07...	1100	1028	1028	258	8.5	7.6	305	20.0	140
22...	1245	1028	1028	434	8.8	7.6	278	17.4	320

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued
(Pennsylvania Water-Quality Network Station)

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 446-484.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
01...	1400	1028	9813	567	11.0	7.7	7.4	253	239	14.2	93	21.8	9.3
DEC													
22...	1730	1028	9813	1100	15.0	7.2	7.6	240	248	4.7	84	20.9	7.8
FEB 2004													
24...	1540	1028	9813	529	15.3	7.2	7.8	264	238	5.1	85	21.5	7.7
APR													
27...	1330	1028	9813	1260	10.8	7.5	7.7	213	179	14.0	73	17.7	6.9
JUN													
29...	1500	1028	9813	330	11.2	8.2	7.8	291	289	21.4	100	24.5	9.8
AUG													
19...	1400	1028	9813	367	9.6	7.4	7.5	289	283	21.6	100	23.8	10.0

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
01...	59	18.3	260	<2	<.020	2.84	<.040	.04	.059	3.1	2.8	<200	<10
DEC													
22...	47	19.4	574	<2	.020	3.31	<.040	.04	.044	3.4	1.7	<200	<10
FEB 2004													
24...	48	18.0	12	<2	.030	3.47	<.040	.07	.092	4.0	2.1	<200	<10
APR													
27...	47	14.2	160	44	.090	2.16	.050	.04	.139	3.1	5.5	1100	10
JUN													
29...	60	18.5	232	2	<.020	3.29	<.040	.06	.089	3.7	2.6	230	<10
AUG													
19...	60	18.2	204	8	.020	2.89	<.040	.06	.074	3.1	2.6	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003					
01...	260	<1.0	30	<50	<10
DEC					
22...	200	<1.0	30	<50	<10
FEB 2004					
24...	150	<1.0	30	<50	<10
APR					
27...	1590	4.1	100	<50	70
JUN					
29...	410	<1.0	60	<50	10
AUG					
19...	360	<1.0	40	<50	<10

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/08/03
Benthic macroinvertebrate	Count
Arthropoda	
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	10
Baetis	7
Caenidae	
Caenis	1
Ephemerellidae	
Serratella	2
Heptageniidae	
Stenonema	1
Tricorythidae	
Tricorythodes	2
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	11
Hydropsyche	11
Philopotamidae	
Chimarra	10
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	20
Oulimnius	1
Stenelmis	23
Psephenidae (WATER PENNIES)	
Psephenus	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	11
Simuliidae (BLACK FLIES)	
Simulium	6
Total Organisms	122
Total Taxa	16

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	261	256	258	245	233	238	---	---	---	---	---	---
2	271	260	265	242	239	241	---	---	---	---	---	---
3	273	269	271	270	241	248	---	---	---	---	---	---
4	274	269	272	259	245	255	---	---	---	---	---	---
5	272	266	269	266	252	259	---	---	---	---	---	---
6	270	267	269	256	185	228	---	---	---	---	---	---
7	271	267	270	260	243	249	---	---	---	---	---	---
8	273	268	271	288	260	274	---	---	---	---	---	---
9	273	262	270	277	269	275	---	---	---	---	---	---
10	278	269	274	272	268	270	---	---	---	---	---	---
11	279	274	277	269	267	268	---	---	---	---	---	---
12	278	272	275	267	241	258	---	---	---	---	---	---
13	277	272	275	246	233	239	---	---	---	---	---	---
14	279	252	275	246	235	238	---	---	---	---	---	---
15	252	185	208	236	231	234	---	---	---	---	---	---
16	254	211	236	244	231	236	---	---	---	---	---	---
17	267	254	262	248	236	243	---	---	---	---	---	---
18	274	264	269	265	241	254	---	---	---	---	---	---
19	273	263	267	262	185	248	---	---	---	---	---	---
20	278	273	276	204	157	175	---	---	---	---	---	---
21	277	272	275	245	204	229	---	---	---	---	---	---
22	278	273	275	258	245	253	---	---	---	---	---	---
23	280	275	278	264	258	261	---	---	---	---	---	---
24	276	274	275	265	260	263	---	---	---	---	---	---
25	279	274	277	264	257	261	---	---	---	---	---	---
26	276	269	274	264	257	262	---	---	---	---	---	---
27	269	138	199	268	263	266	---	---	---	---	---	---
28	200	144	169	269	251	266	---	---	---	---	---	---
29	205	164	184	251	213	222	---	---	---	---	---	---
30	222	179	205	257	228	245	---	---	---	---	---	---
31	239	222	232	---	---	---	---	---	---	---	---	---
MONTH	280	138	257	288	157	249	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	274	270	272	284	278	280	275	271	273
2	---	---	---	277	273	274	278	270	273	276	273	275
3	---	---	---	279	274	276	280	265	270	274	254	268
4	---	---	---	288	275	278	275	249	267	254	238	245
5	---	---	---	289	283	286	261	237	248	265	246	258
6	---	---	---	294	272	280	271	261	267	272	265	269
7	---	---	---	283	267	274	286	269	277	274	270	272
8	---	---	---	285	282	284	286	281	284	277	263	271
9	---	---	---	291	281	284	285	280	282	274	265	270
10	---	---	---	287	283	285	281	277	279	265	208	233
11	---	---	---	287	282	284	281	277	279	258	222	241
12	---	---	---	284	281	282	280	267	275	267	254	262
13	---	---	---	283	279	281	267	231	247	274	267	271
14	---	---	---	283	278	280	245	232	238	279	273	277
15	---	---	---	282	277	279	263	245	258	280	277	279
16	---	---	---	285	276	279	270	263	267	281	273	278
17	---	---	---	515	285	403	273	268	271	276	266	270
18	---	---	---	508	369	423	270	265	267	280	270	276
19	---	---	---	477	343	378	269	264	268	279	256	272
20	---	---	---	527	342	419	276	268	271	258	247	252
21	---	---	---	348	282	313	278	272	274	271	254	262
22	---	---	---	293	287	289	278	271	276	271	265	268
23	---	---	---	294	290	291	278	268	276	280	270	276
24	---	---	---	294	288	291	273	247	256	285	280	283
25	283	265	271	290	286	288	276	254	268	291	283	286
26	283	273	276	288	281	285	278	230	268	292	288	290
27	275	271	272	284	282	283	231	202	215	294	282	287
28	273	269	271	286	282	285	260	231	249	296	276	283
29	275	270	271	287	282	284	268	260	265	288	283	286
30	---	---	---	287	281	285	272	268	270	292	287	290
31	---	---	---	285	277	281	---	---	---	295	288	292
MONTH	283	265	272	527	267	299	286	202	266	296	208	271

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	294	287	290	296	290	293	296	147	224	242	160	207
2	294	281	286	301	296	299	247	198	227	275	242	261
3	290	282	285	303	299	301	277	247	264	288	275	283
4	292	286	290	305	302	304	290	277	284	295	287	292
5	293	275	286	305	303	304	293	280	287	303	293	300
6	277	207	231	311	304	307	292	276	285	304	299	301
7	265	221	245	309	296	305	301	292	298	307	300	304
8	283	265	274	303	286	296	304	299	302	313	303	309
9	291	283	287	288	271	279	306	301	304	321	309	316
10	295	289	292	296	288	292	308	303	305	314	295	303
11	293	268	287	297	294	296	318	303	309	311	299	306
12	273	258	264	297	170	254	316	208	286	313	307	310
13	---	---	---	226	155	192	230	150	180	319	310	313
14	---	---	---	265	226	250	250	207	231	325	313	317
15	---	---	---	276	240	256	268	250	261	320	313	317
16	---	---	---	286	244	268	283	268	275	322	317	319
17	---	---	---	295	285	291	283	272	277	324	321	322
18	---	---	---	300	256	288	297	277	281	322	132	232
19	---	---	---	261	233	244	285	280	283	217	138	177
20	---	---	---	288	261	275	289	281	286	253	217	239
21	---	---	---	293	284	290	290	254	279	273	253	264
22	---	---	---	292	283	288	322	251	268	280	273	276
23	---	---	---	297	291	294	284	261	274	286	280	283
24	---	---	---	306	296	301	295	283	291	294	282	290
25	305	292	301	307	298	301	311	295	305	294	291	293
26	299	290	294	306	300	303	326	305	312	297	291	295
27	296	291	293	307	232	299	320	313	317	297	293	295
28	300	294	297	232	157	181	321	316	318	303	74	244
29	301	294	297	242	181	219	317	313	315	181	75	125
30	303	289	297	267	240	254	319	297	310	226	181	209
31	---	---	---	291	267	279	301	158	227	---	---	---
MONTH	305	207	283	311	155	278	326	147	280	325	74	277

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.5	7.4	7.5	7.1	7.0	7.1	---	---	---	---	---	---
2	7.6	7.4	7.5	7.1	7.1	7.1	---	---	---	---	---	---
3	7.6	7.5	7.5	7.1	6.8	7.0	---	---	---	---	---	---
4	7.6	7.5	7.5	7.0	7.0	7.0	---	---	---	---	---	---
5	7.6	7.5	7.5	7.4	6.9	7.0	---	---	---	---	---	---
6	7.6	7.5	7.5	7.3	6.8	6.9	---	---	---	---	---	---
7	7.6	7.5	7.5	7.0	6.9	6.9	---	---	---	---	---	---
8	7.6	7.4	7.5	6.9	6.8	6.9	---	---	---	---	---	---
9	7.7	7.4	7.5	6.9	6.8	6.8	---	---	---	---	---	---
10	8.1	7.4	7.6	6.8	6.8	6.8	---	---	---	---	---	---
11	8.4	7.6	7.9	6.8	6.8	6.8	---	---	---	---	---	---
12	8.2	7.5	7.8	6.8	6.8	6.8	---	---	---	---	---	---
13	7.9	7.5	7.7	6.9	6.8	6.8	---	---	---	---	---	---
14	7.8	7.4	7.6	6.9	6.9	6.9	---	---	---	---	---	---
15	7.6	7.2	7.2	6.9	6.9	6.9	---	---	---	---	---	---
16	7.3	7.2	7.2	6.9	6.8	6.9	---	---	---	---	---	---
17	7.3	7.3	7.3	6.8	6.8	6.8	---	---	---	---	---	---
18	7.4	7.3	7.3	7.4	6.7	6.8	---	---	---	---	---	---
19	7.4	7.3	7.3	7.4	7.2	7.4	---	---	---	---	---	---
20	7.6	7.3	7.3	7.2	7.0	7.1	---	---	---	---	---	---
21	7.6	7.4	7.5	7.0	7.0	7.0	---	---	---	---	---	---
22	7.5	7.4	7.5	7.0	6.9	7.0	---	---	---	---	---	---
23	7.6	7.4	7.5	6.9	6.8	6.8	---	---	---	---	---	---
24	7.6	7.5	7.5	7.1	6.9	7.1	---	---	---	---	---	---
25	7.6	7.4	7.5	7.1	6.9	7.0	---	---	---	---	---	---
26	7.5	7.4	7.5	6.9	6.8	6.9	---	---	---	---	---	---
27	7.4	6.8	7.1	6.8	6.8	6.8	---	---	---	---	---	---
28	7.2	6.8	7.1	7.0	6.8	6.9	---	---	---	---	---	---
29	7.3	7.1	7.2	7.0	6.8	6.9	---	---	---	---	---	---
30	7.2	7.1	7.2	6.8	6.8	6.8	---	---	---	---	---	---
31	7.2	7.1	7.2	---	---	---	---	---	---	---	---	---
MAX	8.4	7.6	7.9	7.4	7.2	7.4	---	---	---	---	---	---
MIN	7.2	6.8	7.1	6.8	6.7	6.8	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	7.9	7.5	7.6	8.6	7.8	8.3	7.5	6.9	7.2	7.3	7.2	7.2
2	7.9	7.5	7.7	8.8	7.7	8.3	7.3	7.2	7.2	7.4	7.2	7.4
3	8.0	7.5	7.8	8.8	7.7	8.4	7.4	7.3	7.3	7.5	7.4	7.4
4	8.0	7.5	7.8	8.7	7.7	8.3	7.5	7.3	7.4	7.6	7.4	7.5
5	7.8	7.4	7.5	8.5	7.6	8.1	7.5	7.4	7.4	7.6	7.4	7.5
6	7.5	7.4	7.4	8.3	7.5	7.8	7.6	7.4	7.5	7.7	7.5	7.6
7	7.4	7.3	7.4	8.1	7.5	7.6	7.6	7.4	7.5	7.7	7.5	7.6
8	7.4	7.3	7.4	7.8	7.4	7.6	7.7	7.5	7.6	7.6	7.5	7.5
9	7.5	7.3	7.4	7.7	7.4	7.5	7.8	7.5	7.6	7.6	7.5	7.5
10	7.5	7.3	7.4	7.8	7.5	7.6	8.1	7.5	7.7	7.6	7.5	7.5
11	7.5	7.4	7.4	7.8	7.5	7.6	8.2	7.6	7.7	7.7	7.5	7.5
12	7.5	7.3	7.4	7.6	7.1	7.5	7.8	7.3	7.6	7.7	7.5	7.6
13	---	---	---	7.3	7.1	7.2	7.3	7.1	7.2	7.8	7.5	7.6
14	---	---	---	7.4	7.3	7.3	7.3	7.2	7.3	7.7	7.5	7.6
15	---	---	---	7.4	7.4	7.4	7.4	7.3	7.3	7.7	7.5	7.6
16	---	---	---	7.6	7.3	7.4	7.5	7.3	7.4	7.8	7.6	7.6
17	---	---	---	7.6	7.4	7.4	7.5	7.4	7.4	7.7	7.5	7.6
18	---	---	---	7.4	7.3	7.4	7.7	7.4	7.5	7.6	6.8	7.4
19	---	---	---	7.4	7.3	7.4	7.7	7.5	7.6	7.3	6.8	7.2
20	---	---	---	7.4	7.3	7.4	7.7	7.4	7.6	7.4	7.3	7.4
21	---	---	---	7.5	7.3	7.4	7.6	7.4	7.5	7.5	7.4	7.4
22	---	---	---	7.6	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.4
23	---	---	---	7.5	7.4	7.4	7.7	7.4	7.5	7.6	7.5	7.5
24	---	---	---	7.6	7.4	7.5	7.7	7.4	7.6	7.6	7.5	7.5
25	7.8	7.6	7.7	7.6	7.4	7.5	7.8	7.5	7.6	7.6	7.5	7.5
26	7.8	7.5	7.6	7.9	7.5	7.6	7.9	7.5	7.6	7.6	7.5	7.5
27	7.9	7.6	7.7	7.6	7.4	7.5	7.9	7.5	7.7	7.6	7.5	7.5
28	8.1	7.6	7.8	7.4	7.0	7.2	7.9	7.5	7.6	7.5	6.8	7.5
29	8.2	7.7	7.9	7.3	7.2	7.3	7.8	7.4	7.6	7.0	6.8	6.8
30	8.5	7.7	8.1	7.4	7.3	7.3	7.6	7.4	7.5	7.3	7.0	7.2
31	---	---	---	7.6	7.3	7.4	7.5	7.2	7.3	---	---	---
MAX	8.5	7.7	8.1	8.8	7.8	8.4	8.2	7.6	7.7	7.8	7.6	7.6
MIN	7.4	7.3	7.4	7.3	7.0	7.2	7.3	6.9	7.2	7.0	6.8	6.8

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	14.5	14.5	13.5	12.0	13.0	---	---	---	---	---	---
2	14.5	13.0	14.0	14.5	13.0	14.0	---	---	---	---	---	---
3	13.0	11.5	12.5	15.0	13.5	14.5	---	---	---	---	---	---
4	12.5	11.5	12.0	15.5	14.0	15.0	---	---	---	---	---	---
5	13.0	11.5	12.5	15.5	15.0	15.5	---	---	---	---	---	---
6	13.0	11.5	12.0	15.5	15.0	15.5	---	---	---	---	---	---
7	12.5	11.0	12.0	15.0	13.5	14.5	---	---	---	---	---	---
8	14.0	12.5	13.0	13.5	11.0	12.0	---	---	---	---	---	---
9	15.5	13.5	14.5	11.0	8.5	9.5	---	---	---	---	---	---
10	15.5	14.5	15.0	8.5	7.5	8.0	---	---	---	---	---	---
11	16.5	15.0	16.0	9.5	7.5	8.0	---	---	---	---	---	---
12	16.5	15.5	16.0	11.5	9.5	10.5	---	---	---	---	---	---
13	16.5	15.5	16.0	11.5	9.5	11.0	---	---	---	---	---	---
14	15.5	14.5	15.0	9.5	7.5	8.0	---	---	---	---	---	---
15	15.0	14.0	15.0	9.0	8.0	8.5	---	---	---	---	---	---
16	14.0	12.5	13.5	10.0	8.5	9.0	---	---	---	---	---	---
17	13.5	13.0	13.0	11.0	10.0	10.5	---	---	---	---	---	---
18	13.0	12.0	12.5	10.5	10.0	10.0	---	---	---	---	---	---
19	13.0	12.0	12.5	13.5	10.5	12.0	---	---	---	---	---	---
20	12.5	11.5	12.0	13.5	10.5	12.0	---	---	---	---	---	---
21	13.5	12.0	12.5	10.5	9.5	10.0	---	---	---	---	---	---
22	13.5	12.5	13.5	10.0	9.0	9.5	---	---	---	---	---	---
23	12.5	10.0	11.0	10.0	9.0	9.5	---	---	---	---	---	---
24	10.0	8.5	9.0	10.5	9.5	10.0	---	---	---	---	---	---
25	10.0	8.5	9.5	10.5	8.0	9.0	---	---	---	---	---	---
26	13.5	10.0	11.5	8.0	7.0	7.5	---	---	---	---	---	---
27	15.0	13.5	14.5	8.5	7.0	7.5	---	---	---	---	---	---
28	14.5	12.5	13.0	10.5	8.5	9.5	---	---	---	---	---	---
29	12.5	12.0	12.0	10.5	7.5	9.0	---	---	---	---	---	---
30	12.0	11.0	11.5	7.5	7.0	7.0	---	---	---	---	---	---
31	12.5	11.0	11.5	---	---	---	---	---	---	---	---	---
MONTH	16.5	8.5	13.0	15.5	7.0	10.7	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.0	5.5	6.5	10.5	9.5	10.0	18.5	16.5	17.5
2	---	---	---	9.0	7.0	8.0	10.5	9.5	10.0	19.0	18.0	18.5
3	---	---	---	10.0	8.0	9.0	9.5	8.5	9.0	19.0	14.5	17.0
4	---	---	---	10.0	9.0	9.5	9.0	7.0	8.5	15.0	13.0	14.0
5	---	---	---	9.5	9.0	9.5	8.0	5.5	7.0	15.0	13.5	14.0
6	---	---	---	10.5	9.5	10.0	9.0	6.0	7.5	16.5	13.5	15.0
7	---	---	---	10.5	9.0	9.5	12.0	8.5	10.5	17.5	15.5	16.5
8	---	---	---	10.0	8.5	9.0	12.0	10.5	11.0	17.5	16.0	17.0
9	---	---	---	8.5	7.5	8.0	12.5	10.0	11.0	18.0	15.0	16.5
10	---	---	---	7.5	6.5	7.0	12.5	10.5	11.5	19.5	17.0	18.0
11	---	---	---	8.0	5.5	7.0	12.5	10.0	11.0	21.0	18.5	19.5
12	---	---	---	8.5	7.0	7.5	10.0	9.5	9.5	22.0	19.5	21.0
13	---	---	---	7.0	5.5	6.5	10.0	8.5	9.0	22.5	20.5	21.5
14	---	---	---	6.5	5.0	6.0	10.5	10.0	10.5	22.5	20.5	21.5
15	---	---	---	9.0	6.0	7.5	12.5	9.5	11.0	23.0	21.0	22.0
16	---	---	---	8.5	4.5	6.5	13.0	10.5	11.5	22.5	21.0	22.0
17	---	---	---	5.0	4.0	4.5	15.0	11.0	13.0	22.0	20.5	21.5
18	---	---	---	7.0	5.0	6.0	17.0	14.0	15.5	22.0	20.5	21.0
19	---	---	---	7.0	5.5	6.5	18.5	15.5	17.0	21.5	19.5	20.5
20	---	---	---	8.0	5.0	6.5	19.0	17.0	18.5	20.0	19.0	19.5
21	---	---	---	9.0	8.0	8.5	18.5	16.5	17.5	19.5	19.0	19.5
22	---	---	---	8.0	6.0	7.0	19.0	16.5	17.5	22.0	19.0	20.5
23	---	---	---	7.0	4.5	6.0	19.0	17.5	18.5	23.5	21.0	22.0
24	---	---	---	8.5	5.5	7.0	18.0	16.0	17.0	24.5	22.5	23.5
25	5.0	3.5	4.0	9.5	8.5	9.0	17.5	14.5	16.0	24.0	22.5	23.5
26	4.5	3.0	4.0	12.5	9.5	10.5	14.5	13.5	13.5	23.5	21.5	22.0
27	5.0	3.5	4.0	13.0	12.0	12.5	15.5	13.0	14.0	22.0	20.5	21.0
28	6.0	4.0	5.0	14.0	12.0	13.0	15.0	12.5	13.5	22.0	21.0	21.5
29	6.5	4.5	5.5	13.0	11.5	12.5	16.0	12.5	14.5	21.5	20.0	20.5
30	---	---	---	12.0	10.0	10.5	18.0	15.0	16.5	20.5	18.5	19.5
31	---	---	---	10.0	9.0	9.5	---	---	---	19.0	18.0	19.0
MONTH	6.5	3.0	4.5	14.0	4.0	8.3	19.0	5.5	12.7	24.5	13.0	19.6

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	17.5	18.5	22.0	20.5	21.5	25.0	23.0	24.0	22.5	21.0	22.0
2	21.0	19.0	20.0	23.5	21.0	22.5	24.5	22.5	23.5	22.0	20.5	21.5
3	21.5	19.5	20.5	24.0	22.0	23.0	25.5	23.5	24.5	22.0	20.5	21.5
4	21.0	20.0	20.5	24.0	22.0	23.0	25.5	23.5	24.5	22.0	20.5	21.5
5	20.5	17.5	19.0	25.5	23.0	24.0	25.0	22.5	23.5	21.5	20.0	21.0
6	17.5	16.5	17.0	25.5	23.5	24.5	22.5	20.5	21.5	20.5	19.0	20.0
7	20.0	17.0	18.0	25.5	23.0	24.0	20.5	19.0	19.5	21.5	19.5	20.5
8	22.0	19.0	20.5	25.0	23.0	24.0	20.0	18.0	19.0	21.5	21.0	21.5
9	23.5	21.0	22.0	24.0	22.5	23.5	21.5	19.0	20.5	22.5	21.5	22.0
10	23.5	22.5	23.0	24.0	21.5	23.0	22.5	20.5	21.5	22.5	21.0	22.0
11	23.0	20.0	21.5	24.5	22.0	23.5	23.5	21.5	22.5	22.0	20.5	21.5
12	21.0	18.5	20.0	24.0	21.0	22.5	22.5	21.5	22.0	21.0	19.5	20.5
13	---	---	---	22.0	20.5	21.0	21.5	21.0	21.5	21.5	19.5	20.5
14	---	---	---	22.0	21.0	21.5	21.5	20.5	21.0	21.0	20.0	20.5
15	---	---	---	21.5	20.5	21.0	22.0	20.5	21.0	20.0	19.5	19.5
16	---	---	---	21.5	20.0	21.0	22.5	20.5	21.5	20.5	19.5	20.0
17	---	---	---	22.5	20.5	21.5	22.0	20.5	21.5	20.5	19.5	20.0
18	---	---	---	22.5	20.5	21.5	22.0	20.5	21.5	21.0	18.0	20.0
19	---	---	---	21.0	19.5	20.0	22.5	21.0	21.5	18.0	17.0	17.5
20	---	---	---	23.0	20.0	21.5	23.5	21.5	22.5	17.5	15.5	16.5
21	---	---	---	24.0	21.5	22.5	23.5	21.5	23.0	17.5	15.5	16.5
22	---	---	---	24.0	22.5	23.5	22.0	20.0	21.0	18.5	16.5	17.5
23	---	---	---	24.0	23.0	23.5	21.0	19.5	20.5	19.5	17.5	18.5
24	---	---	---	23.0	22.5	22.5	21.5	20.0	21.0	20.0	18.5	19.5
25	22.0	21.0	21.5	22.5	21.0	21.5	22.0	20.5	21.0	19.5	18.5	19.0
26	22.0	20.5	21.0	22.5	20.0	21.5	22.0	20.5	21.5	19.0	18.0	18.5
27	21.5	19.5	20.5	22.5	22.0	22.0	23.0	21.5	22.0	19.0	17.5	18.5
28	21.0	19.5	20.5	22.5	21.5	22.0	24.5	22.0	23.0	20.0	19.0	19.5
29	22.0	20.0	21.0	23.5	21.5	22.5	24.5	23.0	24.0	19.5	18.5	19.0
30	22.0	19.5	21.0	24.5	22.0	23.0	24.0	23.0	23.5	18.5	17.5	18.0
31	---	---	---	25.5	23.5	24.5	23.0	22.0	22.5	---	---	---
MONTH	23.5	16.5	20.3	25.5	19.5	22.5	25.5	18.0	22.0	22.5	15.5	19.8

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.2	9.6	9.9	10.7	9.9	10.4	---	---	---	---	---	---
2	10.4	9.9	10.1	10.6	10.1	10.4	---	---	---	---	---	---
3	10.9	10.2	10.6	10.4	8.7	10.0	---	---	---	---	---	---
4	11.0	10.4	10.6	10.7	9.9	10.4	---	---	---	---	---	---
5	11.0	10.3	10.6	9.9	8.4	9.7	---	---	---	---	---	---
6	11.3	10.4	10.8	9.6	7.2	8.0	---	---	---	---	---	---
7	11.7	10.4	11.0	8.8	7.1	8.2	---	---	---	---	---	---
8	11.4	10.2	10.7	9.7	8.5	9.1	---	---	---	---	---	---
9	11.4	9.7	10.5	10.8	9.7	10.3	---	---	---	---	---	---
10	11.4	9.4	10.2	11.3	10.8	11.0	---	---	---	---	---	---
11	11.4	9.3	10.2	11.2	10.5	10.9	---	---	---	---	---	---
12	11.3	9.1	10.0	10.5	9.3	9.7	---	---	---	---	---	---
13	10.9	9.0	9.9	10.3	9.5	9.8	---	---	---	---	---	---
14	11.0	9.1	9.9	11.3	10.2	10.8	---	---	---	---	---	---
15	9.6	7.2	8.8	11.2	10.5	10.7	---	---	---	---	---	---
16	9.7	9.0	9.3	11.0	10.3	10.7	---	---	---	---	---	---
17	9.9	9.4	9.6	---	---	---	---	---	---	---	---	---
18	10.2	9.6	9.9	---	---	---	---	---	---	---	---	---
19	10.3	9.7	10	---	---	---	---	---	---	---	---	---
20	11.0	9.8	10.3	---	---	---	---	---	---	---	---	---
21	10.6	9.9	10.3	---	---	---	---	---	---	---	---	---
22	10.1	9.4	9.8	---	---	---	---	---	---	---	---	---
23	11.1	9.9	10.5	---	---	---	---	---	---	---	---	---
24	11.7	10.8	11.2	---	---	---	---	---	---	---	---	---
25	11.8	11.0	11.3	11.2	10.2	10.7	---	---	---	---	---	---
26	11.0	9.6	10.4	11.0	10.2	10.7	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	10.1	9.6	9.8	---	---	---	---	---	---	---	---	---
30	10.7	10.1	10.5	---	---	---	---	---	---	---	---	---
31	10.9	10.2	10.7	---	---	---	---	---	---	---	---	---
MONTH	11.8	7.2	10.3	11.3	7.1	10.1	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	---	---	---	14.4	13.0	13.7	---	---	---	9.6	8.4	8.9
2	---	---	---	13.9	12.6	13.3	---	---	---	9.1	7.9	8.5
3	---	---	---	14.2	12.0	13.1	---	---	---	9.6	8.1	8.7
4	---	---	---	13.8	11.5	12.7	---	---	---	10.8	9.6	10.1
5	---	---	---	13.5	11.8	12.6	---	---	---	11.0	9.9	10.4
6	---	---	---	12.7	11.2	11.8	---	---	---	11.0	10.0	10.4
7	---	---	---	13.5	11.7	12.6	---	---	---	10.5	9.5	9.9
8	---	---	---	13.6	12.1	12.8	11.7	10.3	11.0	10.9	9.3	10.0
9	---	---	---	14.9	12.7	13.7	12.0	10.7	11.3	11.1	9.7	10.3
10	---	---	---	15.1	13.7	14.4	12.4	10.6	11.4	9.8	8.5	8.9
11	---	---	---	14.8	13.8	14.4	11.6	10.4	11.0	8.8	8.2	8.5
12	---	---	---	14.3	13.1	13.8	12.6	11.0	11.7	9.0	8.1	8.5
13	---	---	---	15.0	13.7	14.4	11.8	10.9	11.4	8.9	7.8	8.3
14	---	---	---	15.3	13.9	14.6	10.9	10.5	10.7	9.0	7.2	8.3
15	---	---	---	14.6	13.4	14.0	11.7	10.7	11.1	8.9	7.5	8.2
16	---	---	---	14.3	12.5	13.4	11.6	10.6	11.1	8.6	7.4	8.0
17	---	---	---	15.3	14.2	14.8	11.4	10.1	10.7	8.8	7.4	8.1
18	---	---	---	14.7	13.8	14.4	11.1	9.4	10.1	8.8	7.4	8.1
19	---	---	---	14.2	13.1	13.7	10.7	8.8	9.6	8.1	7.4	7.7
20	---	---	---	14.3	13.0	13.7	10.5	8.1	9.2	7.9	7.4	7.7
21	---	---	---	13.0	12.1	12.6	10.6	8.1	9.3	8.7	7.7	8.0
22	---	---	---	13.7	12.3	13.0	10.8	8.3	9.4	8.8	7.9	8.4
23	---	---	---	---	---	---	10.4	7.9	9.0	8.5	7.5	7.9
24	---	---	---	---	---	---	9.6	8.3	8.8	8.6	7.1	7.7
25	14.1	12.9	13.5	---	---	---	10.4	8.4	9.3	9.1	7.0	7.9
26	14.8	13.4	14.0	---	---	---	9.7	9.2	9.5	8.9	7.4	8.0
27	14.6	13.6	14.1	---	---	---	9.4	8.6	9.0	9.4	7.9	8.6
28	14.6	13.5	14.0	---	---	---	10.3	8.7	9.5	9.5	7.8	8.6
29	14.5	13.3	13.9	---	---	---	10.4	9.4	9.9	10.3	8.0	9.1
30	---	---	---	---	---	---	9.6	8.8	9.2	10.8	8.5	9.5
31	---	---	---	---	---	---	---	---	---	9.5	8.6	9.1
MONTH	14.8	12.9	13.9	15.3	11.2	13.5	12.6	7.9	10.1	11.1	7.0	8.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	10.5	8.7	9.5	11.1	7.9	9.4	7.8	7.1	7.4	7.8	7.0	7.3
2	10.8	8.4	9.5	11.4	7.6	9.3	7.9	7.6	7.8	8.3	7.1	7.7
3	10.8	8.3	9.4	11.4	7.1	9.1	8.0	7.5	7.7	8.5	7.4	7.8
4	11.0	8.2	9.5	10.9	7.0	8.9	8.4	7.4	7.8	8.6	7.4	7.9
5	9.4	8.2	8.7	9.9	6.6	8.1	8.4	7.6	8.0	8.1	7.4	7.8
6	9.1	8.5	8.9	9.4	6.3	7.7	9.1	8.0	8.6	8.9	7.8	8.2
7	8.6	7.5	8.2	9.2	6.2	7.3	9.7	8.5	9.1	8.8	7.7	8.2
8	8.1	7.1	7.5	8.2	6.2	7.0	10.0	9.0	9.4	8.2	7.4	7.8
9	8.1	6.6	7.3	8.0	6.0	6.9	10.0	8.6	9.2	8.0	7.2	7.5
10	7.9	6.5	7.1	8.5	6.6	7.4	10.1	8.2	9.0	8.4	7.2	7.7
11	8.0	6.7	7.3	8.6	7.1	7.7	10.0	7.7	8.7	8.7	7.5	8.0
12	8.9	7.8	8.3	7.5	7.0	7.2	9.4	7.4	8.1	9.0	7.8	8.3
13	---	---	---	7.9	7.2	7.6	7.6	6.9	7.4	9.0	7.8	8.2
14	---	---	---	7.8	7.5	7.6	8.0	7.5	7.7	8.6	7.6	8.1
15	---	---	---	8.0	7.5	7.8	8.4	7.7	8.0	8.7	7.8	8.2
16	---	---	---	8.2	7.7	7.9	8.3	7.6	7.9	8.9	7.9	8.3
17	---	---	---	8.3	7.7	7.9	8.5	7.5	7.9	8.7	7.7	8.1
18	---	---	---	8.0	7.4	7.7	9.3	7.4	8.0	7.7	6.4	7.2
19	---	---	---	8.2	7.9	8.1	8.7	7.5	8.0	8.3	6.4	7.7
20	---	---	---	8.3	7.6	8.0	8.8	7.4	8.0	8.9	8.3	8.7
21	---	---	---	8.4	7.5	7.9	8.0	6.4	7.3	9.0	8.5	8.7
22	---	---	---	8.4	7.3	7.8	8.5	7.3	7.9	9.0	8.3	8.6
23	---	---	---	8.0	7.2	7.6	9.1	7.7	8.2	8.7	8.1	8.4
24	---	---	---	8.8	7.5	8.1	9.1	7.7	8.3	8.5	7.9	8.2
25	8.6	7.4	7.9	9.0	7.8	8.3	9.3	7.7	8.4	8.8	7.9	8.3
26	8.7	7.3	8.0	9.6	8.3	8.8	9.4	7.7	8.4	8.9	8.1	8.4
27	9.4	7.8	8.5	8.6	7.8	8.1	9.3	7.5	8.3	9.1	7.6	8.6
28	9.9	8.0	8.9	8.0	7.3	7.7	9.1	7.2	8.1	8.3	6.8	7.8
29	10.1	8.0	9.0	8.3	7.8	8.0	8.8	6.9	7.8	7.7	6.5	6.8
30	10.8	8.0	9.3	8.5	7.8	8.0	7.8	6.8	7.3	8.5	7.7	8.2
31	---	---	---	8.4	7.6	7.9	7.4	6.9	7.1	---	---	---
MONTH	11.0	6.5	8.5	11.4	6.0	8.0	10.1	6.4	8.1	9.1	6.4	8.0

CHRISTINA RIVER BASIN

LAKES AND RESERVOIRS IN CHRISTINA RIVER BASIN

01480399 CHAMBERS LAKE NEAR WAGONTOWN.--Lat 40°01'40", long 75°51'03", Chester County, Hydrologic Unit 02040205, at Hibernia Dam on Birch Run, 0.6 mi upstream from gaging station on Birch Run (station 01480400), 0.9 mi upstream from mouth, and 1.4 mi northwest of Wagontown. DRAINAGE AREA, 4.5 mi^2. PERIOD OF RECORD, May 1997 to current year. GAGE, non-recording gage. Manual measurement from top of concrete riser at upstream flank of Hibernia Dam. Datum of gage is sea level (levels by Chester County Water Resources Authority, Chester County Parks and Recreation Department).

REMARKS.--Reservoir formed by earthfill dam with principle spillway at elevation 587.5 ft, capacity 2,000 acre-ft. Dam crest at elevation 596.5 ft. Normal elevation 580 ft, capacity 1,226 acre feet. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent total contents.

COOPERATION.--Records provided by Chester County Water Resources Authority, in cooperation with City of Coatesville Authority and Chester County Parks and Recreation Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,440 acre-ft, March 22, 2000, elevation, 582.76 ft; minimum contents, 605 acre-ft, Oct. 10, 2002, elevation, 571.23 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,396 acre-ft, Dec. 11, elevation, 582.25 ft; minimum contents, 1,170 acre-ft, Sept. 7, elevation, 579.9 ft.

01480684 MARSH CREEK LAKE NEAR DOWNINGTOWN.--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^2. PERIOD OF RECORD, November 1973 to current year. GAGE, Water-stage recorder. Datum of gage is sea level (levels by Pennsylvania Department of Environmental Protection).

REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 359.5 ft. Storage began November 1973. Total capacity, 22,190 acre-ft, 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.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,500 acre-ft, Sept. 18, 1999, elevation, 363.49 ft; minimum contents (after first filling), 10,410 acre-ft, Mar. 3, 1976, elevation, 351.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,760 acre-ft, Sept. 29, elevation, 362.36 ft; minimum contents, 12,940 acre-ft, Feb. 1, elevation, 357.07 ft.

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	01480399 Chambers Lake			01480684 Marsh Creek Lake		
	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
Sept. 30	580.20	1,190	---	360.35	14,650	---
Oct. 31	580.40	1,210	+0.3	362.25	15,700	+17.9
Nov. 30	580.30	1,200	-0.2	359.92	14,420	-21.8
Dec. 31	580.10	1,180	-0.3	360.17	14,550	+3.2
CAL YR 2003	--	--	0	--	--	+0.8
Jan. 31	580.30	1,200	+0.3	357.10	12,960	-26.0
Feb. 29	580.22	1,200	0	357.90	13,360	+7.0
Mar. 31	580.20	1,190	-0.2	359.65	14,270	+14.6
Apr. 30	580.40	1,210	+0.3	360.96	14,990	+11.8
May 31	580.23	1,200	-0.2	360.18	14,560	-6.5
June 30	580.10	1,180	-0.3	360.31	14,630	0.0
July 31	580.20	1,190	+0.2	360.62	14,800	+3.2
Aug. 31	580.00	1,180	-0.2	360.45	14,710	-1.6
Sept. 30	580.27	1,200	+0.3	362.20	15,670	+16.8
WTR YR 2004	--	--	0	--	--	+1.5

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Delaware, Hydrologic Unit 02040205, on dock on streamward side of jetty about 0.4 mi downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi^2, approximately.

PERIOD OF RECORD.--Water year 1997 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: February 1970 to current year.
WATER TEMPERATURES: February 1970 to current year.
DISSOLVED OXYGEN: February 1970 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1970. Probes interfaced with a data collection platform since the 1986 water year. Probes placed in situ since July 1998.

REMARKS.--Specific conductance records rated good except for period July 17-22, which is poor. Water temperature records rated good. Dissolved oxygen records rated poor. pH records rated good. Interruptions in the record were due to malfunctions of the equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 35,600 microsiemens, Nov. 15, 1978; minimum, 100 microsiemens, 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, many days during winters.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 16, 19, 1976; minimum, 0.3 mg/L, Sept. 16, 17, 1971.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 21,800 microsiemens, Feb. 3; minimum, 154 microsiemens, Sept. 30.
pH: Maximim 8.0, Mar. 2-6, 17, 18; minimum, 6.9, Nov. 1-10, May 17, Sept. 24, 29, 30.
WATER TEMPERATURE: Maximum, 28.0°C, Aug. 4; minimum recorded, 0.0°C, many days during winter.
DISSOLVED OXYGEN: Maximum recorded, 12.2 mg/L, Mar. 2, 4-6, 27, 28; minimum recorded, 3.4 mg/L, July 27.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3870	656	1100	850	403	667	531	252	333	1010	224	301
2	3460	677	1090	783	401	548	2200	237	469	3470	230	1040
3	6640	636	2010	1250	386	495	6490	232	2410	4830	281	1570
4	5530	1120	2820	1590	391	526	7510	1160	3600	4840	385	1530
5	4880	1520	2430	2610	415	804	9530	1520	3960	5690	635	1870
6	6610	1530	2610	2340	365	619	10700	3480	6500	4890	567	1630
7	7830	1660	3030	1190	333	504	12000	3190	7050	3120	404	991
8	7830	1560	2850	1180	282	421	12900	4310	8060	3080	312	829
9	5970	1570	2690	3930	303	766	13500	4370	8450	6150	293	1300
10	5930	1660	2930	3510	276	869	12200	5160	7720	6680	677	2270
11	8810	2430	4610	4940	396	1440	12500	2650	8320	7690	822	2980
12	9880	2940	5670	4660	444	1480	3960	1010	2740	5340	1000	2180
13	8510	2640	4470	4010	429	1350	2520	905	1470	6890	1070	2630
14	9550	2470	5280	4970	557	1520	7510	710	2100	5600	948	2260
15	9220	1930	4920	8420	1530	4390	1630	357	911	6560	1420	3020
16	4820	1650	2490	10300	2430	7260	2740	397	910	2710	908	1560
17	6030	1410	2740	12800	4120	9290	3430	623	1490	9130	917	4030
18	9690	1670	5140	13500	5530	9800	3730	369	1080	12300	2140	6140
19	11600	2720	7000	15300	6580	11100	2610	382	772	12500	3250	6220
20	11400	3960	7690	11800	5350	8140	5080	329	1190	10600	2460	4970
21	11600	4540	7900	10300	3090	5690	4610	327	1250	10700	2210	4760
22	13000	3120	6820	9390	2490	4450	1150	359	547	14400	3120	7130
23	13200	4480	8020	7880	1930	3660	3150	345	782	11400	2860	5780
24	12600	4400	7220	8100	1660	3510	3620	352	1050	13400	3850	7180
25	11800	4500	6810	5660	1360	2740	1550	360	536	10900	4110	6520
26	11600	4580	6600	5290	1220	2390	436	281	363	12900	4700	7990
27	11900	4390	6750	4780	1140	2080	337	259	291	15300	6990	9890
28	9340	2900	5020	4660	1140	2060	298	250	263	13400	6680	9740
29	7350	1490	3820	1630	514	1060	257	239	250	13100	6210	9860
30	2020	889	1480	676	290	449	258	238	246	14500	7240	10800
31	1230	677	922	---	---	---	522	236	274	16000	6590	11700
MONTH	13200	636	4350	15300	276	3000	13500	232	2430	16000	224	4540

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	17200	9110	13700	15700	7790	12100	11100	4780	8140	9000	2300	4850
2	19500	10400	15200	16600	7850	13000	10700	4890	7600	8690	2600	4620
3	21800	12900	16300	17200	7640	12400	10800	4400	7230	8690	2210	3760
4	19800	9010	14600	18000	7810	12200	9730	3790	6330	7490	1700	3430
5	17300	7660	11600	18100	8420	12300	6580	2800	4060	7500	1650	3400
6	17600	7220	11300	16600	8720	11900	8950	2560	4720	---	---	2900
7	14300	5180	9250	14200	6930	9150	12900	3130	6330	---	---	2700
8	8890	3110	5240	12000	5920	8390	12400	3770	6480	---	---	2450
9	7930	2520	4310	14400	5080	8640	12500	4100	6700	---	---	2400
10	8770	2460	3880	12700	5240	7350	10900	3770	5710	---	---	2050
11	9450	2310	4420	13900	4700	8270	10000	3630	5200	---	---	2000
12	9150	2230	4110	13900	4930	7570	9680	3740	5810	3790	1350	1970
13	9540	2340	4280	7880	3260	4460	11200	3830	6830	4550	1160	1930
14	9200	2080	3970	9110	3060	5330	8620	3210	5070	4900	1180	2040
15	9840	1970	4530	10500	3440	5800	7770	2010	3750	4200	1060	1840
16	10500	2420	5990	10600	3510	5840	8620	1660	3750	4850	903	1560
17	11200	3240	5960	12700	4230	7840	8620	1750	3180	4850	918	1660
18	12000	3920	6940	13100	4320	7730	3780	1510	2210	---	---	2100
19	15100	4450	8600	11800	4250	6820	4680	1450	2280	---	---	1600
20	14900	5110	8020	11800	3560	6880	4480	1200	1840	---	---	1800
21	13000	5320	8520	10200	3660	5570	5480	1380	2320	---	---	2150
22	10300	4920	6850	7450	2990	4190	4960	1310	2310	---	---	2150
23	12100	4840	6960	9390	2800	4870	4450	1370	1980	6010	1180	2620
24	11400	4670	7140	7430	2500	3640	4480	1320	2270	6780	1310	3410
25	9990	4970	6830	6270	2460	3480	4660	1370	2330	7390	1450	4240
26	13100	5270	8570	6930	2260	3240	5590	1390	2520	9260	2690	5760
27	11800	5310	8640	5730	2030	3010	4410	1430	2370	10700	3030	6620
28	14000	5860	9560	6340	2040	3740	5360	1160	2460	11100	4000	6780
29	15600	6970	10800	8790	3400	5720	8770	1800	5040	11300	3500	6250
30	---	---	---	8230	4210	5520	8780	2080	5110	12600	3920	7330
31	---	---	---	9200	3750	6790	---	---	---	12700	4170	7100
MONTH	21800	1970	8140	18100	2030	7220	12900	1160	4400	12700	903	3400

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	14400	4410	8140	14900	5940	8400	5850	1600	2600	5160	1020	2010
2	14400	5060	7950	14700	6120	8500	3340	1270	1990	4090	1050	1880
3	13200	4620	7310	14600	6200	8780	3450	1140	1860	4990	1130	2040
4	13100	4850	7210	15100	6640	9490	4270	1100	1810	3500	1090	1890
5	13200	4940	7800	14600	6910	9560	3500	1080	1790	7290	1160	2530
6	13100	4910	7960	13400	6880	9000	6250	1120	2310	6380	2120	3960
7	13300	4940	8050	13400	6900	9330	8600	1190	3330	6440	1930	3730
8	11900	5060	7140	12600	7420	9360	8080	1260	3970	8120	1930	4570
9	11100	4960	6700	12600	7000	8840	9620	1570	4750	8630	3840	5770
10	10400	4940	6460	13700	6670	8800	11400	2120	6980	7050	1520	3200
11	11800	4750	7380	13900	6500	9110	12800	3460	7490	8310	1670	3400
12	12000	5110	7540	---	---	10000	12900	3220	7080	9170	1960	4030
13	11700	5240	7590	---	---	7600	12500	3870	6790	9170	1940	3790
14	10700	5050	6970	9940	4850	6600	11100	2470	4590	8650	2010	3800
15	10700	4060	5890	9940	3820	5960	7950	1650	3670	8680	2340	4500
16	9580	3760	5470	9880	3270	5310	7350	1380	2970	6780	2410	3970
17	9850	3930	5740	---	---	5800	7690	1330	2800	7330	2430	4300
18	10500	3910	6010	---	---	5900	6600	1440	2680	7730	2210	4460
19	10900	4000	6320	---	---	6200	4880	1250	2310	4960	462	2420
20	11800	3970	6920	---	---	6200	4180	1240	1940	642	247	436
21	12800	4460	7700	---	---	5900	3950	1210	1890	609	343	466
22	12400	4200	7230	---	---	6600	5160	1050	1770	2480	398	723
23	12000	4080	6790	9980	3270	6030	4290	767	1840	3540	474	947
24	12400	4520	7840	8460	3580	5280	4370	711	1480	6000	412	1790
25	12000	4850	8040	11700	3580	6150	5480	780	1740	4930	789	1970
26	11600	5310	7620	12300	4210	6930	6050	785	1880	4950	777	1630
27	13100	5180	7750	11100	4410	6870	5630	922	1830	4950	840	1840
28	13700	5170	7750	9210	2950	5280	5630	910	1730	5950	1000	2060
29	14400	5250	8000	9050	2170	3840	5160	1020	2000	1990	181	824
30	14900	5550	8440	9050	1910	3290	4810	1020	1990	782	154	353
31	---	---	---	7790	1920	3030	5580	1060	2030	---	---	---
MONTH	14900	3760	7260	15100	1910	7030	12900	711	3030	9170	154	2640
YEAR	21800	154	4770									

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	7.3	7.2	7.2	7.0	6.9	7.0	7.2	7.1	7.1	7.3	7.2	7.3
2	7.4	7.2	7.3	7.1	6.9	7.0	7.3	7.1	7.2	7.4	7.2	7.3
3	7.5	7.3	7.4	7.0	7.0	7.0	7.4	7.2	7.3	7.4	7.3	7.3
4	7.6	7.4	7.5	7.0	6.9	7.0	7.4	7.2	7.3	7.4	7.2	7.3
5	7.6	7.5	7.5	7.0	6.9	6.9	7.5	7.3	7.4	7.4	7.2	7.3
6	7.7	7.5	7.6	7.0	6.9	6.9	7.5	7.4	7.5	7.4	7.3	7.3
7	7.7	7.5	7.6	7.0	6.9	6.9	7.6	7.4	7.5	7.4	7.3	7.4
8	7.6	7.5	7.5	7.1	6.9	7.0	7.6	7.5	7.6	7.5	7.3	7.4
9	7.6	7.5	7.5	7.1	6.9	7.0	7.6	7.5	7.5	7.5	7.3	7.4
10	7.6	7.5	7.5	7.1	6.9	7.0	7.5	7.4	7.5	7.6	7.4	7.5
11	7.6	7.6	7.6	7.1	7.0	7.0	7.5	7.3	7.5	7.6	7.5	7.6
12	7.7	7.6	7.6	7.1	7.0	7.0	7.3	7.2	7.2	7.6	7.5	7.5
13	7.6	7.3	7.3	7.5	7.0	7.1	7.3	7.1	7.3	7.6	7.5	7.5
14	7.5	7.3	7.3	7.7	7.1	7.3	7.4	7.2	7.3	7.6	7.5	7.6
15	7.5	7.4	7.4	7.4	7.2	7.4	7.4	7.3	7.3	7.6	7.5	7.6
16	7.5	7.4	7.5	7.5	7.4	7.4	7.3	7.2	7.3	7.6	7.5	7.6
17	7.5	7.4	7.5	7.5	7.4	7.5	7.4	7.2	7.3	7.7	7.6	7.6
18	7.5	7.3	7.4	7.5	7.4	7.5	7.4	7.2	7.3	7.8	7.6	7.7
19	7.4	7.4	7.4	7.5	7.4	7.5	7.4	7.2	7.3	7.8	7.6	7.7
20	7.5	7.4	7.4	7.5	7.4	7.4	7.4	7.2	7.3	7.7	7.6	7.7
21	7.5	7.3	7.4	7.4	7.3	7.3	7.4	7.2	7.3	7.8	7.6	7.7
22	7.5	7.4	7.4	7.3	7.2	7.2	7.4	7.2	7.2	7.8	7.6	7.7
23	7.5	7.4	7.5	7.2	7.1	7.2	7.3	7.2	7.2	7.8	7.6	7.7
24	7.5	7.4	7.5	7.2	7.0	7.1	7.4	7.2	7.2	7.8	7.6	7.7
25	7.5	7.4	7.5	7.2	7.1	7.1	7.3	7.2	7.2	7.7	7.6	7.7
26	7.5	7.4	7.4	7.2	7.0	7.1	7.3	7.2	7.2	7.7	7.6	7.7
27	7.5	7.4	7.4	7.1	7.0	7.0	7.3	7.2	7.2	7.8	7.7	7.7
28	7.4	7.2	7.3	7.1	7.0	7.0	7.2	7.2	7.2	7.7	7.6	7.7
29	7.3	7.1	7.2	7.3	7.1	7.2	7.2	7.2	7.2	7.8	7.6	7.7
30	7.2	7.0	7.1	7.3	7.0	7.2	7.3	7.1	7.2	7.8	7.6	7.7
31	7.1	7.0	7.0	---	---	---	7.3	7.2	7.2	7.8	7.6	7.7
MAX	7.7	7.6	7.6	7.7	7.4	7.5	7.6	7.5	7.6	7.8	7.7	7.7
MIN	7.1	7.0	7.0	7.0	6.9	6.9	7.2	7.1	7.1	7.3	7.2	7.3

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	7.8	7.7	7.7	7.9	7.6	7.8	7.8	7.5	7.7	7.4	7.2	7.3
2	7.8	7.6	7.8	8.0	7.6	7.8	7.8	7.5	7.6	7.4	7.3	7.3
3	7.8	7.7	7.7	8.0	7.6	7.8	7.7	7.4	7.6	7.3	7.1	7.3
4	7.8	7.6	7.7	8.0	7.6	7.8	7.7	7.4	7.5	7.3	7.2	7.3
5	7.7	7.6	7.6	8.0	7.6	7.8	7.6	7.5	7.5	7.3	7.2	7.2
6	7.7	7.5	7.6	8.0	7.6	7.7	7.7	7.5	7.5	7.2	7.0	7.2
7	7.6	7.5	7.6	7.8	7.5	7.6	7.8	7.5	7.6	7.2	7.0	7.2
8	7.6	7.4	7.5	7.7	7.5	7.6	7.7	7.4	7.6	7.3	7.1	7.2
9	7.6	7.4	7.5	7.9	7.4	7.6	7.6	7.4	7.5	7.2	7.0	7.2
10	---	---	---	7.8	7.5	7.5	7.6	7.4	7.4	7.2	7.1	7.2
11	---	---	---	7.9	7.5	7.6	7.5	7.3	7.4	7.2	7.1	7.2
12	---	---	---	7.9	7.5	7.5	7.5	7.3	7.4	7.2	7.2	7.2
13	---	---	---	7.6	7.5	7.5	7.6	7.4	7.5	7.2	7.1	7.2
14	---	---	---	7.8	7.5	7.6	7.5	7.4	7.4	7.2	7.1	7.2
15	7.6	7.4	7.5	7.8	7.5	7.6	7.5	7.3	7.4	7.2	7.0	7.2
16	7.6	7.5	7.5	7.8	7.5	7.6	7.5	7.2	7.4	7.2	7.1	7.2
17	7.6	7.5	7.5	8.0	7.6	7.7	7.4	7.3	7.3	7.3	6.9	7.1
18	7.6	7.5	7.5	8.0	7.6	7.7	7.4	7.2	7.3	7.3	7.1	7.2
19	7.7	7.5	7.6	7.9	7.6	7.7	7.4	7.2	7.3	7.3	7.1	7.2
20	7.7	7.5	7.6	7.9	7.6	7.7	7.4	7.2	7.3	7.3	7.1	7.2
21	7.7	7.5	7.6	7.8	7.6	7.6	7.3	7.2	7.3	7.3	7.1	7.2
22	7.6	7.5	7.5	7.7	7.5	7.6	7.3	7.1	7.2	7.3	7.1	7.2
23	7.6	7.5	7.5	7.8	7.6	7.6	7.3	7.1	7.2	7.4	7.2	7.3
24	7.6	7.5	7.5	7.7	7.5	7.6	7.3	7.1	7.2	7.3	7.2	7.3
25	7.6	7.5	7.5	7.7	7.5	7.6	7.3	7.2	7.2	7.4	7.2	7.3
26	7.7	7.5	7.6	7.7	7.5	7.5	7.3	7.1	7.2	7.4	7.3	7.3
27	7.7	7.5	7.6	7.6	7.4	7.5	7.2	7.0	7.1	7.4	7.3	7.4
28	7.8	7.5	7.6	7.6	7.4	7.5	7.3	7.0	7.2	7.4	7.3	7.3
29	7.9	7.6	7.7	7.8	7.5	7.7	7.4	7.2	7.3	7.4	7.3	7.4
30	---	---	---	7.7	7.6	7.6	7.3	7.1	7.3	7.5	7.3	7.4
31	---	---	---	7.8	7.5	7.7	---	---	---	7.5	7.3	7.4
MAX	7.9	7.7	7.8	8.0	7.6	7.8	7.8	7.5	7.7	7.5	7.3	7.4
MIN	7.6	7.4	7.5	7.6	7.4	7.5	7.2	7.0	7.1	7.2	6.9	7.1

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.3	7.5	7.2	7.4
2	7.5	7.3	7.3	7.4	7.2	7.3	7.3	7.2	7.3	7.4	7.2	7.3
3	7.4	7.2	7.3	7.3	7.2	7.2	7.3	7.2	7.3	7.4	7.3	7.3
4	7.4	7.2	7.3	7.5	7.3	7.3	7.3	7.2	7.2	7.3	7.3	7.3
5	7.4	7.3	7.3	7.4	7.3	7.3	7.3	7.2	7.3	7.4	7.2	7.3
6	7.4	7.3	7.4	7.3	7.3	7.3	7.5	7.3	7.4	7.5	7.4	7.4
7	7.4	7.3	7.3	7.4	7.3	7.3	7.5	7.4	7.4	7.5	7.3	7.4
8	7.3	7.2	7.3	7.3	7.2	7.3	7.5	7.3	7.4	7.5	7.3	7.4
9	7.3	7.2	7.2	7.3	7.2	7.3	7.5	7.4	7.4	7.5	7.3	7.4
10	7.3	7.3	7.3	7.4	7.2	7.3	7.5	7.4	7.4	7.4	7.3	7.4
11	7.4	7.3	7.4	7.4	7.3	7.3	7.5	7.4	7.4	7.5	7.3	7.4
12	7.4	7.3	7.3	7.5	7.3	7.4	7.5	7.3	7.4	7.5	7.3	7.4
13	7.4	7.3	7.4	7.4	7.2	7.3	7.5	7.4	7.4	7.5	7.3	7.3
14	7.4	7.3	7.4	7.5	7.3	7.3	7.4	7.3	7.4	7.4	7.2	7.3
15	7.4	7.2	7.3	7.4	7.3	7.4	7.4	7.2	7.3	7.4	7.2	7.3
16	7.3	7.2	7.2	7.4	7.3	7.3	7.3	7.2	7.3	7.4	7.2	7.3
17	7.3	7.2	7.2	7.4	7.3	7.3	7.3	7.2	7.2	7.5	7.3	7.4
18	7.3	7.2	7.2	7.4	7.3	7.3	7.3	7.2	7.3	7.6	7.4	7.5
19	7.3	7.2	7.2	7.4	7.3	7.3	7.3	7.2	7.3	7.6	7.4	7.5
20	7.3	7.2	7.3	7.3	7.2	7.3	7.3	7.2	7.3	7.4	7.2	7.3
21	7.4	7.2	7.3	7.3	7.2	7.3	7.4	7.2	7.3	7.2	7.1	7.2
22	7.3	7.2	7.3	7.3	7.2	7.2	7.4	7.3	7.3	7.2	7.1	7.2
23	7.3	7.2	7.2	7.3	7.2	7.2	7.4	7.3	7.3	7.2	7.0	7.1
24	7.3	7.2	7.3	7.3	7.2	7.3	7.4	7.2	7.3	7.2	6.9	7.0
25	7.5	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.2	7.0	7.0
26	7.4	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.3	7.7	7.0	7.0
27	7.4	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3	7.1	7.0	7.0
28	7.4	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.4	7.2	7.0	7.0
29	7.4	7.3	7.3	7.3	7.2	7.3	7.4	7.3	7.4	7.2	6.9	7.1
30	7.4	7.3	7.3	7.3	7.2	7.3	7.4	7.3	7.4	7.0	6.9	7.0
31	---	---	---	7.4	7.2	7.3	7.5	7.4	7.4	---	---	---
MAX	7.5	7.3	7.4	7.5	7.3	7.4	7.5	7.4	7.4	7.7	7.4	7.5
MIN	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.2	7.0	6.9	7.0

YEAR			
	MAX	MAXIMUM 8.0	MINIMUM 7.0
	MIN	MAXIMUM 7.7	MINIMUM 6.9
	MEDIAN	MAXIMUM 7.8	MINIMUM 6.9

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	20.5	21.0	14.5	13.5	14.0	8.5	7.5	8.5	4.5	4.0	4.0
2	21.0	19.5	20.5	15.0	13.5	14.0	8.5	6.5	8.0	4.5	4.0	4.5
3	20.0	19.0	19.5	15.0	14.0	14.0	7.5	6.0	7.0	5.0	4.5	4.5
4	19.5	18.5	19.0	15.0	14.0	14.5	8.0	6.5	7.0	5.5	4.5	5.0
5	19.0	18.0	18.5	15.0	14.5	14.5	7.0	6.5	7.0	5.5	5.0	5.0
6	18.5	18.0	18.0	15.0	14.5	14.5	7.0	6.0	6.5	5.0	4.5	5.0
7	18.5	17.5	18.0	15.0	14.5	14.5	6.5	5.0	5.5	4.5	3.5	4.0
8	18.5	18.0	18.0	14.5	13.0	14.0	5.5	4.5	5.0	4.0	2.5	3.5
9	18.5	18.0	18.5	13.5	12.0	13.0	5.5	4.5	5.0	3.5	2.5	3.0
10	18.5	18.0	18.5	13.5	12.0	12.5	5.5	5.0	5.0	3.5	1.5	2.5
11	18.5	18.0	18.5	13.0	12.0	12.5	6.0	5.5	6.0	2.5	1.0	2.0
12	18.5	18.5	18.5	13.0	12.0	12.5	6.0	4.5	5.0	2.0	1.5	1.5
13	18.5	18.0	18.5	13.0	10.5	11.5	5.5	4.5	4.5	2.0	1.5	1.5
14	18.5	18.0	18.5	11.0	9.0	10.0	5.0	4.0	4.5	2.0	1.0	1.5
15	18.5	17.0	18.0	11.0	10.0	10.5	4.5	3.5	4.0	1.5	0.5	1.0
16	17.5	17.0	17.0	11.0	10.0	10.5	4.0	3.5	4.0	1.0	0.0	0.5
17	17.0	16.5	17.0	11.0	10.0	10.5	4.5	3.5	4.0	0.5	0.0	0.0
18	17.0	16.5	16.5	11.0	10.5	11.0	4.5	3.5	4.0	0.5	0.0	0.5
19	16.5	16.0	16.5	11.5	11.0	11.0	4.0	3.0	3.5	0.5	0.0	0.0
20	16.5	15.5	16.0	11.5	11.0	11.5	4.0	3.5	3.5	0.0	0.0	0.0
21	16.5	16.0	16.5	11.5	11.0	11.0	3.5	3.5	3.5	0.0	0.0	0.0
22	16.5	16.0	16.0	11.5	11.0	11.0	3.5	3.0	3.5	0.0	0.0	0.0
23	16.0	15.0	15.0	11.5	11.0	11.0	4.0	3.5	3.5	0.0	0.0	0.0
24	15.0	14.0	14.5	11.5	11.0	11.0	4.0	4.0	4.0	0.0	0.0	0.0
25	14.5	14.0	14.5	11.5	10.0	11.0	4.0	4.0	4.0	0.0	0.0	0.0
26	15.0	14.5	14.5	10.5	10.0	10.5	4.0	3.5	3.5	0.0	0.0	0.0
27	15.0	14.5	14.5	10.5	10.0	10.5	3.5	3.0	3.5	0.0	0.0	0.0
28	14.5	14.5	14.5	10.5	10.0	10.5	3.5	3.5	3.5	0.0	0.0	0.0
29	14.5	14.0	14.5	10.5	8.5	9.5	4.0	3.5	3.5	0.0	0.0	0.0
30	14.0	14.0	14.0	9.0	8.5	9.0	4.5	3.5	4.0	0.5	0.0	0.0
31	14.5	14.0	14.0	---	---	---	4.5	3.5	4.0	0.0	0.0	0.0
MONTH	21.5	14.0	17.0	15.0	8.5	11.9	8.5	3.0	4.8	5.5	0.0	1.6

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			**MARCH**			**APRIL**			**MAY**	
1	0.5	0.0	0.0	5.0	3.5	4.0	9.5	8.5	9.0	17.0	15.5	16.0
2	0.0	0.0	0.0	5.0	4.0	4.5	9.0	9.0	9.0	17.0	16.0	16.5
3	0.0	0.0	0.0	5.5	4.5	5.0	9.0	9.0	9.0	17.0	16.0	16.5
4	0.5	0.0	0.0	5.5	5.0	5.5	9.0	8.5	9.0	17.5	16.0	16.5
5	0.0	0.0	0.0	6.0	5.5	5.5	9.0	7.5	8.0	---	---	---
6	0.5	0.0	0.0	6.5	5.5	6.0	8.5	7.0	8.0	---	---	---
7	0.5	0.0	0.5	7.5	6.0	6.5	9.0	8.0	8.5	---	---	---
8	0.5	0.0	0.5	7.0	6.5	7.0	9.0	8.5	8.5	---	---	---
9	0.5	0.0	0.5	7.5	6.5	7.0	9.5	8.5	9.0	---	---	---
10	1.0	0.5	0.5	7.0	6.5	7.0	9.5	9.0	9.5	---	---	---
11	1.0	0.5	1.0	7.0	6.5	7.0	9.5	9.0	9.5	---	---	---
12	1.0	1.0	1.0	7.5	6.5	7.0	9.5	9.0	9.5	20.5	18.5	19.5
13	1.5	1.0	1.0	7.0	6.5	7.0	9.5	9.0	9.0	21.0	19.0	20.0
14	1.5	1.0	1.5	7.0	6.5	6.5	10.0	9.5	9.5	21.5	20.0	20.5
15	2.0	1.0	1.5	7.5	6.5	7.0	10.5	9.5	10.0	22.5	20.5	21.5
16	2.0	1.0	1.5	7.0	6.5	7.0	11.0	9.5	10.0	22.5	21.0	22.0
17	2.0	1.0	1.5	7.0	6.5	6.5	11.5	10.0	10.5	---	---	---
18	2.0	1.5	1.5	7.0	6.5	7.0	12.0	11.0	11.5	---	---	---
19	2.5	1.5	2.0	7.0	6.5	7.0	13.0	11.0	12.0	---	---	---
20	2.5	2.0	2.0	7.5	6.5	7.0	14.0	12.0	13.0	---	---	---
21	3.0	2.5	2.5	7.5	7.0	7.5	13.5	12.5	13.0	---	---	---
22	3.0	2.5	2.5	7.5	6.5	7.0	14.5	13.0	14.0	---	---	---
23	3.5	2.5	3.0	7.0	6.5	7.0	15.0	13.5	14.5	---	---	---
24	3.0	3.0	3.0	7.5	6.5	7.0	15.5	14.0	15.0	24.5	23.0	23.5
25	3.5	3.0	3.0	8.0	7.0	7.5	15.5	14.5	15.0	24.5	23.0	24.0
26	3.0	3.0	3.0	8.5	7.5	8.0	15.0	14.5	15.0	24.0	23.5	23.5
27	3.5	3.0	3.0	9.0	8.0	8.5	15.5	14.5	15.0	24.5	23.0	23.5
28	4.5	3.0	3.5	9.0	8.5	9.0	15.0	14.5	14.5	24.0	23.0	23.5
29	4.5	3.5	4.0	9.5	8.5	9.0	15.5	14.0	15.0	24.0	22.5	23.5
30	---	---	---	9.0	8.5	8.5	16.5	14.5	15.5	23.0	22.0	22.5
31	---	---	---	9.0	8.5	9.0	---	---	---	22.5	22.0	22.5
MONTH	4.5	0.0	1.5	9.5	3.5	6.9	16.5	7.0	11.3	24.5	15.5	20.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	23.0	21.5	22.0	25.5	24.5	25.0	27.0	26.5	27.0	26.5	25.5	26.0
2	23.0	21.5	22.0	26.0	24.5	25.0	27.5	27.0	27.0	26.5	25.5	26.0
3	23.0	22.0	22.5	26.0	25.0	25.5	27.5	27.0	27.5	26.5	25.5	26.0
4	22.5	22.0	22.5	25.5	25.0	25.5	28.0	27.0	27.5	26.0	26.0	26.0
5	22.0	21.5	21.5	26.0	25.0	25.5	27.5	27.0	27.5	26.0	25.5	26.0
6	21.5	21.0	21.0	26.0	25.5	26.0	27.0	26.0	26.5	25.5	25.0	25.5
7	22.0	21.0	21.5	26.5	25.5	26.0	26.0	25.5	26.0	26.0	25.0	25.0
8	22.5	21.0	22.0	26.5	26.0	26.0	25.5	25.0	25.5	25.5	25.0	25.5
9	23.5	22.0	22.5	26.5	26.0	26.5	26.0	25.0	25.5	25.5	25.0	25.5
10	24.0	22.5	23.0	---	---	---	26.0	25.0	25.5	26.0	25.0	25.0
11	23.5	22.5	23.0	---	---	---	26.5	25.5	25.5	25.0	25.0	25.0
12	23.5	22.5	23.0	---	---	---	26.0	25.5	25.5	25.5	24.5	25.0
13	22.5	22.0	22.5	---	---	---	26.0	25.5	25.5	25.5	24.5	25.0
14	23.0	22.0	22.5	---	---	---	25.5	25.0	25.5	25.0	24.5	25.0
15	23.5	22.5	23.0	26.0	25.0	25.5	25.5	25.0	25.0	24.5	24.0	24.5
16	24.0	22.5	23.5	25.5	25.0	25.5	26.0	25.0	25.0	24.5	24.0	24.0
17	24.5	23.0	24.0	---	---	---	25.5	25.0	25.0	24.5	24.0	24.0
18	25.0	23.5	24.0	---	---	---	25.5	25.0	25.5	24.5	22.5	24.0
19	25.0	24.0	24.5	---	---	---	26.0	25.0	25.5	23.5	22.0	22.5
20	24.5	23.5	24.0	---	---	---	26.5	25.5	26.0	22.5	21.5	22.0
21	24.5	23.5	24.0	---	---	---	26.0	25.5	26.0	22.0	21.5	21.5
22	24.5	23.5	24.0	---	---	---	26.0	25.0	25.5	22.0	21.0	21.5
23	24.5	24.0	24.5	---	---	---	26.0	25.5	25.5	22.0	21.0	21.0
24	25.5	24.0	24.5	26.5	26.0	26.5	26.5	25.5	25.5	21.5	20.5	21.0
25	25.5	24.0	24.5	26.5	26.0	26.0	25.5	25.0	25.5	21.5	20.5	21.0
26	25.0	24.0	24.5	27.0	25.5	26.0	26.0	25.0	25.5	21.5	19.5	21.0
27	25.0	24.0	24.5	26.0	25.5	26.0	26.0	25.5	25.5	21.5	20.5	21.0
28	25.5	24.0	24.5	26.5	26.0	26.0	26.5	25.5	26.0	21.5	20.5	21.0
29	26.0	24.5	25.0	27.0	25.5	26.0	26.5	25.5	26.0	21.0	19.5	20.0
30	25.5	24.5	24.5	27.0	26.0	26.5	26.5	26.0	26.5	20.0	19.5	19.5
31	---	---	---	27.5	26.5	26.5	26.5	26.0	26.0	---	---	---
MONTH	26.0	21.0	23.3	27.5	24.5	25.9	28.0	25.0	25.9	26.5	19.5	23.5
YEAR	28.0	0.0	13.9									

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			**NOVEMBER**			**DECEMBER**			**JANUARY**	
1	6.6	6.2	6.4	7.9	6.7	7.7	---	---	---	---	---	---
2	6.5	6.1	6.2	7.9	7.0	7.3	---	---	---	---	---	---
3	6.4	5.9	6.2	7.3	6.2	7.1	---	---	---	---	---	---
4	6.5	5.5	6.2	7.2	6.2	7.0	---	---	---	---	---	---
5	6.4	6.0	6.3	7.2	5.5	6.9	---	---	---	---	---	---
6	6.4	5.9	6.2	7.3	6.0	7.0	---	---	---	---	---	---
7	6.5	5.9	6.2	7.4	5.3	6.9	---	---	---	---	---	---
8	6.8	5.9	6.4	8.0	5.2	7.1	---	---	---	---	---	---
9	7.1	5.3	6.6	8.3	5.2	7.2	---	---	---	---	---	---
10	---	---	---	9.2	5.8	8.4	---	---	---	---	---	---
11	---	---	---	9.6	8.6	9.0	---	---	---	---	---	---
12	---	---	---	9.4	8.6	9.0	---	---	---	---	---	---
13	---	---	---	9.7	8.9	9.2	---	---	---	---	---	---
14	8.5	7.6	8.0	9.9	8.7	9.3	---	---	---	---	---	---
15	8.5	7.7	8.2	10.1	8.3	9.8	---	---	---	---	---	---
16	8.6	8.2	8.4	10.0	9.5	9.8	---	---	---	---	---	---
17	8.6	8.1	8.4	10.0	8.5	9.4	---	---	---	---	---	---
18	8.6	8.0	8.2	9.8	6.7	9.0	---	---	---	---	---	---
19	8.3	7.7	8.1	9.8	8.9	9.3	---	---	---	---	---	---
20	8.2	7.8	8.1	10.3	9.1	9.8	---	---	---	---	---	---
21	8.2	7.6	8.0	10.6	7.6	9.8	---	---	---	---	---	---
22	8.1	7.7	8.0	---	---	---	---	---	---	---	---	---
23	8.3	7.4	8.0	---	---	---	---	---	---	---	---	---
24	8.3	5.9	7.6	---	---	---	---	---	---	---	---	---
25	8.7	5.9	8.1	---	---	---	---	---	---	---	---	---
26	8.6	8.4	8.5	---	---	---	---	---	---	---	---	---
27	8.6	8.1	8.5	---	---	---	---	---	---	---	---	---
28	8.5	8.1	8.4	---	---	---	---	---	---	---	---	---
29	8.6	6.2	8.2	---	---	---	---	---	---	---	---	---
30	8.5	7.3	8.0	---	---	---	---	---	---	---	---	---
31	8.0	7.4	7.8	---	---	---	---	---	---	---	---	---
MONTH	8.7	5.3	7.5	10.6	5.2	8.4	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	12.1	11.8	11.9	10.8	9.7	10.2	8.3	7.6	8.1
2	---	---	---	12.2	11.7	11.9	11.1	9.8	10.5	8.2	7.8	8.1
3	---	---	---	12.1	11.8	11.9	11.6	9.9	10.7	8.4	6.9	7.8
4	---	---	---	12.2	11.8	12.0	11.2	10.2	10.7	8.1	7.2	7.7
5	---	---	---	12.2	11.7	11.9	11.7	11.0	11.3	7.9	7.0	7.5
6	---	---	---	12.2	11.6	11.8	11.2	10.1	10.8	7.5	6.2	7.0
7	---	---	---	11.8	11.4	11.6	10.9	9.7	10.5	7.3	5.0	6.6
8	---	---	---	11.6	11.3	11.4	10.9	10.0	10.5	7.1	6.5	6.9
9	---	---	---	11.6	11.0	11.3	11.1	10.0	10.6	7.0	5.5	6.5
10	---	---	---	11.5	11.1	11.2	11.2	10.4	10.9	7.0	6.2	6.7
11	---	---	---	11.3	10.7	11.1	11.3	10.6	10.9	---	---	---
12	---	---	---	11.2	9.9	10.8	11.4	10.7	11.1	---	---	---
13	---	---	---	11.3	10.6	11.1	11.1	10.2	10.8	---	---	---
14	---	---	---	11.3	10.2	11.0	11.1	9.9	10.6	---	---	---
15	11.8	11.5	11.7	11.0	10.2	10.7	11.1	10.2	10.8	---	---	---
16	12.0	10.2	11.6	11.2	9.9	10.7	10.9	9.9	10.6	---	---	---
17	11.6	10.6	11.4	10.6	9.2	9.9	10.7	8.9	10.0	---	---	---
18	11.6	11.2	11.5	10.6	9.0	9.8	9.6	8.9	9.4	---	---	---
19	11.6	10.9	11.4	10.5	9.5	10.1	9.5	8.8	9.2	---	---	---
20	11.7	11.4	11.6	10.8	9.2	10.1	9.5	8.4	9.1	---	---	---
21	11.6	11.1	11.5	11.0	9.6	10.5	9.4	8.7	9.1	---	---	---
22	11.7	10.1	11.3	11.1	9.4	10.8	9.2	8.3	8.8	---	---	---
23	11.6	11.0	11.3	10.9	10.0	10.5	9.1	6.6	8.7	---	---	---
24	11.8	11.0	11.5	11.1	9.7	10.6	6.9	5.7	6.3	9.4	8.1	8.9
25	11.8	10.2	11.5	11.3	10.6	11.1	6.4	5.5	6.0	9.6	8.2	9.0
26	11.8	10.2	11.5	11.6	10.9	11.3	6.9	5.7	6.4	9.6	8.5	9.0
27	11.9	11.6	11.8	12.2	11.4	11.8	7.8	6.1	7.1	9.7	8.2	9.2
28	12.0	11.0	11.7	12.2	11.4	11.8	8.5	6.2	7.9	9.7	8.4	9.2
29	12.1	11.6	11.9	11.7	10.2	10.7	8.6	7.8	8.3	10.0	8.4	9.4
30	---	---	---	10.9	10.4	10.6	8.5	7.3	8.2	9.8	8.3	9.4
31	---	---	---	10.8	10.1	10.4	---	---	---	9.5	8.6	9.3
MONTH	12.1	10.1	11.5	12.2	9.0	11.0	11.7	5.5	9.5	10.0	5.0	8.1

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			**JULY**			**AUGUST**			**SEPTEMBER**	
1	9.2	8.2	8.9	5.8	5.0	5.3	---	---	---	6.8	6.5	6.7
2	9.0	8.2	8.7	5.4	4.9	5.2	---	---	---	7.0	6.6	6.8
3	8.7	7.4	8.2	5.3	4.2	4.9	---	---	---	7.0	6.6	6.8
4	7.4	4.8	5.6	5.4	4.1	5.0	---	---	---	6.8	6.6	6.7
5	6.9	5.8	6.4	5.5	4.1	5.1	---	---	---	7.2	6.4	6.9
6	7.0	5.7	6.4	5.4	4.2	5.1	---	---	---	7.3	6.8	7.1
7	6.4	5.5	5.9	---	---	---	---	---	---	7.0	6.7	6.9
8	5.8	5.0	5.5	---	---	---	---	---	---	7.0	6.5	6.8
9	5.7	4.6	5.3	---	---	---	---	---	---	7.0	6.3	6.7
10	5.7	4.7	5.3	---	---	---	---	---	---	6.7	6.4	6.6
11	5.8	4.5	4.9	---	---	---	6.5	5.5	6.0	---	---	---
12	6.0	3.7	5.2	---	---	---	6.8	5.7	6.2	---	---	---
13	---	---	---	---	---	---	6.6	5.6	6.3	---	---	---
14	---	---	---	---	---	---	6.5	5.8	6.2	---	---	---
15	---	---	---	---	---	---	6.3	5.6	6.1	---	---	---
16	---	---	---	---	---	---	6.1	5.3	5.9	---	---	---
17	---	---	---	---	---	---	6.2	5.2	5.8	---	---	---
18	---	---	---	---	---	---	6.5	4.6	5.9	---	---	---
19	---	---	---	---	---	---	6.2	5.8	6.0	---	---	---
20	---	---	---	---	---	---	6.2	5.7	6.0	---	---	---
21	6.9	5.0	6.4	---	---	---	6.6	5.8	6.3	---	---	---
22	6.7	5.7	6.3	---	---	---	6.6	6.2	6.4	---	---	---
23	6.4	5.4	6.1	---	---	---	6.5	6.1	6.3	---	---	---
24	6.4	5.6	6.1	5.5	4.6	5.0	6.5	5.9	6.2	5.8	4.3	4.8
25	6.5	5.6	6.0	5.2	4.6	4.9	6.5	6.0	6.3	5.0	4.7	4.8
26	5.9	4.6	5.5	6.3	4.2	4.7	6.8	6.1	6.4	7.5	4.8	5.2
27	5.9	4.3	5.3	5.0	3.4	4.4	6.8	6.0	6.4	5.4	5.0	5.2
28	6.0	3.9	5.5	5.5	3.5	4.2	6.7	6.0	6.3	6.0	5.0	5.3
29	5.7	3.5	5.1	4.6	3.5	4.1	6.8	6.0	6.3	6.7	5.8	6.2
30	6.6	3.5	5.0	---	---	---	6.7	6.2	6.4	6.2	5.9	6.1
31	---	---	---	---	---	---	6.8	6.3	6.6	---	---	---
MONTH	9.2	3.5	6.1	6.3	3.4	4.8	6.8	4.6	6.2	7.5	4.3	6.2

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 2004

Station name and number	Location and drainage area	Period of Record	Water year 2004 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
DELAWARE RIVER BASIN								
LACKAWAXEN RIVER BASIN								
Dyberry Creek above Reservoir near Honesdale, Pa. (01429300)	Lat 41°39’26”, long 75°17’12”, Wayne County, Hydrologic Unit 02040103, on right bank 955 ft downstream from bridge on West Branch Dyberry Creek at Tanners Falls, Pa., 0.2 mi downstream from confluence of the East and West Branches of Dyberry Creek, and 6 mi north of Dyberry, Pa. Datum of gage is 1,023.43 ft above sea level. Drainage area is 45.8 mi^2.	1975-2004 Discontinued	9-18-04	12.73	7,060	9-18-04	12.73	7,060
VANDERMARK CREEK BASIN								
Vandermark Creek at Milford, Pa. (01438300)	Lat 41°19’35”, long 74°47’50”, Pike County, Hydrologic Unit 02040104, at stone bridge on Broad Street in Milford, Pa., and 0.4 mi upstream of mouth.Datum of gage is 490.50 ft above sea level. Drainage area is 5.36 mi^2.	1962-2004	9-18-04	3.16	431	9-16-99	3.36[a]	566
BRODHEAD CREEK BASIN								
Mill Creek at Mountainhome, Pa. (01440300)	Lat 41°09’50”, long 75°16’00”, Monroe County, Hydrologic Unit 02040104, at concrete bridge on macadam road, 0.5 mi east of Mountainhome, Pa., and 1.5 mi upstream of mouth. Drainage area is 5.84 mi^2.	1961-2004	9-18-04	10.87	789	7-28-69	12.65	1,650

Annual maximum discharge at crest-stage partial-record stations during water year 2004—Continued

Station name and number	Location and drainage area	Period of Record	Water year 2004 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
DELAWARE RIVER BASIN--Continued								
LEHIGH RIVER BASIN								
Lehigh River at Allentown, Pa. (01451192)	Lat 40°36'23", long 75°27'17", Lehigh County, Hydrologic Unit 02040106, on upstream side of bridge on Hamilton Street in Allentown, Pa., 200 ft downstream from lock and dam, and 0.7 mi upstream from Little Lehigh Creek. Datum of gage, 200 ft above sea level. Drainage area is 1,033 mi^2.	1977-81***** 1982-2004 Discontinued	9-18-04	49.35	53,000	9-18-04	49.35	53,000
NESHAMINY CREEK BASIN								
Neshaminy Creek near Penns Park, Pa. (01465200)	Lat 40°15'06", long 75°00'31", Bucks County, Hydrologic Unit 02040201, on left bank at bridge over main stem of Neshaminy Creek on Second Street Pike (Rt. 232) at Penns Park, Pa. Drainage area is 157 mi^2	2002-04	9-29-04	19.93	15,800	9-29-04	19.93	15,800
SCHUYLKILL RIVER BASIN								
Schuylkill River at Birdsboro, Pa. (01471660)	Lat 40°16'05", long 75°48'40", Berks County, Hydrologic Unit 02040203, on railroad bridge, on right bank 1,000 ft upstream from bridge on SR 82 in Birdsboro, Pa. Datum of gage, sea level. Drainage area is 976 mi^2.	1981-94 1996 1999-2004 Discontinued	9-19-04	157.49	27,600	4-16-83	158.72	30,700
Schuylkill River at Phoenixville, Pa. (01472162)	Lat 40°08'07", long 75°30'32", Chester County, Hydrologic Unit 02040203, on the downstream end of the left bank wingwall of Reading Railroad bridge across the mouth of French Creek at Phoenixville, Pa. (station 014721612). Datum of gage, sea level. Drainage area is 1,280 mi^2.	1971-94 1996 1999-2004 Discontinued	9-19-04	87.99	35,590	6-23-72	100.58	79,100
CHRISTINA RIVER BASIN BRANDYWINE CREEK BASIN WEST BRANCH BRANDYWINE CREEK BASIN								
Sucker Run near Coatesville, Pa. (01480610)	Lat 39°58'20", long 75°51'03", Chester County, Hydrologic Unit 02040205, at concrete bridge on South Park Avenue on SR 372, 1.6 mi upstream of mouth, and 2.0 mi west of Coatesville, Pa. Drainage area is 2.57 mi^2.	1964-2004	9-28-04	6.01	403	7-21-79	8.49	1,500

***** Operated as a low-flow partial-record station.
a Peak gage height for period of record is 3.65 ft, Sept. 25, 1975.

Miscellaneous sites

Discharge measurements made at miscellaneous sites during water year 2004

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements: Date	Measurements: Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
		EQUINUNK CREEK BASIN				
01427200 Equinunk Creek	Delaware River	Lat 41°50'15", long 75°13'55", Wayne County, Hydrologic Unit 02040101, at highway bridge 700 ft downstream from South Branch Equinunk Creek, and 1.4 mi above mouth and Equinunk, Pa.	56.3	1946-57* 1978-91* 1992-2003	6-10-04 6-15-04	26 17
		LACKAWAXEN RIVER BASIN				
01431600 Wallenpaupack Creek	Lackawaxen River	Lat 41°20'10", long 75°20'25", Wayne County, Hydrologic Unit 02040103, at bridge on dirt road 2.6 mi south of intersection of State Routes 84 and 191, 0.2 mi upstream from Rock Port Creek, and at East Sterling, Pa.	69.5	1944-57 1978-81 1989-2003	10-08-03 11-19-03 4-14-04 6-03-04 7-14-04 8-24-04	125 139 252 137 29 189
01432110 Lackawaxen River	Delaware River	Lat 41°28'33", long 75°02'12", Pike County, Hydrologic Unit 02040103, at mouth, and downstream from bridge on SR 590, at Rowland, Pa. Regulated by lakes and reservoirs upstream.	588	1949[a] 1989-2003	10-08-03 11-19-03 4-14-04 6-03-04 7-14-04 8-24-04	489 1,310 2,790 765 184 1,500
		SHOHOLA CREEK BASIN				
01432500 Shohola Creek	Delaware River	Lat 41°27'20", long 74°55'25", Pike County, Hydrologic Unit 02040104, 1.7 mi upstream from mouth, and 1.4 mi south of Shohola, Pa. Prior to 1959 at highway bridge 0.4 mi upstream.	83.6	1920-28≠ 1957-80 1981-91* 1992-2003	6-23-04 7-21-04	53 14
0143839602 Sawkill Creek	Delaware River	Lat 41°19'00", long 74°47'59", Pike County, Hydrologic Unit 02040104, at bridge on River Road, 1,000 dt upstream from mouth, at Milford, Pa.	24.7	2002-03 Discontinued	3-30-04 5-10-04 6-22-04	35 63 18
01438700 Raymondskill Creek	Delaware River	Lat 41°18'11", long 74°51'21", Pike County, Hydrologic Unit 02040104, at bridge on SR 2009, 2.0 mi upstream from mouth, and 2.4 mi southwest of Milford, Pa.	20.4	1947-57 2002-03 Discontinued	3-30-04 5-10-04 6-22-04	34 57 12
01438754 Adams Creek	Delaware River	Lat 41°15'40", long 74°53'24", Pike County, Hydrologic Unit 02040104, at bridge on SR 2001, 3.0 mi upstream from mouth, and near Edgemere, Pa.	3.71	2002-03 Discontinued	3-30-04 5-10-04 6-22-04	6.2 11 4.8
01438892 Dingmans Creek	Delaware River	Lat 41°13'47", long 74°53'50", Pike County, Hydrologic Unit 02040104, at bridge on Doodle Hollow Road, 2.3 mi upstream from mouth, and near Dingmans Ferry, Pa.	13.9	2002-03 Discontinued	3-30-04 3-30-04 5-10-04 6-22-04	21 21 34 10
01439092 Hornbecks Creek	Delaware River	Lat 41°11'45", long 74°54'36", Pike County, Hydrologic Unit 02040104, at culvert on Emery Road 2.0 mi upstream from mouth, and near Dingmans Ferry, Pa.	6.43	2002-03 Discontinued	3-31-04 5-10-04 6-22-04	19 14 1.8

Discharge measurements made at miscellaneous sites during water year 2004—Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
		SHOHOLA CREEK BASIN--Continued				
01439400 Toms Creek	Delaware River	Lat 41°07'33", long 74°57'20", Pike County, Hydrologic Unit 02040104, at bridge on Toms Creek Road, 0.4 mi upstream from mouth, at Egypt Mills, Pa.	9.34	1970-83 2002-03 Discontinued	3-31-04 3-31-04 5-11-04 5-11-04 6-22-04	28 27 43 40 4.1
01439570 Sand Hill Creek	Bush Kill	Lat 41°05'06", long 75°00'32", Monroe County, Hydrologic Unit 02040104, at abandoned footbridge, 0.3 mi upstream from mouth, at Bushkill, Pa.	3.46	2002-03 Discontinued	3-31-04 5-11-04 5-11-04 6-23-04	5.4 39 40 1.2
01439680 Little Bush Kill	Bush Kill	Lat 41°05'52", long 75°00'15", Pike County, Hydrologic Unit 02040104, at bridge on East Sugar Mountain Road, 0.7 mi upstream from mouth, at Bushkill, Pa.	32.6	2002-03 Discontinued	3-31-04 5-11-04 6-23-04	65 129 19
		BRODHEAD CREEK BASIN POHOPOCO CREEK BASIN				
01450020 Pohopoco Creek	Lehigh River	Lat 40°49'05", long 75°40'27", Carbon County, Hydrologic Unit 02040106, 200 ft upstream of Parryville Dam, at Parryville, Pa., and 0.25 mi above mouth.	111	1992-1998≠[b] 1999-2003	3-01-04 4-15-04 5-18-04 6-28-04 8-24-04	154 267 221 88 460
		NESHAMINY CREEK BASIN				
01465460 Iron Works Creek	Mill Creek	Lat 40°11'54", long 75°00'40", Bucks County, Hydrologic Unit 02040201, at lower Holland Road bridge 300 ft east of Bustleton Pike, and 1.3 mi south of Richboro, Pa.	3.69	1981* 1982-86 1991-2003	10-29-03 2-11-04 3-31-04 5-19-04 7-07-04	9.1 5.4 5.2 2.7 .81
		SCHUYLKILL RIVER BASIN				
†01472190 Pickering Creek	Schuylkill River	Lat 40°06'33", long 75°31'42", Chester County, Hydrologic Unit 02040203, at bridge on Creek Road at SR 29, 0.3 mi downstream from Conrail bridge, 1.0 mi south of Phoenixville, Pa., and 2.6 mi upstream from Pickering Creek Dam.	31.4	1967-68≠ 1975-2003 1981-84*	10-21-03 11-03-03 2-19.04 3-30-04 5-18-04 6-23-04 7-22-04	40.8 67.9 51.4 40.6 39.9 32.7 27.9
01473110 Skippack Creek	Perkiomen Creek	Lat 40°10'17", long 75°25'52", Montgomery County, Hydrologic Unit 02040203, at bridge on State Route 363, and 0.4 mi east of Evansburg, Pa.	52.9	1995-2003	11-04-03 12-10-03 2-20-04 3-31-04 5-19-04 6-25-04 7-22-04	72.3 46.7 37.7 254 58.5 12.9 35.7
		CHRISTINA RIVER BASIN				
01478230 Middle Branch White Clay Creek	White Clay Creek	Lat 39°45'02", long 75°46'19", Chester County, Hydrologic Unit 02040205, at bridge on Sharpless Road, 2.0 mi south of Landenberg, Pa., and 6.0 mi south of Avondale, Pa. Formerly published as "White Clay Creek".	25.5	1989-2003	10-30-03 12-17-03 12-17-03 2-05-04 4-14-04 6-03-04 7-22-04 8-31-04	70.9 378 297 58.8 71.6 33.3 35.4 55.2

Discharge measurements made at miscellaneous sites during water year 2004—Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements: Date	Measurements: Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
		CHRISTINA RIVER BASIN--Continued				
01480424 West Branch Brandywine Creek	Brandywine Creek	Lat 40°01'19", long 75°50'53", Chester County, Hydrologic Unit 02040205, on downstream side of concrete bridge on Wagontown Road, .75 mi northwest of Wagontown, Pa.	31.9	2002-03	10-28-03 12-15-03 4-20-04 5-20-04 7-02-04 9-18-04	140 150 33.8 57.1 21.8 26.4
		BIG ELK CREEK BASIN				
01494990 Big Elk Creek	Elk River	Lat 39°43'50", long 75°50'55", Chester County, Hydrologic Unit 02060002, at bridge on Lewisville Road, 1.5 mi east of Lewisville, Pa., and 9.2 mi north of Elkton, Md.	41.0	1989-2003	10-30-03 12-18-03 2-05-04 4-16-04 6-03-04 7-22-04 8-31-04	113 151 97.8 76.0 50.3 51.1 69.1

***** Operated as a low-flow partial-record station.
≠ Operated as a continuous-record gaging station.
† Operated as a water-quality partial-record station since 1974.
a Prior to October 1988 located at latitude 41°28'19", longitude 75°02'25".
b The results of discharge measurements made from 1992 through 1998 water years are available in office files.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

The Pennsylvania Water-Quality Network (WQN) is a statewide, fixed station water-quality sampling system currently operated by the Department of Environmental Protection (PaDEP), Bureau of Water Supply and Wastewater Management in cooperation with the United States Geological Survey (USGS). It is designed to assess both the quality of Pennsylvania's surface waters and the effectiveness of the water quality management program by accomplishing three basic objectives:

* Monitor temporal water-quality trends in major surface streams throughout the Commonwealth of Pennsylvania.

* Monitor temporal water-quality trends in selected reference waters.

* Monitor temporal water-quality trends in selected Pennsylvania lakes.

Major streams are defined as interstate waters and intrastate streams with drainage areas of roughly 200 mi^2 or greater. These waters are sampled at or near their mouths to measure overall quality before flows enter the next higher order stream or before exiting the Commonwealth. In this way, trends can be established and the effectiveness of water-quality management programs can be assessed by watershed. Samples are collected on fixed-time intervals resulting in coverage of a range of flow regimes. All samples were collected by the USGS and analyzed by the PaDEP laboratory in Harrisburg.

Most of the current WQN standard sites are co-located with USGS gage stations and others are equipped with a wire-weight gage. Currently the network consists of 117 standard stream sites, 22 reference stream sites, and 21 lakes distributed across the Commonwealth. This report contains only those sites in the Delaware River basin. The locations of these sites can be found in figures 6-11. Other data for the WQN can be found in the annual Water Data Reports PA-04-2 and PA-04-3.

Standard stations are sampled bimonthly (6 times per year) for physical and chemical parameters and stream discharge or a stage reading. Reference stations are sampled at 25-30 day intervals for physical and chemical parameters and stream discharge or a stage reading. Benthic macroinvertebrates are also collected annually at all WQN stations.

Ninety lakes are part of the WQN. Of these 90 lakes, approximately 15-25 are sampled annually during mid-summer stratification for 5 years; and then a different set of 15-25 lakes is sampled for 5 years. Using this schedule, all 90 lakes are sampled over a 30-year period. Lakes are sampled for physical and chemical parameters and chlorophyll-*a*. Two samples are collected from the deepest point of the lake with the first sample being collected 1-meter below the surface and the second sample collected 1-meter from the bottom. Each sample is analyzed separately. A temperature and dissolved oxygen profile is collected at the site through the water column. This report contains only data for lakes in the Delaware River basin. The locations of these sites can be found in figures 6-11.

For additional information, contact Andrew Reif at the USGS Pennsylvania Water Science Center, Exton Office, 770 Pennsylvania Drive, Suite 116, Exton, PA 19341; 610-321-2434, (email: agreif@usgs.gov).

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

TABLE 1.--List of stream sites sampled as part of the Pennsylvania Water-Quality Network (WQN).

Station number	WQN No.	Location	Latitude	Longitude	Drainage area (mi^2)
[a]01427000	104	West Branch Delaware River at Hancock, NY	41° 57’ 08”	75° 17’ 31”	650
[a]01427510	185	Delaware River at Callicoon, NY	41° 45’ 24”	75° 03’ 28”	1,820
01429301	336	Dyberry Creek at Tanners Falls near Dyberry, PA (Reference station)	41° 39’ 11”	75° 16’ 55”	46.4
01431600	141	Wallenpaupack Creek at East Sterling, PA	41° 20’ 10”	75° 20’ 25”	69.5
01432119	147	Lackawaxen River at mouth at Lackawaxen, PA	41° 29’ 12”	74° 59’ 31”	597
[a]01434000	103	Delaware River at Port Jervis, NY	41° 22’ 14”	74° 41’ 52”	3,070
01438760	192	Adams Creek near Dingmans Ferry, PA (Reference station)	41° 14’ 22”	74° 52’ 02”	8.20
[a]01439500	139	Bush Kill at Shoemakers, PA	41° 05’ 17”	75° 02’ 17”	117
01440650	138	Brodhead Creek near East Stroudsburg, PA	41° 02’ 10”	75° 12’ 34”	121
[a]01442500	137	Brodhead Creek at Minisink Hills, PA	40° 59’ 55”	75° 08’ 35”	259
01444800	194	Delaware River near Richmond, PA	40° 49’ 44”	75° 05’ 06”	4,378
01447300	190	Choke Creek near Thornhurst, PA (Reference station)	41° 09’ 40”	75° 36’ 10”	8.06
[a]01447500	126	Lehigh River at Stoddartsville, PA	41° 07’ 49”	75° 37’ 33”	91.7
[a]01447720	142	Tobyhanna Creek near Blakeslee, PA	41° 05’ 05”	75° 36’ 21”	118
01449375	191	Wild Creek above Penn Forest Reservoir near Kresgeville, PA (Reference station	40° 56’ 24”	75° 35’ 04”	5.4
01451070	125	Lehigh River at Treichlers, PA	40° 44’ 03”	75° 32’ 28”	928
01452040	130	Jordan Creek at mouth at Allentown, PA	40° 36’ 06”	75° 27’ 43”	82.3
[a]01454700	123	Lehigh River at Glendon, PA	40° 40’ 09”	75° 14’ 12”	1,359
01457790	187	Cooks Creek at Durham Furnace, PA (Reference station)	40° 34’ 56”	75° 12’ 20”	29.4
01458900	186	Tinicum Creek near Ottsville, PA (Reference station)	40° 28’ 14”	75° 08’ 13”	14.7
[a]01463500	101	Delaware River at Trenton, NJ	40° 13’ 18”	74° 46’ 42”	6,780
[a]01465500	121	Neshaminy Creek near Langhorne, PA	40° 10’ 26”	74° 57’ 26”	210
[a]01470500	113	Schuylkill River at Berne, PA	40° 31’ 21”	75° 59’ 55”	355
[a]01471000	117	Tulpehocken Creek near Reading, PA	40° 22’ 08”	75° 58’ 46”	211
[a]01472000	111	Schuylkill River at Pottstown, PA	40° 14’ 30”	75° 39’ 07”	1,147
01472150	156	French Creek at Coventryville, PA (Reference station)	40° 10’ 16”	75° 41’ 26”	36.9
01473030	116	Perkiomen Creek at Arcola near Collegeville, PA	40° 09’ 11”	75° 27’ 21”	300
01473170	154	Valley Creek at Wilson Road near Valley Forge, PA	40° 04’ 53”	75° 27’ 25”	22.0
[a]01473900	193	Wissahickon Creek at Fort Washington, PA	40° 07’ 26”	75° 13’ 13”	40.8
[a]01474000	115	Wissahickon Creek at mouth at Philadelphia, PA	40° 00’ 55”	75° 12’ 26”	64.0
01474010	110	Schuylkill River at Falls Bridge at Philadelphia, PA	40° 00’ 30”	75° 11’ 52”	1,893
[a]01478245	149	White Clay Creek near Strickersville, PA	39° 44’ 51”	75° 46’ 15”	59.2
[a]01479820	150	Red Clay Creek near Kennett Square, PA	39° 49’ 00”	75° 41’ 31”	28.3
[a]01481000	105	Brandywine Creek at Chadds Ford, PA	39° 52’ 11”	75° 35’ 37”	287
01494990	256	Big Elk Creek near Lewisville, PA	39° 43’ 48”	75° 50’ 54”	41.0

[a]Other data for this station can be found in the continuous station records section of this report.

TABLE 2.--List of lakes sampled as part of the Pennsylvania Water-Quality Network.

Station number	WQN No.	Location	Latitude	Longitude
01427252	L114	Duck Harbor Pond near Lookout, PA	41° 45’ 11”	75° 12’ 01”
01446590	L112	Minsi Lake near Roseto, PA	40° 54’ 43”	75° 10’ 15”
01447100	L113	Gouldsboro Lake at Gouldsboro, PA	41° 14’ 07”	75° 27’ 09”
01464640	L115	Lake Galena near Chalfont, PA	40° 19’ 01”	75° 12’ 15”
01472124	L102	Hopewell Lake at Hopewell, PA	40° 12’ 16”	75° 46’ 43”
0148064640	L116	Struble Lake near Honey Brook, PA	40° 06’ 28”	75° 51’ 51”

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

REMARKS.--Some values for "*dissolved*" parameters exceeded values for the corresponding "*total*" parameter. These results are within the limits of analytical precision and methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01427000 West Branch Delaware River at Hancock, NY (LAT 41 57 08N LONG 075 17 31W)													
OCT 2003													
09...	1130	1028	9813	--	--	10.4	7.5	7.3	92	89	15.0	24	6.7
DEC													
11...	1030	1028	9813	--	--	11.7	7.4	6.9	194	196	5.0	23	6.4
FEB 2004													
09...	1115	1028	9813	--	--	14.3	8.3	7.7	123	133	.1	27	7.1
APR													
20...	1100	1028	9813	--	--	13.6	7.9	7.3	84	84	7.3	24	6.7
JUN													
15...	1100	1028	9813	--	--	11.1	8.5	7.7	104	100	19.3	27	7.9
AUG													
24...	1230	1028	9813	--	--	12.8	7.5	6.7	86	87	12.3	23	6.5
01429301 Dyberry Creek at Tanners Falls near Dyberry, PA (LAT 41 39 11N LONG 075 16 55W)													
OCT 2003													
08...	1215	1028	9813	54	2.0	11.9	7.3	7.4	61	59	8.9	24	--
NOV													
03...	1400	1028	9813	123	4.0	11.2	7.2	7.2	54	53	11.8	19	--
DEC													
10...	1230	1028	9813	70	<1.0	12.9	7.3	6.8	59	60	2.0	21	--
JAN 2004													
07...	1300	1028	9813	178	<1.0	15.0	8.0	7.2	50	51	.1	17	--
FEB													
25...	1330	1028	9813	29	6.0	14.5	7.4	7.3	76	79	.9	26	--
MAR													
24...	1415	1028	9813	66	6.0	13.2	7.6	6.9	62	61	4.9	20	--
APR													
19...	1545	1028	9813	77	5.0	10.9	7.4	7.0	61	60	14.3	21	--
MAY													
19...	1450	1028	9813	61	4.0	10.3	7.7	7.2	64	63	18.1	23	--
JUN													
14...	1530	1028	9813	22	1.0	9.8	7.4	6.8	75	55	16.2	28	--
JUL													
29...	1540	1028	9813	99	1.0	9.2	7.1	7.0	62	62	19.2	25	--
AUG													
23...	1615	1028	9813	48	<1.0	10.4	7.7	6.8	66	63	18.5	24	--
SEP													
27...	1500	1028	9813	62	<1.0	10.0	7.2	6.9	62	51	15.6	24	--
01431600 Wallenpaupack Creek at East Sterling, PA (LAT 41 20 10N LONG 075 20 25W)													
OCT 2003													
08...	1510	1028	9813	121	--	11.4	7.8	7.2	67	72	13.1	19	6.1
DEC													
17...	0900	1028	9813	343	--	14.0	6.6	7.0	57	53	2.7	18	4.9
FEB 2004													
19...	1130	1028	9813	172	--	14.8	8.0	6.6	80	79	.1	23	7.2
APR													
15...	1000	1028	9813	164	--	10.8	7.0	6.8	67	66	5.6	17	--
JUN													
24...	0830	1028	9813	44	--	10.0	7.2	--	84	78	17.1	26	8.2
AUG													
17...	1240	1028	9813	413	--	9.3	6.8	6.3	46	45	17.8	15	4.5

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Calcium water unfltrd recover -able, mg/L (00916)	Magnes- ium, water, fltrd, mg/L (00925)	Magnes- ium, water, unfltrd recover -able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
		01427000 West Branch Delaware River at Hancock, NY (LAT 41 57 08N LONG 075 17 31W)											
OCT 2003													
09...	6.8	1.7	1.8	19	0	--	--	6.1	146	6	<.020	.35	<.040
DEC													
11...	6.5	1.3	1.7	13	0	--	--	6.0	174	24	<.020	.26	<.040
FEB 2004													
09...	7.6	1.8	2.0	18	6.4	--	--	7.3	72	2	<.020	.56	<.040
APR													
20...	6.6	1.8	1.7	15	13	--	--	6.2	48	8	<.020	.45	<.040
JUN													
15...	7.8	2.0	1.9	21	14	--	--	6.7	56	10	.020	.40	<.040
AUG													
24...	6.5	1.6	1.6	16	6.0	--	--	6.2	62	2	<.020	.49	<.040
		01429301 Dyberry Creek at Tanners Falls near Dyberry, PA (LAT 41 39 11N LONG 075 16 55W)											
OCT 2003													
08...	8.5	--	.78	19	--	2.6	<.2	5.7	56	8	<.020	.07	<.040
NOV													
03...	6.6	--	.64	16	--	2.3	<.2	5.5	52	2	<.020	.07	<.040
DEC													
10...	7.1	--	.66	16	--	2.5	<.2	6.1	24	<2	<.020	.17	<.040
JAN 2004													
07...	5.7	--	.58	12	--	2.5	<.2	5.9	50	<2	<.020	.24	<.040
FEB													
25...	8.9	--	.81	20	--	4.9	<.2	6.6	52	4	<.020	.33	<.040
MAR													
24...	7.1	--	.66	15	--	4.7	<.2	6.2	58	4	<.020	.30	<.040
APR													
19...	7.2	--	.66	19	--	3.6	<.2	6.0	60	<2	<.020	.15	<.040
MAY													
19...	7.9	--	.71	18	--	3.0	<.2	5.6	42	2	<.020	.13	<.040
JUN													
14...	9.7	--	.80	24	--	3.5	<.2	5.9	54	6	.030	.20	<.040
JUL													
29...	8.6	--	.83	22	--	2.8	<.2	4.6	72	<2	.030	.06	<.040
AUG													
23...	8.3	--	.75	23	--	3.1	<.2	4.9	48	<2	<.020	.07	<.040
SEP													
27...	8.2	--	.78	22	--	2.4	<.2	5.2	58	<2	<.020	.10	<.040
		01431600 Wallenpaupack Creek at East Sterling, PA (LAT 41 20 10N LONG 075 20 25W)											
OCT 2003													
08...	6.1	.91	.90	15	--	--	--	5.8	86	2	<.020	.21	<.040
DEC													
17...	5.5	.79	.95	8	0	--	--	6.1	56	<2	<.020	.35	<.040
FEB 2004													
19...	7.4	1.11	1.1	13	9.2	--	--	7.1	22	<2	<.020	.44	<.040
APR													
15...	5.6	--	.82	12	--	--	--	6.2	60	8	<.020	.28	<.040
JUN													
24...	8.4	1.11	1.1	--	4.0	--	--	6.2	76	<2	<.020	.27	<.040
AUG													
17...	4.6	.67	.72	9	17	--	--	4.8	46	14	<.020	.15	<.040

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coli-form, M-FC 0.45µMF col/ 100 mL (31616)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Cyanide amen-able to chlor-ination wat unf mg/L (00722)
01427000 West Branch Delaware River at Hancock, NY (LAT 41 57 08N LONG 075 17 31W)													
OCT 2003													
09...	<.01	.017	.75	--	1.1	--	<10	30	--	--	<4	<4	--
DEC													
11...	.02	.070	.60	--	2.1	--	40	1600	--	--	<4	<4	--
FEB 2004													
09...	.01	.013	.76	--	1.3	--	20	40	--	--	<4	<4	--
APR													
20...	.01	.022	.74	--	1.2	--	<10	40	--	--	<4	<4	--
JUN													
15...	<.01	.023	.69	--	1.2	--	<10	30	--	--	<4	<4	--
AUG													
24...	<.01	.019	.60	--	.5	--	<10	40	--	--	<4	<4	--
01429301 Dyberry Creek at Tanners Falls near Dyberry, PA (LAT 41 39 11N LONG 075 16 55W)													
OCT 2003													
08...	.01	<.010	.24	--	.8	<20	<10	20	<4.0	<.20	<4	<4	--
NOV													
03...	<.01	<.010	.24	--	--	40	30	80	<4.0	<.20	<4	<4	--
DEC													
10...	<.01	.016	.32	--	1.9	<20	<10	40	<4.0	<.20	<4	<4	--
JAN 2004													
07...	<.01	.016	.40	--	.7	<20	20	80	<4.0	<.20	<4	<4	--
FEB													
25...	<.01	.016	.45	--	1.3	<10	<10	30	<4.0	<.20	<4	<4	--
MAR													
24...	<.01	<.010	.41	--	.8	<20	10	50	<4.0	<.20	<4	<4	--
APR													
19...	.01	.015	.43	--	1.7	<20	20	50	<4.0	<.20	<4	<4	--
MAY													
19...	.01	.023	.26	--	.9	20	10	80	<4.0	<.20	<4	<4	--
JUN													
14...	.01	.025	.34	--	1.0	40	10	30	<4.0	<.20	<4	<4	--
JUL													
29...	.01	.039	.31	--	1.0	140	20	60	<4.0	<.20	<4	<4	--
AUG													
23...	.01	.015	.18	--	<.2	<20	20	40	<4.0	<.20	<4	<4	--
SEP													
27...	.01	.014	.23	--	.9	10	<10	30	<4.0	<.20	<4	<4	--
01431600 Wallenpaupack Creek at East Sterling, PA (LAT 41 20 10N LONG 075 20 25W)													
OCT 2003													
08...	.01	.013	.44	--	--	--	30	40	--	--	<4	<4	--
DEC													
17...	.02	.012	.35	--	1.7	--	40	120	--	--	<4	<4	--
FEB 2004													
19...	<.01	.012	.54	--	2.8	--	10	30	--	--	<4	<4	--
APR													
15...	.01	.011	.58	2.6	--	--	--	<200	--	--	--	<10	--
JUN													
24...	<.01	.013	.26	--	1.0	--	30	50	--	--	<4	<4	--
AUG													
17...	.01	.028	.38	--	.7	--	70	150	--	--	<4	<4	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Phen-olic com-pounds, water, unfltrd µg/L (32730)
01427000 West Branch Delaware River at Hancock, NY (LAT 41 57 08N LONG 075 17 31W)											
OCT 2003											
09...	<20	90	<1.0	<1.0	31	51	12	<4.0	<5.0	<5.0	--
DEC											
11...	100	2320	<1.0	4.6	80	190	<4.0	<4.0	6.5	22	--
FEB 2004											
09...	30	120	<1.0	<1.0	26	35	<4.0	<4.0	<5.0	<5.0	--
APR											
20...	40	150	<1.0	1.0	36	48	<4.0	<4.0	<5.0	<5.0	--
JUN											
15...	50	130	1.0	<1.0	29	43	<4.0	<4.0	<5.0	<5.0	--
AUG											
24...	50	180	<1.0	<1.0	12	35	<4.0	<4.0	<5.0	<5.0	--
01429301 Dyberry Creek at Tanners Falls near Dyberry, PA (LAT 41 39 11N LONG 075 16 55W)											
OCT 2003											
08...	40	90	<1.0	<1.0	23	26	<4.0	<4.0	<5.0	<5.0	<5
NOV											
03...	50	110	<1.0	<1.0	16	28	<4.0	<4.0	<5.0	<5.0	<5
DEC											
10...	50	90	<1.0	<1.0	22	28	<4.0	<4.0	<5.0	<5.0	<5
JAN 2004											
07...	40	140	<1.0	<1.0	11	20	<4.0	<4.0	<5.0	<5.0	<5
FEB											
25...	40	100	<1.0	<1.0	21	25	<4.0	<4.0	<5.0	<5.0	<5
MAR											
24...	30	80	<1.0	<1.0	17	21	<4.0	<4.0	<5.0	<5.0	<5
APR											
19...	40	90	<1.0	<1.0	18	25	<4.0	<4.0	<5.0	<5.0	<5
MAY											
19...	70	120	<1.0	<1.0	22	32	<4.0	<4.0	<5.0	<5.0	<5
JUN											
14...	40	110	<1.0	<1.0	27	36	<4.0	<4.0	<5.0	<5.0	<5
JUL											
29...	90	290	<1.0	<1.0	13	39	<4.0	<4.0	<5.0	<5.0	<5
AUG											
23...	70	140	<1.0	<1.0	18	31	<4.0	<4.0	<5.0	<5.0	<5
SEP											
27...	70	90	<1.0	<1.0	25	30	<4.0	<4.0	<5.0	<5.0	<5
01431600 Wallenpaupack Creek at East Sterling, PA (LAT 41 20 10N LONG 075 20 25W)											
OCT 2003											
08...	100	140	<1.0	<1.0	24	30	<4.0	<4.0	--	--	--
DEC											
17...	80	230	<1.0	<1.0	18	30	<4.0	<4.0	6.2	5.7	--
FEB 2004											
19...	60	90	<1.0	<1.0	25	31	<4.0	<4.0	<5.0	<5.0	--
APR											
15...	--	120	--	<1.0	--	27	--	<50	--	<10	--
JUN											
24...	60	140	<1.0	<1.0	21	33	<4.0	<4.0	<5.0	<5.0	--
AUG											
17...	140	290	<1.0	<1.0	50	69	<4.0	<4.0	6.2	6.6	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01432119 Lackawaxen River at mouth at Lackawaxen, PA (LAT 41 29 12N LONG 074 59 31W)													
DEC 2003													
17...	1100	1028	9813	3050	--	14.7	7.1	7.1	73	69	2.5	19	--
FEB 2004													
19...	1330	1028	9813	699	--	16.0	8.1	7.4	88	87	.3	25	--
APR													
14...	1000	1028	9813	2540	--	12.1	6.5	7.0	77	78	7.3	22	--
JUN													
24...	1050	1028	9813	800	--	11.4	8.3	7.6	90	89	17.4	27	--
AUG													
17...	1110	1028	9813	2720	--	8.9	7.0	6.5	84	85	18.9	22	--
01438760 Adams Creek near Dingmans Ferry, PA (LAT 41 14 22N LONG 074 52 02W)													
OCT 2003													
01...	1020	1028	9813	15	3.0	11.0	7.1	6.5	73	60	8.1	8	1.8
NOV													
24...	1410	1028	9813	23	5.0	11.8	6.9	6.5	63	61	7.8	15	3.3
DEC													
15...	1400	1028	9813	40	<1.0	14.2	6.6	6.6	60	57	1.8	12	3.0
FEB 2004													
23...	1530	1028	9813	--	4.0	16.0	7.0	6.6	80	78	1.2	18	4.4
MAR													
23...	1340	1028	9813	16	6.0	14.8	7.5	6.8	81	83	1.1	17	4.1
APR													
19...	1300	1028	9813	21	5.0	11.3	7.1	6.7	82	73	13.1	15	3.8
MAY													
25...	1250	1028	9813	11	3.0	9.6	7.3	7.0	82	81	17.4	17	4.2
JUN													
24...	1400	1028	9813	3.0	2.0	10.2	7.3	6.9	80	78	17.3	22	--
JUL													
13...	1520	1028	9813	2.6	2.0	10.2	7.3	6.6	75	73	17.2	20	--
AUG													
17...	0800	1028	9813	10	1.0	9.8	7.2	6.5	78	79	16.6	18	--
SEP													
09...	0945	1028	9813	30	<1.0	9.4	7.0	6.9	82	80	19.5	17	--
01440650 Brodhead Creek near Analomink, PA (LAT 41 02 10N LONG 075 12 34W)													
OCT 2003													
07...	1430	1028	9813	261	--	10.8	7.5	7.1	84	76	10.0	19	5.4
DEC													
16...	1620	1028	9813	610	--	13.8	6.8	6.9	71	66	3.4	17	4.6
FEB 2004													
23...	1630	1028	9813	99	--	15.3	7.2	6.6	101	101	3.4	22	6.1
APR													
19...	1600	1028	9813	292	--	11.6	7.6	6.8	104	92	14.1	22	5.9
JUN													
21...	1640	1028	9813	73	--	10.3	7.2	7.9	109	100	19.6	27	7.2
AUG													
17...	1420	1028	9813	588	--	9.6	7.2	6.6	77	78	18.1	18	4.9

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Calcium water unfltrd recover -able, mg/L (00916)	Magnes- ium, water, fltrd, mg/L (00925)	Magnes- ium, water, unfltrd recover -able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
		01432119 Lackawaxen River at mouth at Lackawaxen, PA (LAT 41 29 12N LONG 074 59 31W)											
DEC 2003													
17...	6.2	--	1.0	12	--	--	--	6.6	266	2	.030	.19	<.040
FEB 2004													
19...	7.8	--	1.3	16	--	--	--	7.5	64	<2	<.020	.31	<.040
APR													
14...	7.2	--	1.1	14	--	--	--	6.6	44	20	<.020	.24	<.040
JUN													
24...	8.7	--	1.2	19	--	--	--	7.0	84	2	<.020	.11	<.040
AUG													
17...	7.3	--	1.0	20	--	--	--	5.8	56	4	.030	.05	<.040
		01438760 Adams Creek near Dingmans Ferry, PA (LAT 41 14 22N LONG 074 52 02W)											
OCT 2003													
01...	1.9	.69	.7	4	0	15.1	<.2	2.0	122	16	<.020	<.04	<.040
NOV													
24...	3.6	1.3	1.3	7	0	9.1	<.2	8.0	32	14	<.020	<.04	<.040
DEC													
15...	3.0	1.2	1.2	5	--	8.0	<.2	7.8	42	4	<.020	.08	<.040
FEB 2004													
23...	4.4	1.7	1.7	8	--	12.0	<.2	8.3	182	<2	<.020	.19	<.040
MAR													
23...	4.3	1.4	1.6	7	11	14.1	<.2	7.6	46	<2	<.020	.10	<.040
APR													
19...	3.8	1.4	1.4	7	--	13.3	<.2	7.6	--	--	<.020	.05	<.040
MAY													
25...	4.2	1.6	1.6	9	--	13.0	<.2	6.4	26	<2	--	.16	<.040
JUN													
24...	5.6	--	1.9	12	--	12.4	<.2	6.5	66	<2	<.020	.18	<.040
JUL													
13...	5.3	--	1.7	15	--	8.5	<.2	6.9	76	<2	<.020	.27	<.040
AUG													
17...	4.6	--	1.6	12	--	12.4	<.2	6.5	42	22	<.020	.09	<.040
SEP													
09...	4.3	--	1.5	9	--	14.0	<.2	6.1	52	2	.040	.06	<.040
		01440650 Brodhead Creek near Analomink, PA (LAT 41 02 10N LONG 075 12 34W)											
OCT 2003													
07...	5.4	1.4	1.5	12	0	--	--	7.0	64	<2	<.020	.19	<.040
DEC													
16...	4.7	1.2	1.2	9	0	--	--	7.3	64	2	<.020	.25	<.040
FEB 2004													
23...	6.2	1.7	1.7	11	.20	--	--	7.6	14	<2	<.020	.32	<.040
APR													
19...	6.1	1.5	1.5	12	6.6	--	--	7.4	--	--	<.020	.18	<.040
JUN													
21...	7.5	1.9	2.0	16	1.6	--	--	7.0	152	<2	<.020	.12	<.040
AUG													
17...	5.1	1.2	1.3	15	6.2	--	--	6.5	44	10	<.020	.20	<.040

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coli-form, M-FC 0.45µMF col/ 100 mL (31616)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Cyanide amen-able to chlor-ination wat unf mg/L (00722)
		01432119 Lackawaxen River at mouth at Lackawaxen, PA (LAT 41 29 12N LONG 074 59 31W)											
DEC 2003													
17...	.02	.033	.30	3.9	--	--	--	<200	--	--	--	<10	--
FEB 2004													
19...	.01	.019	.50	2.8	--	--	--	<200	--	--	--	<10	--
APR													
14...	.02	.047	1.2	4.0	--	--	--	240	--	--	--	<10	--
JUN													
24...	<.01	.018	1.1	3.0	--	--	--	<200	--	--	--	<10	--
AUG													
17...	.01	.036	.38	4.0	--	--	--	<200	--	--	--	<10	--
		01438760 Adams Creek near Dingmans Ferry, PA (LAT 41 14 22N LONG 074 52 02W)											
OCT 2003													
01...	<.01	.013	<.06	--	1.4	<10	20	40	<4.0	<.20	<4	<4	--
NOV													
24...	<.01	.017	.19	--	1.2	20	20	30	<4.0	<.20	<4	<4	--
DEC													
15...	<.01	.013	.17	--	1.6	10	30	40	<4.0	<.20	<4	<4	--
FEB 2004													
23...	<.01	.020	.20	--	1.7	<20	<10	20	<4.0	<.20	<4	<4	--
MAR													
23...	<.01	<.010	.20	--	.9	<20	10	30	<4.0	<.20	<4	<4	--
APR													
19...	.01	.014	.23	--	1.2	80	20	50	<4.0	<.20	<4	<4	--
MAY													
25...	<.01	--	.56	--	.6	20	10	50	<4.0	<.20	<4	<4	--
JUN													
24...	<.01	.022	.35	--	1.1	<10	30	30	<4.0	<.20	<4	<4	--
JUL													
13...	.01	.016	.53	--	2.3	20	20	40	<4.0	<.20	<4	<4	--
AUG													
17...	<.01	.015	.20	--	.5	20	<10	30	<4.0	<.20	<4	<4	--
SEP													
09...	<.01	.017	.23	--	.5	140	20	70	<4.0	<.20	<4	<4	--
		01440650 Brodhead Creek near Analomink, PA (LAT 41 02 10N LONG 075 12 34W)											
OCT 2003													
07...	.01	.013	.41	--	1.0	--	10	30	--	--	<4	<4	--
DEC													
16...	.01	.013	.26	--	1.7	--	20	50	--	--	<4	<4	--
FEB 2004													
23...	<.01	.012	.37	--	1.9	--	<10	10	--	--	<4	<4	--
APR													
19...	.01	.012	.42	--	1.3	--	10	30	--	--	<4	<4	--
JUN													
21...	<.01	.017	.99	--	1.8	--	--	--	--	--	<4	<4	--
AUG													
17...	.02	.019	.30	--	.7	--	30	70	--	--	<4	<4	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Phen-olic com-pounds, water, unfltrd µg/L (32730)
01432119 Lackawaxen River at mouth at Lackawaxen, PA (LAT 41 29 12N LONG 074 59 31W)											
DEC 2003											
17...	--	200	--	<1.0	--	50	--	<50	--	<10	--
FEB 2004											
19...	--	110	--	<1.0	--	20	--	<50	--	40	--
APR											
14...	--	390	--	1.1	--	80	--	<50	--	10	--
JUN											
24...	--	100	--	<1.0	--	30	--	<50	--	20	--
AUG											
17...	--	500	--	<1.0	--	290	--	<50	--	<10	--
01438760 Adams Creek near Dingmans Ferry, PA (LAT 41 14 22N LONG 074 52 02W)											
OCT 2003											
01...	<20	30	<1.0	<1.0	4.7	7.5	<4.0	<4.0	19	17	<5
NOV											
24...	30	70	<1.0	<1.0	<2.0	7.2	<4.0	<4.0	7.2	<5.0	<5
DEC											
15...	30	60	<1.0	<1.0	2.7	6.9	<4.0	<4.0	<5.0	<5.0	<5
FEB 2004											
23...	40	60	<1.0	<1.0	<2.0	2.8	<4.0	<4.0	<5.0	<5.0	<5
MAR											
23...	30	70	<1.0	<1.0	2.2	7.4	<4.0	<4.0	7.1	<5.0	<5
APR											
19...	30	80	<1.0	<1.0	2.6	20	<4.0	<4.0	<5.0	<5.0	<5
MAY											
25...	70	170	<1.0	<1.0	2.3	22	<4.0	<4.0	<5.0	<5.0	--
JUN											
24...	--	--	<1.0	<1.0	--	--	<4.0	<4.0	<5.0	<5.0	<5
JUL											
13...	30	70	<1.0	<1.0	<2.0	8.0	<4.0	<4.0	<5.0	<5.0	--
AUG											
17...	40	80	<1.0	<1.0	<2.0	9.8	<4.0	<4.0	<5.0	<5.0	18
SEP											
09...	80	250	<1.0	<1.0	<2.0	22	<4.0	<4.0	<5.0	<5.0	<5
01440650 Brodhead Creek near Analomink, PA (LAT 41 02 10N LONG 075 12 34W)											
OCT 2003											
07...	20	50	<1.0	<1.0	6.5	11	<4.0	<4.0	<5.0	<5.0	--
DEC											
16...	30	70	<1.0	<1.0	6.9	13	<4.0	<4.0	6.0	5.3	--
FEB 2004											
23...	20	60	<1.0	<1.0	12	13	<4.0	<4.0	5.6	<5.0	--
APR											
19...	<20	60	<1.0	<1.0	4.3	9.6	<4.0	<4.0	<5.0	<5.0	--
JUN											
21...	30	40	<1.0	<1.0	2.7	7.7	<4.0	<4.0	<5.0	<5.0	--
AUG											
17...	60	140	<1.0	<1.0	13	31	<4.0	<4.0	<5.0	5.3	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01444800 Delaware River near Richmond, PA (LAT 40 49 44N LONG 075 05 06W)													
OCT 2003													
27...	0900	1028	9813	6940	--	13.2	7.5	6.8	110	116	10.6	32	--
DEC													
15...	1140	1028	9813	28300	--	15.7	6.6	7.0	80	76	1.4	24	--
FEB 2004													
23...	1200	1028	9813	3560	--	14.9	7.1	7.3	151	147	1.8	45	--
APR													
26...	1300	1028	9813	9110	--	11.9	7.6	7.5	115	112	12.6	31	--
JUN													
22...	1320	1028	9813	2820	--	8.2	7.7	6.9	136	128	23.7	41	--
AUG													
16...	1150	1028	9813	17600	--	8.6	7.0	6.6	74	75	20.4	20	--
01447300 Choke Creek near Thornhurst, PA (LAT 41 09 40N LONG 075 36 10W)													
OCT 2003													
08...	1020	1028	9813	16	2.0	11.2	4.7	5.0	24	22	8.3	5	.92
NOV													
24...	1130	1028	9813	21	4.0	11.6	4.9	5.4	24	24	6.5	5	1.1
DEC													
16...	0930	1028	9813	28	<1.0	14.6	4.7	5.0	24	23	.9	5	.93
JAN 2004													
29...	1430	1028	9813	--	6.0	15.3	5.6	5.6	21	8	.0	5	.92
FEB													
24...	0830	1028	9813	--	6.0	16.0	5.2	6.3	22	21	.7	5	1.0
MAR													
24...	0740	1028	9813	12	5.0	14.2	5.8	6.2	30	31	.6	6	1.2
APR													
20...	0800	1028	9813	11	3.0	12.0	5.1	5.7	28	24	10.8	6	1.2
MAY													
26...	0950	1028	9813	--	2.0	9.3	5.1	6.0	21	21	15.5	5	1.1
JUN													
22...	0900	1028	9813	6.6	2.0	9.3	5.2	5.8	20	19	15.7	5	.98
JUL													
14...	1400	1028	9813	3.5	1.0	9.2	5.5	5.7	23	21	17.9	6	1.1
AUG													
18...	0900	1028	9813	15	<1.0	10.3	4.1	5.5	22	21	14.6	4	.88
SEP													
08...	1500	1028	9813	6.4	--	9.2	5.4	6.0	16	18	17.4	4	.77
01449375 Wild Creek above Penn Forest Reservoir near Kresgeville, PA (LAT 40 56 24N LONG 075 35 04W)													
NOV 2003													
24...	0920	1028	9813	15	5.0	11.3	7.4	6.3	60	58	7.8	8	1.9
DEC													
16...	1240	1028	9813	25	<1.0	13.3	6.4	6.6	68	63	4.5	7	1.8
JAN 2004													
29...	1130	1028	9813	12	6.0	16.1	6.7	6.7	53	53	.2	7	1.6
FEB													
24...	1240	1028	9813	6.0	6.0	15.8	6.2	6.8	54	51	2.0	7	1.7
MAR													
24...	1000	1028	9813	11	5.0	13.3	6.8	6.8	59	57	3.5	7	1.8
APR													
20...	1400	1028	9813	7.7	4.0	11.5	6.8	6.7	62	52	13.3	9	2.0
MAY													
26...	1050	1028	9813	10	2.0	9.8	6.6	6.4	63	62	14.1	8	2.0
JUN													
21...	1230	1028	9813	5.1	2.0	9.9	6.5	6.7	63	57	15.2	9	2.0
JUL													
14...	1100	1028	9813	5.0	2.0	10.3	6.3	6.1	56	52	15.7	8	1.8
AUG													
19...	1000	1028	9813	8.1	<1.0	10.8	5.4	6.4	68	65	15.1	9	2.2
SEP													
07...	1200	1028	9813	6.4	<1.0	9.2	5.4	6.0	--	18	17.4	4	.77

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
01444800 Delaware River near Richmond, PA (LAT 40 49 44N LONG 075 05 06W)													
OCT 2003													
27...	9.3	--	2.2	25	--	--	--	7.7	196	<2	.020	.19	<.040
DEC													
15...	6.8	--	1.6	15	--	--	--	7.0	84	2	<.020	.30	<.040
FEB 2004													
23...	12.7	--	3.3	32	--	--	--	10.4	92	2	<.020	.44	<.040
APR													
26...	8.9	--	2.1	22	--	--	--	7.8	76	8	<.020	.31	<.040
JUN													
22...	11.9	--	2.6	31	--	--	--	9.1	84	2	.020	.16	<.040
AUG													
16...	5.8	--	1.3	18	--	--	--	6.0	82	8	.020	.19	<.040
01447300 Choke Creek near Thornhurst, PA (LAT 41 09 40N LONG 075 36 10W)													
OCT 2003													
08...	1.0	.53	.54	1	26	1.5	<.2	4.1	68	2	<.020	<.04	<.040
NOV													
24...	1.2	.57	.58	2	20	1.7	<.2	4.7	--	--	.020	<.04	<.040
DEC													
16...	1.0	.55	.56	1	14	1.3	<.2	4.8	26	<2	<.020	<.04	<.040
JAN 2004													
29...	1.1	.55	.58	2	22	1.7	<.2	4.0	10	<2	<.020	<.04	<.040
FEB													
24...	1.1	.60	.62	3	10	1.9	<.2	3.9	16	<2	<.020	<.04	<.040
MAR													
24...	1.2	.66	.67	2	--	3.8	<.2	4.5	--	<2	<.020	<.04	<.040
APR													
20...	1.3	.63	.64	2	18	3.0	<.2	4.4	22	2	<.020	<.04	<.040
MAY													
26...	1.1	.52	.53	3	32	1.8	<.2	3.4	14	4	<.020	<.04	<.040
JUN													
22...	1.0	.53	.54	3	24	1.7	<.2	3.3	14	<2	<.020	<.04	<.040
JUL													
14...	1.1	.63	.66	3	18	2.0	<.2	4.4	20	<2	<.020	<.04	<.040
AUG													
18...	.91	.50	.53	2	26	1.8	<.2	3.9	36	4	<.020	<.04	<.040
SEP													
08...	.79	.44	.46	3	29	1.3	<.2	3.2	--	<2	.030	<.04	<.040
01449375 Wild Creek above Penn Forest Reservoir near Kresgeville, PA (LAT 40 56 24N LONG 075 35 04W)													
NOV 2003													
24...	1.9	.72	.75	4	12	13.6	<.2	2.1	10	26	<.020	<.04	<.040
DEC													
16...	1.8	.69	.68	4	0	16.5	<.2	2.3	446	<2	<.020	<.04	<.040
JAN 2004													
29...	1.7	.66	.68	5	0	12.2	<.2	1.8	24	<2	<.020	.04	<.040
FEB													
24...	1.7	.70	.71	5	6.8	12.0	<.2	1.6	146	<2	<.020	.04	<.040
MAR													
24...	1.7	.74	.73	5	--	13.0	<.2	2.0	--	<2	<.020	.04	<.040
APR													
20...	2.0	.81	.82	5	16	13.7	<.2	1.7	64	4	<.020	<.04	<.040
MAY													
26...	2.0	.79	.81	6	14	14.3	<.2	1.5	84	12	.060	.06	<.040
JUN													
21...	2.1	.87	.86	10	9.6	14.7	<.2	1.4	56	<2	<.020	.04	<.040
JUL													
14...	1.9	.69	.73	5	12	11.9	<.2	2.6	52	<2	<.020	.06	<.040
AUG													
19...	2.1	.86	.87	5	7.4	15.9	<.2	1.9	26	<2	<.020	.04	<.040
SEP													
07...	.77	.44	.46	3	29	1.3	<.2	3.2	--	<2	.030	<.04	<.040

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coli-form, M-FC 0.45µMF col/ 100 mL (31616)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Cyanide amen-able to chlor-ination wat unf mg/L (00722)
01444800 Delaware River near Richmond, PA (LAT 40 49 44N LONG 075 05 06W)													
OCT 2003													
27...	.01	.020	.41	3.0	--	--	--	<200	--	--	--	<10	--
DEC													
15...	.02	.021	.53	2.8	--	--	--	<200	--	--	--	<10	--
FEB 2004													
23...	<.01	.016	.57	2.1	--	--	--	<200	--	--	--	<10	--
APR													
26...	.01	.020	.60	2.7	--	--	--	<200	--	--	--	10	--
JUN													
22...	.02	.031	.43	3.1	--	--	--	<200	--	--	--	<10	--
AUG													
16...	.02	.052	.48	5.2	--	--	--	330	--	--	--	<10	--
01447300 Choke Creek near Thornhurst, PA (LAT 41 09 40N LONG 075 36 10W)													
OCT 2003													
08...	<.01	<.010	.17	--	1.1	<20	120	130	<4.0	<.20	<4	<4	--
NOV													
24...	<.01	.016	.10	--	1.2	40	130	160	<4.0	<.20	<4	<4	--
DEC													
16...	<.01	<.010	.09	--	1.6	<20	140	150	<4.0	<.20	<4	<4	--
JAN 2004													
29...	<.01	<.010	<.06	--	.6	<20	60	80	<4.0	<.20	<4	<4	--
FEB													
24...	<.01	<.010	.08	--	1.3	<20	70	80	<4.0	<.20	<4	<4	--
MAR													
24...	<.01	<.010	.11	--	1.0	<20	80	90	<4.0	<.20	<4	<4	--
APR													
20...	<.01	<.010	.18	--	.9	<10	110	130	<4.0	<.20	<4	<4	--
MAY													
26...	<.01	.012	.42	--	.6	60	130	170	<4.0	<.20	<4	<4	--
JUN													
22...	<.01	.014	<.06	--	1.0	<20	100	170	<4.0	<.20	<4	<4	--
JUL													
14...	<.01	.011	.17	--	1.0	40	90	100	<4.0	<.20	<4	<4	--
AUG													
18...	<.01	<.010	.08	--	.8	10	140	180	<4.0	<.20	<4	<4	--
SEP													
08...	<.01	.010	<.06	--	1.2	550	100	120	<4.0	<.20	<4	<4	--
01449375 Wild Creek above Penn Forest Reservoir near Kresgeville, PA (LAT 40 56 24N LONG 075 35 04W)													
NOV 2003													
24...	<.01	.010	.20	--	1.1	<20	30	60	<4.0	<.20	<4	<4	--
DEC													
16...	<.01	<.010	<.06	--	1.5	<20	30	40	<4.0	<.20	<4	<4	--
JAN 2004													
29...	<.01	<.010	.10	--	.6	<10	10	50	<4.0	<.20	<4	<4	--
FEB													
24...	<.01	<.010	.30	--	1.4	<20	20	30	<4.0	<.20	<4	<4	--
MAR													
24...	<.01	.013	.11	--	1.1	40	20	30	<4.0	<.20	<4	<4	--
APR													
20...	<.01	.011	--	--	.7	<20	40	90	<4.0	<.20	<4	<4	--
MAY													
26...	<.01	<.010	.30	--	.2	20	20	90	<4.0	<.20	<4	<4	--
JUN													
21	<.01	.019	.12	--	1.4	<20	20	50	<4.0	<.20	<4	<4	--
JUL													
14...	<.01	.011	.48	--	1.0	<20	60	90	<4.0	<.20	<4	<4	--
AUG													
19...	<.01	<.010	<.06	--	.8	<20	30	50	<4.0	<.20	<4	<4	--
SEP													
07...	<.01	.010	<.06	--	1.2	280	100	120	<4.0	<.20	<4	<4	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Phen-olic com-pounds, water, unfltrd µg/L (32730)
01444800 Delaware River near Richmond, PA (LAT 40 49 44N LONG 075 05 06W)											
OCT 2003											
27...	--	160	--	<1.0	--	20	--	<50	--	30	--
DEC											
15...	--	200	--	<1.0	--	30	--	<50	--	80	--
FEB 2004											
23...	--	80	--	<1.0	--	10	--	<50	--	<10	--
APR											
26...	--	170	--	<1.0	--	30	--	<50	--	40	--
JUN											
22...	--	200	--	<1.0	--	50	--	<50	--	20	--
AUG											
16...	--	690	--	1.6	--	90	--	<50	--	20	--
01447300 Choke Creek near Thornhurst, PA (LAT 41 09 40N LONG 075 36 10W)											
OCT 2003											
08...	110	120	<1.0	<1.0	67	67	<4.0	<4.0	12	12	<5
NOV											
24...	70	130	1.0	<1.0	74	82	<4.0	<4.0	--	--	<5
DEC											
16...	60	70	<1.0	<1.0	72	78	<4.0	<4.0	16	14	<5
JAN 2004											
29...	30	40	<1.0	<1.0	30	32	<4.0	<4.0	10	9.0	<5
FEB											
24...	30	40	<1.0	<1.0	23	22	<4.0	<4.0	12	9.1	<5
MAR											
24...	30	50	<1.0	<1.0	48	50	<4.0	<4.0	13	14	<5
APR											
20...	60	100	<1.0	<1.0	48	50	<4.0	<4.0	17	18	<5
MAY											
26...	210	260	<1.0	<1.0	35	40	<4.0	<4.0	9.6	9.8	<5
JUN											
22...	100	190	<1.0	<1.0	25	37	<4.0	<4.0	9.1	14	<5
JUL											
14...	80	110	<1.0	<1.0	19	21	<4.0	<4.0	7.5	7.7	<5
AUG											
18...	180	220	<1.0	<1.0	63	74	<4.0	<4.0	11	12	<5
SEP											
08...	110	200	<1.0	<1.0	20	24	<4.0	<4.0	6.4	7.4	<5
01449375 Wild Creek above Penn Forest Reservoir near Kresgeville, PA (LAT 40 56 24N LONG 075 35 04W)											
NOV 2003											
24...	<20	60	<1.0	<1.0	3.1	17	<4.0	<4.0	20	21	<5
DEC											
16...	<20	30	<1.0	<1.0	6.9	9.6	<4.0	<4.0	21	19	<5
JAN 2004											
29...	<20	40	<1.0	<1.0	2.4	17	<4.0	<4.0	12	15	<5
FEB											
24...	<20	20	<1.0	<1.0	2.3	3.6	<4.0	<4.0	18	15	<5
MAR											
24...	<20	<20	<1.0	<1.0	5.0	8.2	<4.0	<4.0	19	20	<5
APR											
20...	<20	60	<1.0	<1.0	5.4	32	<4.0	<4.0	16	17	<5
MAY											
26...	30	140	<1.0	<1.0	4.7	35	<4.0	<4.0	15	15	<5
JUN											
21...	40	100	<1.0	<1.0	3.0	14	<4.0	<4.0	12	12	<5
JUL											
14...	60	90	<1.0	<1.0	3.9	14	<4.0	<4.0	20	23	<5
AUG											
19...	40	60	<1.0	<1.0	3.8	13	<4.0	<4.0	16	15	<5
SEP											
07...	110	200	<1.0	<1.0	20	24	<4.0	<4.0	6.4	7.4	<5

TUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01451070 Lehigh River at Treichlers, PA (LAT 40 44 03N LONG 075 32 28W)													
OCT 2003													
29...	1130	1028	9813	520	--	12.5	7.5	6.5	78	75	10.5	21	--
DEC													
16...	0930	1028	9813	270	--	14.1	6.5	6.8	90	93	2.6	23	--
FEB 2004													
23...	0940	1028	9813	170	--	13.8	7.4	7.2	141	144	2.1	39	--
APR													
27...	0830	1028	9813	220	--	11.2	7.0	7.0	108	108	10.1	21	--
JUN													
23...	0930	1028	9813	92	--	9.1	7.5	6.7	118	116	18.4	33	--
AUG													
18...	0810	1028	9813	105	--	9.1	7.3	6.4	96	101	18.5	26	--
01452040 Jordan Creek at mouth at Allentown, PA (LAT 40 36 06N LONG 075 27 43W)													
OCT 2003													
29...	1230	1028	9813	840	--	12.2	7.7	7.0	217	215	11.4	79	--
DEC													
16...	1030	1028	9813	250	--	14.1	7.5	7.7	311	323	3.7	99	--
FEB 2004													
23...	1030	1028	9813	150	--	14.5	8.1	8.1	308	308	4.2	100	--
APR													
27...	1020	1028	9813	210	--	11.1	7.8	7.8	253	256	11.6	95	--
JUN													
23...	1040	1028	9813	43	--	8.4	7.8	7.8	407	399	19.8	140	--
AUG													
18...	0900	1028	9813	79	--	8.4	7.6	7.7	417	425	19.6	150	--
01457790 Cooks Creek at Durham Furnace, PA (LAT 40 34 56N LONG 075 12 20W)													
OCT 2003													
09...	1500	1028	9813	25	6.0	12.9	8.8	8.7	276	255	12.9	130	--
NOV													
20...	0920	1028	9813	E13	1.0	10.9	7.6	7.5	137	143	10.3	58	--
DEC													
09...	0950	1028	9813	50	<1.0	14.6	8.2	8.1	248	256	3.1	120	--
JAN 2004													
22...	1130	1028	9813	38	2.0	17.8	7.7	8.1	271	266	2.0	120	--
FEB													
17...	1130	1028	9813	E45	9.0	15.0	8.2	8.2	265	269	2.6	120	--
MAR													
23...	1100	1028	9813	60	9.0	14.7	8.0	7.9	232	234	4.0	95	--
APR													
08...	0800	1028	9813	E35	8.0	12.8	7.7	8.1	255	253	7.7	120	--
MAY													
25...	0950	1028	9813	26	5.0	9.5	8.1	8.2	276	272	17.9	130	--
JUN													
17...	1030	1028	9813	E28	6.0	10.0	8.2	8.2	293	284	19.0	130	--
JUL													
21...	1030	1028	9813	37	3.0	9.9	8.1	8.0	261	258	17.5	120	--
AUG													
16...	1010	1028	9813	30	3.0	9.4	8.0	7.8	271	275	17.7	130	--
SEP													
15...	1030	1028	9813	20	3.0	10.1	8.1	8.3	280	273	16.2	130	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
01451070 Lehigh River at Treichlers, PA (LAT 40 44 03N LONG 075 32 28W)													
OCT 2003													
29...	5.7	--	1.7	11	--	--	--	8.6	58	16	<.020	.64	<.040
DEC													
16...	6.0	--	2.0	9	--	--	--	11.1	86	8	<.020	.66	<.040
FEB 2004													
23...	9.9	--	3.5	16	--	--	--	17.6	96	<2	.020	1.04	<.040
APR													
27...	5.4	--	1.8	9	--	--	--	9.8	88	8	<.020	.44	<.040
JUN													
23...	8.5	--	2.9	19	--	--	--	15.4	80	<2	.040	.69	<.040
AUG													
18...	6.8	--	2.1	14	--	--	--	11.5	92	4	<.020	.53	<.040
01452040 Jordan Creek at mouth at Allentown, PA (LAT 40 36 06N LONG 075 27 43W)													
OCT 2003													
29...	21.7	--	6.0	45	--	--	--	21.5	198	16	<.020	4.65	<.040
DEC													
16...	26.6	--	7.9	50	--	--	--	28.4	220	10	<.020	5.40	<.040
FEB 2004													
23...	27.1	--	8.3	62	--	--	--	39.4	180	4	<.020	3.72	<.040
APR													
27...	25.0	--	8.0	53	--	--	--	20.9	180	18	.100	2.98	<.040
JUN													
23...	36.4	--	11.6	98	--	--	--	51.0	298	4	.030	2.70	.080
AUG													
18...	38.6	--	12.8	99	--	--	--	51.9	304	2	.050	3.39	<.040
01457790 Cooks Creek at Durham Furnace, PA (LAT 40 34 56N LONG 075 12 20W)													
OCT 2003													
09...	30.8	--	14.0	105	--	10.5	<.2	15.8	200	<2	<.020	1.94	<.040
NOV													
20...	14.6	--	5.2	43	--	5.9	<.2	10.2	148	32	<.020	1.52	<.040
DEC													
09...	26.7	--	12.1	88	--	11.5	<.2	17.0	186	12	<.020	2.21	<.040
JAN 2004													
22...	26.5	--	13.3	94	--	11.1	<.2	17.0	182	2	.020	2.50	<.040
FEB													
17...	25.4	--	13.1	93	--	12.3	<.2	16.8	218	<2	<.020	2.46	<.040
MAR													
23...	21.8	--	9.8	72	--	16.9	<.2	15.2	164	8	<.020	2.23	<.040
APR													
08...	26.6	--	11.9	84	--	13.4	<.2	16.0	176	<2	<.020	1.91	<.040
MAY													
25...	28.9	--	13.5	99	--	10.5	<.2	15.7	202	8	<.020	1.94	<.040
JUN													
17...	28.2	--	13.7	107	--	10.7	<.2	15.5	206	<2	<.020	1.70	<.040
JUL													
21...	27.2	--	12.1	92	--	11.5	<.2	14.9	204	6	.030	1.97	<.040
AUG													
16...	28.0	--	13.7	98	--	11.5	<.2	14.7	196	12	<.020	1.84	<.040
SEP													
15..	27.9	--	13.7	105	--	10.9	<.2	15.1	212	10	<.020	2.02	<.040

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coli-form, M-FC 0.45µMF col/ 100 mL (31616)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Cyanide amen-able to chlor-ination wat unf mg/L (00722)
01451070 Lehigh River at Treichlers, PA (LAT 40 44 03N LONG 075 32 28W)													
OCT 2003													
29...	.02	.032	1.0	4.7	--	--	--	460	--	--	--	<10	--
DEC													
16...	.01	.024	.71	2.4	--	--	--	290	--	--	--	<10	--
FEB 2004													
23...	.02	.021	1.2	1.4	--	--	--	<200	--	--	--	<10	--
APR													
27...	.02	.029	.69	2.7	--	--	--	260	--	--	--	<10	--
JUN													
23...	.02	.025	.79	2.0	--	--	--	<200	--	--	--	<10	--
AUG													
18...	.02	.041	.78	3.7	--	--	--	290	--	--	--	10	--
01452040 Jordan Creek at mouth at Allentown, PA (LAT 40 36 06N LONG 075 27 43W)													
OCT 2003													
29...	.04	.065	5.3	2.4	--	--	--	600	--	--	--	<10	--
DEC													
16...	.02	.043	5.8	1.3	--	--	--	<200	--	--	--	<10	--
FEB 2004													
23...	.03	.026	4.2	1.9	--	--	--	<200	--	--	--	<10	--
APR													
27...	.05	.067	3.7	3.1	--	--	--	380	--	--	--	<10	--
JUN													
23...	.09	.117	2.9	2.7	--	--	--	<200	--	--	--	<10	--
AUG													
18...	.05	.055	3.8	2.0	--	--	--	<200	--	--	--	<10	--
01457790 Cooks Creek at Durham Furnace, PA (LAT 40 34 56N LONG 075 12 20W)													
OCT 2003													
09...	<.01	.014	2.3	--	1.3	50	--	20	--	--	--	<4	--
NOV													
20...	.09	.103	2.3	--	2.3	8100	60	1000	<4.0	<.20	<4	<4	--
DEC													
09...	.01	.011	2.5	--	1.6	200	20	30	<4.0	<.20	<4	<4	--
JAN 2004													
22...	.01	.011	3.1	--	.8	40	<10	20	<4.0	<.20	<4	<4	--
FEB													
17...	.01	.014	2.5	--	.8	<20	10	20	<4.0	<.20	<4	<4	--
MAR													
23...	.01	.010	2.5	--	.8	40	<10	50	<4.0	<.20	<4	<4	--
APR													
08...	.01	.017	2.1	--	.2	100	<10	20	<4.0	<.20	<4	<4	--
MAY													
25...	.02	.050	2.3	--	.9	400	<10	60	<4.0	<.20	<4	<4	--
JUN													
17...	.01	.025	2.0	--	1.1	1000	<10	130	<4.0	<.20	<4	<4	--
JUL													
21...	.02	.026	2.4	--	.9	220	<10	70	<4.0	<.20	<4	<4	--
AUG													
16...	.01	.019	1.9	--	.3	340	<10	30	<4.0	<.20	<4	<4	--
SEP													
15...	.02	.032	2.1	--	.7	140	<10	30	<4.0	<.20	<4	<4	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Phen-olic com-pounds, water, unfltrd µg/L (32730)
01451070 Lehigh River at Treichlers, PA (LAT 40 44 03N LONG 075 32 28W)											
OCT 2003											
29...	--	690	--	2.1	--	120	--	<50	--	70	--
DEC											
16...	--	220	--	<1.0	--	70	--	<50	--	80	--
FEB 2004											
23...	--	150	--	<1.0	--	80	--	<50	--	130	--
APR											
27...	--	330	--	<1.0	--	80	--	<50	--	50	--
JUN											
23...	--	270	--	<1.0	--	70	--	<50	--	90	--
AUG											
18...	--	330	--	<1.0	--	90	--	<50	--	70	--
01452040 Jordan Creek at mouth at Allentown, PA (LAT 40 36 06N LONG 075 27 43W)											
OCT 2003											
29...	--	1070	--	2.8	--	30	--	<50	--	<10	--
DEC											
16...	--	300	--	1.3	--	20	--	<50	--	<10	--
FEB 2004											
23...	--	180	--	<1.0	--	10	--	<50	--	120	--
APR											
27...	--	540	--	1.8	--	30	--	<50	--	110	--
JUN											
23...	--	230	--	1.9	--	20	--	<50	--	<10	--
AUG											
18...	--	80	--	<1.0	--	10	--	<50	--	10	--
01457790 Cooks Creek at Durham Furnace, PA (LAT 40 34 56N LONG 075 12 20W)											
OCT 2003											
09...	--	30	--	<1.0	--	2.3	--	<4.0	--	<5.0	<5
NOV											
20...	120	1310	<1.0	1.4	7.2	55	<4.0	<4.0	5.4	6.6	<5
DEC											
09...	<20	40	<1.0	<1.0	3.6	5.3	<4.0	<4.0	<5.0	<5.0	<5
JAN 2004											
22...	20	50	<1.0	<1.0	3.3	4.7	<4.0	<4.0	<5.0	<5.0	<5
FEB											
17...	<20	30	<1.0	<1.0	3.8	4.3	<4.0	<4.0	<5.0	<5.0	<5
MAR											
23...	20	70	<1.0	<1.0	5.0	7.0	<4.0	<4.0	<5.0	<5.0	<5
APR											
08...	<20	70	<1.0	<1.0	5.8	8.9	<4.0	<4.0	<5.0	<5.0	<5
MAY											
25...	<20	120	<1.0	<1.0	8.4	16	<4.0	<4.0	<5.0	<5.0	<5
JUN											
17...	20	220	<1.0	<1.0	4.4	18	<4.0	<4.0	<5.0	<5.0	<5
JUL											
21...	40	150	<1.0	<1.0	2.2	9.2	<4.0	<4.0	<5.0	<5.0	<5
AUG											
16...	<20	70	<1.0	<1.0	<2.0	4.8	<4.0	<4.0	<5.0	<5.0	<5
SEPT											
15...	<20	60	<1.0	<1.0	<2.0	5.1	<4.0	<4.0	<5.0	<5.0	<5

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01458900 Tinicum Creek near Ottsville, PA (LAT 40 28 14N LONG 075 08 13W)													
OCT 2003													
09...	1640	1028	9813	6.0	6.0	12.3	9.0	8.8	220	202	14.5	90	--
NOV													
20...	0820	1028	9813	E418	<1.0	11.1	7.5	7.3	82	85	10.4	33	--
DEC													
09...	1130	1028	9813	13	1.0	15.0	8.0	7.9	177	181	1.1	74	--
JAN 2004													
22...	1320	1028	9813	4.5	<1.0	17.9	7.8	7.8	247	243	.3	100	--
FEB													
17...	0940	1028	9813	12	8.0	15.2	7.2	7.7	231	237	.1	91	--
MAR													
23...	0920	1028	9813	25	6.0	15.4	7.3	7.6	168	173	1.7	61	--
APR													
08...	1000	1028	9813	E21	6.0	14.0	8.2	7.9	155	154	8.0	62	--
MAY													
25...	0830	1028	9813	2.4	6.0	8.4	7.6	7.9	335	332	19.0	150	--
JUN													
17...	0850	1028	9813	1.8	6.0	8.6	7.7	8.0	343	341	20.8	140	--
JUL													
21...	0900	1028	9813	12	2.0	9.4	7.6	7.4	169	168	18.2	69	--
AUG													
16...	0900	1028	9813	6.1	2.0	8.9	7.6	7.2	279	283	19.2	120	--
SEP													
15...	0840	1028	9813	5.9	4.0	9.2	7.5	8.0	393	385	16.8	170	--
01472150 French Creek at Coventryville, PA (LAT 40 10 16N LONG 075 41 26W)													
OCT 2003													
16...	1430	1028	9813	55	3.0	11.2	7.6	7.2	141	128	12.4	51	--
NOV													
13...	1030	1028	9813	93	4.0	11.0	7.6	7.2	137	135	9.8	51	--
DEC													
08...	1150	1028	9813	E68	<1.0	14.7	7.6	7.5	147	152	1.1	49	--
08...	1151	1028	9813	E68	<1.0	14.7	7.6	7.5	146	152	1.1	49	--
JAN 2004													
20...	1300	1028	9813	58	<1.0	15.2	7.5	6.9	156	150	.2	49	--
FEB													
19...	0930	1028	9813	64	7.0	14.6	7.3	7.5	142	144	1.9	47	--
MAR													
16...	1100	1028	9813	46	7.0	13.4	7.5	7.5	141	144	3.8	50	--
APR													
12...	1100	1028	9813	56	6.0	12.7	7.5	7.3	135	135	8.5	47	--
MAY													
20...	0850	1028	9813	78	<1.0	9.4	7.0	7.5	140	136	16.7	49	--
JUN													
16...	1250	1028	9813	60	3.0	8.8	7.4	7.3	122	120	20.1	46	--
JUL													
07...	1100	1028	9813	19	3.0	9.7	7.9	7.4	164	161	20.9	60	--
AUG													
12...	1010	1028	9813	51	<1.0	9.4	7.7	6.8	139	140	20.1	51	--
SEP													
01...	1130	1028	9813	53	1.0	9.2	7.5	7.0	137	138	19.4	49	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Calcium water unfltrd recover -able, mg/L (00916)	Magnes- ium, water, fltrd, mg/L (00925)	Magnes- ium, water, unfltrd recover -able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
01458900 Tinicum Creek near Ottsville, PA (LAT 40 28 14N LONG 075 08 13W)													
OCT 2003													
09...	21.6	--	8.7	65	--	10.2	<.2	28.0	188	4	<.020	.21	<.040
NOV													
20...	7.2	--	3.7	24	--	3.4	<.2	8.4	74	6	<.020	.33	<.040
DEC													
09...	16.6	--	8.0	49	--	11.0	<.2	20.9	158	6	<.020	.28	<.040
JAN 2004													
22...	21.8	--	11.3	61	--	14.4	<.2	36.8	166	<2	<.020	.54	<.040
FEB													
17...	19.6	--	10.1	49	--	16.6	<.2	36.2	210	4	<.020	.72	<.040
MAR													
23...	13.8	--	6.5	38	--	15.9	<.2	20.0	180	4	<.020	.53	<.040
APR													
08...	13.8	--	6.8	39	--	9.5	<.2	18.9	88	<2	<.020	.20	<.040
MAY													
25...	34.2	--	14.9	89	--	13.6	<.2	54.6	266	2	<.020	.82	<.040
JUN													
17...	33.7	--	14.7	96	--	12.5	<.2	56.1	254	2	.020	.52	<.040
JUL													
21...	16.1	--	7.0	49	--	7.0	<.2	19.0	818	4	.030	.30	<.040
AUG													
16...	27.8	--	11.4	79	--	10.5	<.2	40.5	230	4	<.020	.33	<.040
SEP													
15...	41.7	--	16.9	100	--	13.6	<.2	74.4	264	2	<.020	.58	<.040
01472150 French Creek at Coventryville, PA (LAT 40 10 16N LONG 075 41 26W)													
OCT 2003													
16...	12.9	--	4.5	37	--	10.7	<.2	10.2	110	30	<.020	1.00	<.040
NOV													
13...	12.8	--	4.6	34	--	10.2	<.2	10.6	600	6	<.020	1.20	<.040
DEC													
08...	12.6	--	4.3	30	--	14.3	<.2	11.5	152	2	<.020	1.60	<.040
08...	12.5	--	4.2	30	--	14.4	<.2	11.5	150	4	<.020	1.58	<.040
JAN 2004													
20...	12.4	--	4.5	29	--	17.3	<.2	12.4	146	10	<.020	1.90	<.040
FEB													
19...	11.5	--	4.4	29	--	12.9	<.2	11.4	110	2	<.020	1.82	<.040
MAR													
16...	12.8	--	4.4	31	--	12.1	<.2	11.3	82	6	<.020	1.58	<.040
APR													
12...	11.7	--	4.3	30	--	11.1	<.2	10.7	110	6	<.020	1.36	<.040
MAY													
20...	12.5	--	4.3	36	--	10.2	<.2	8.6	126	2	.050	.96	<.040
JUN													
16...	11.6	--	4.2	31	--	8.6	<.2	8.6	130	26	.040	1.00	<.040
JUL													
07...	15.9	--	4.9	43	--	1.3	<.2	10.9	132	<2	<.020	1.32	<.040
AUG													
12...	13.0	--	4.4	40	--	10.7	<.2	9.2	102	<2	<.020	1.29	<.040
SEP													
01...	12.6	--	4.2	42	--	10.0	<.2	8.8	124	<2	.040	.83	<.040

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coli-form, M-FC 0.45µMF col/ 100 mL (31616)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Cyanide amen-able to chlor-ination wat unf mg/L (00722)
01458900 Tinicum Creek near Ottsville, PA (LAT 40 28 14N LONG 075 08 13W)													
OCT 2003													
09...	<.01	.014	.53	--	1.1	300	<10	20	<4.0	<.20	<4	<4	--
NOV													
20...	--	--	.95	--	2.6	2200	150	900	<4.0	<.20	<4	4	--
DEC													
09...	.01	.010	.48	--	2.1	20	30	100	<4.0	<.20	<4	<4	--
JAN 2004													
22...	<.01	<.010	.80	--	.5	30	10	50	<4.0	<.20	<4	<4	--
FEB													
17...	.01	.012	.80	--	.9	10	<10	60	<4.0	<.20	<4	<4	--
MAR													
23...	.01	.011	.72	--	.9	20	20	170	<4.0	<.20	<4	<4	--
APR													
08...	.01	.017	.51	--	.2	20	30	100	<4.0	<.20	<4	<4	--
MAY													
25...	.01	.018	1.4	--	.8	60	<10	10	<4.0	<.20	<4	<4	--
JUN													
17...	<.01	.015	.93	--	.9	100	<10	20	<4.0	<.20	<4	<4	--
JUL													
21...	.02	.028	1.1	--	.8	100	30	120	<4.0	<.20	<4	<4	--
AUG													
16...	<.01	.012	.48	--	.7	180	<10	20	<4.0	<.20	<4	<4	--
SEP													
15...	.01	.012	.65	--	.4	40	<10	<10	<4.0	<.20	<4	<4	--
01472150 French Creek at Coventryville, PA (LAT 40 10 16N LONG 075 41 26W)													
OCT 2003													
16...	.03	.038	1.7	--	1.6	1900	30	120	<4.0	<.20	<4	<4	--
NOV													
13...	.02	.025	1.6	--	1.0	340	10	120	<4.0	<.20	<4	<4	--
DEC													
08...	.02	.014	1.8	--	1.4	60	30	60	<4.0	<.20	<4	<4	--
08...	.02	.019	1.8	--	1.6	80	30	60	<4.0	<.20	<4	<4	--
JAN 2004													
20...	.01	.016	2.2	--	--	20	10	80	<4.0	<.20	<4	<4	--
FEB													
19...	.02	.018	2.1	--	4.1	120	<10	80	<4.0	<.20	<4	<4	--
MAR													
16...	.01	.017	1.9	--	1.1	30	<10	40	<4.0	<.20	<4	<4	--
APR													
12...	.01	.052	1.6	--	1.2	140	<10	130	<4.0	<.20	<4	<4	--
MAY													
20...	.03	.065	1.6	--	1.4	1200	30	240	<4.0	<.20	<4	<4	--
JUN													
16...	.02	.067	1.7	--	.3	4800	20	750	<4.0	<.20	<4	4	--
JUL													
07...	.02	.019	1.9	--	1.3	200	10	80	<4.0	<.20	<4	<4	--
AUG													
12...	.01	.017	1.4	--	.5	360	<10	50	<4.0	<.20	<4	<4	--
SEP													
01...	.04	.048	1.3	--	.9	1200	10	120	<4.0	<.20	<4	<4	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Phen-olic com-pounds, water, unfltrd µg/L (32730)
01458900 Tinicum Creek near Ottsville, PA (LAT 40 28 14N LONG 075 08 13W)											
OCT 2003											
09...	20	50	<1.0	<1.0	2.3	3.1	<4.0	<4.0	<5.0	<5.0	<5
NOV											
20...	250	1240	<1.0	1.3	9.0	35	<4.0	<4.0	<5.0	6.1	<5
DEC											
09...	110	240	<1.0	<1.0	<2.0	2.8	<4.0	<4.0	<5.0	<5.0	<5
JAN 2004											
22...	80	180	<1.0	<1.0	<2.0	<2.0	<4.0	<4.0	<5.0	<5.0	<5
FEB											
17...	50	130	<1.0	<1.0	<2.0	<2.0	<4.0	<4.0	<5.0	<5.0	<5
MAR											
23...	70	200	<1.0	<1.0	<2.0	3.2	<4.0	<4.0	<5.0	<5.0	<5
APR											
08...	150	260	<1.0	<1.0	<2.0	3.7	<4.0	<4.0	<5.0	<5.0	<5
MAY											
25...	<20	<20	<1.0	<1.0	7.0	7.8	<4.0	<4.0	<5.0	<5.0	<5
JUN											
17...	<20	20	<1.0	<1.0	3.9	7.0	<4.0	<4.0	<5.0	<5.0	<5
JUL											
21...	180	290	<1.0	<1.0	2.2	4.6	<4.0	<4.0	<5.0	<5.0	<5
AUG											
16...	<20	30	<1.0	<1.0	3.3	4.0	<4.0	<4.0	<5.0	<5.0	<5
SEP											
15...	<20	<20	<1.0	<1.0	8.6	10	<4.0	5.9	<5.0	<5.0	<5
01472150 French Creek at Coventryville, PA (LAT 40 10 16N LONG 075 41 26W)											
OCT 2003											
16...	310	530	<1.0	<1.0	11	18	<4.0	<4.0	<5.0	<5.0	<5
NOV											
13...	220	540	<1.0	<1.0	17	29	<4.0	<4.0	<5.0	<5.0	<5
DEC											
08...	220	290	<1.0	<1.0	31	33	<4.0	<4.0	<5.0	<5.0	<5
08...	150	300	<1.0	<1.0	32	32	<4.0	<4.0	<5.0	<5.0	<5
JAN 2004											
20...	100	290	<1.0	<1.0	28	32	<4.0	<4.0	<5.0	<5.0	<5
FEB											
19...	80	220	<1.0	<1.0	19	24	<4.0	<4.0	<5.0	<5.0	<5
MAR											
16...	90	210	<1.0	<1.0	17	22	<4.0	<4.0	<5.0	<5.0	<5
APR											
12...	120	490	<1.0	<1.0	22	31	<4.0	<4.0	<5.0	<5.0	<5
MAY											
20...	270	1120	<1.0	<1.0	29	67	<4.0	<4.0	<5.0	5.1	<5
JUN											
16...	220	1700	<1.0	2.2	33	100	<4.0	<4.0	<5.0	7.5	<5
JUL											
07...	90	310	<1.0	<1.0	25	38	<4.0	<4.0	<5.0	<5.0	<5
AUG											
12...	90	360	<1.0	<1.0	9.4	16	<4.0	<4.0	<5.0	<5.0	<5
SEP											
01...	170	610	<1.0	<1.0	15	23	<4.0	<4.0	<5.0	<5.0	<5

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01473030 Perkiomen Creek at Arcola near Collegeville, PA (LAT 40 09 11N LONG 075 27 21W)													
OCT 2003													
02...	1600	1028	9813	310	--	13.8	8.2	7.8	282	287	15.2	90	--
DEC													
02...	1130	1028	9813	520	--	12.9	7.9	7.9	229	234	5.1	81	--
FEB 2004													
19...	1250	1028	9813	290	--	17.2	8.3	8.1	362	367	2.5	95	--
APR													
08...	1220	1028	9813	330	--	13.0	8.0	8.0	438	436	10.7	120	--
JUN													
24...	1140	1028	9813	170	--	9.5	8.3	8.2	358	351	24.3	110	--
AUG													
18...	1250	1028	9813	260	--	9.6	8.4	8.3	272	281	23.9	87	--
01473170 Valley Creek at Wilson Road near Valley Forge, PA (LAT 40 04 53N LONG 075 27 25W)													
OCT 2003													
01...	1600	1028	9813	28	--	12.2	8.4	8.4	679	619	14.0	270	--
DEC													
02...	1250	1028	9813	43	--	13.5	8.4	8.4	651	647	7.1	270	--
FEB 2004													
25...	1210	1028	9813	37	--	16.7	8.4	8.4	787	785	5.4	260	--
APR													
06...	1230	1028	9813	44	--	16.8	8.2	8.4	677	692	8.2	250	--
JUN													
14...	1240	1028	9813	29	--	10.4	8.2	8.3	681	672	15.8	230	--
AUG													
19...	1210	1028	9813	30	--	10.5	8.2	8.4	668	649	17.8	250	--
01474010 Schuylkill River at Falls Bridge, Philadelphia, PA (LAT 40 00 30N LONG 075 11 52W)													
OCT 2003													
06...	1130	1028	9813	2860	--	10.8	7.8	8.0	354	366	13.2	130	--
DEC													
10...	1245	1028	9813	3300	--	17.1	7.8	7.7	360	373	3.5	130	--
FEB 2004													
12...	1130	1028	9813	4900	--	14.0	7.7	7.6	372	376	3.5	120	--
APR													
13...	1210	1028	9813	7690	--	12.5	7.7	7.8	353	364	10.1	120	--
JUN													
15...	1250	1028	9813	1880	--	8.8	7.8	7.7	408	402	22.2	120	--
AUG													
24...	1120	1028	9813	4960	--	8.9	7.7	7.4	258	260	21.4	96	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
01473030 Perkiomen Creek at Arcola near Collegeville, PA (LAT 40 09 11N LONG 075 27 21W)													
OCT 2003													
02...	23.1	--	7.8	63	--	--	--	24.0	200	<2	<.020	1.89	<.040
DEC													
02...	20.5	--	7.3	59	--	--	--	19.5	182	6	.020	1.75	<.040
FEB 2004													
19...	23.4	--	8.9	54	--	--	--	27.5	220	<2	<.020	2.26	.070
APR													
08...	29.8	--	10.2	59	--	--	--	24.7	268	<2	<.020	1.64	<.200
JUN													
24...	27.8	--	9.0	71	--	--	--	29.7	256	4	.040	1.47	<.040
AUG													
18...	22.7	--	7.4	67	--	--	--	20.5	220	2	<.020	.92	<.040
01473170 Valley Creek at Wilson Road near Valley Forge, PA (LAT 40 04 53N LONG 075 27 25W)													
OCT 2003													
01...	58.0	--	30.3	205	--	--	<.2	26.0	454	<2	<.020	2.09	<.040
DEC													
02...	56.2	--	30.8	206	--	--	<.2	26.2	446	<2	<.020	2.16	<.040
FEB 2004													
25...	56.1	--	29.4	202	--	--	<.2	26.0	506	<2	.020	2.11	<.200
APR													
06...	54.8	--	28.5	192	--	--	<.2	25.7	470	6	<.020	2.09	<.200
JUN													
14...	49.5	--	26.8	201	--	--	<.2	24.8	528	10	.020	2.08	<.200
AUG													
19...	51.9	--	28.4	196	--	--	<.2	23.7	428	<2	<.020	1.86	<.200
01474010 Schuylkill River at Falls Bridge, Philadelphia, PA (LAT 40 00 30N LONG 075 11 52W)													
OCT 2003													
06...	32.9	--	12.3	75	--	--	<.2	45.0	310	2	.060	3.39	<.040
DEC													
10...	31.7	--	12.9	71	--	--	<.2	42.5	246	<2	.100	3.14	<.040
FEB 2004													
12...	32.2	--	10.2	69	--	--	<.2	28.1	240	<2	.210	3.36	.060
APR													
13...	28.7	--	11.7	65	--	--	<.2	35.7	216	40	.210	2.30	.100
JUN													
15...	30.0	--	12.0	71	--	--	<.2	46.2	274	10	.110	3.24	.140
AUG													
24...	24.5	--	8.3	61	--	--	<.2	24.1	178	20	.040	2.82	<.040

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coli-form, M-FC 0.45µMF col/ 100 mL (31616)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Cyanide amen-able to chlor-ination wat unf mg/L (00722)
01473030 Perkiomen Creek at Arcola near Collegeville, PA (LAT 40 09 11N LONG 075 27 21W)													
OCT 2003													
02...	.07	.087	2.2	4.2	--	--	--	<200	--	--	--	<10	--
DEC													
02...	.05	.051	2.1	3.6	--	--	--	200	--	--	--	<10	--
FEB 2004													
19...	.04	.046	2.6	2.4	--	--	--	<200	--	--	--	<10	--
APR													
08...	.02	.057	2.1	3.2	--	--	--	<200	--	--	--	<10	--
JUN													
24...	.06	.088	1.9	3.4	--	--	--	<200	--	--	--	10	--
AUG													
18...	.01	.087	1.6	4.5	--	--	--	<200	--	--	--	<10	--
01473170 Valley Creek at Wilson Road near Valley Forge, PA (LAT 40 04 53N LONG 075 27 25W)													
OCT 2003													
01...	.02	.014	2.2	1.6	--	--	--	<200	--	--	--	<10	<1.00
DEC													
02...	.02	.015	2.2	1.3	--	--	--	<200	--	--	--	<10	<1.00
FEB 2004													
25...	<.01	.012	2.2	1.3	--	--	--	<200	--	--	--	<10	<1.00
APR													
06...	.02	.019	2.3	1.4	--	--	--	<200	--	--	--	<10	<1.00
JUN													
14...	.02	.030	2.1	1.6	--	--	--	<200	--	--	--	<10	<1.00
AUG													
19...	<.01	.013	1.9	1.4	--	--	--	<200	--	--	--	<10	<1.00
01474010 Schuylkill River at Falls Bridge, Philadelphia, PA (LAT 40 00 30N LONG 075 11 52W)													
OCT 2003													
06...	.14	.155	3.8	2.7	--	--	--	<200	--	--	--	<10	<1.00
DEC													
10...	.10	.124	3.5	2.1	--	--	--	<200	--	--	--	<10	<1.00
FEB 2004													
12...	.10	.113	4.0	3.0	--	--	--	270	--	--	--	<10	<1.00
APR													
13...	.14	.286	3.5	3.4	--	--	--	1200	--	--	--	<10	<1.00
JUN													
15...	.25	.251	3.6	2.8	--	--	--	<200	--	--	--	30	<1.00
AUG													
24...	.08	.101	3.3	3.0	--	--	--	370	--	--	--	<10	<1.00

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Phen-olic com-pounds, water, unfltrd µg/L (32730)
01473030 Perkiomen Creek at Arcola near Collegeville, PA (LAT 40 09 11N LONG 075 27 21W)											
OCT 2003											
02...	--	120	--	<1.0	--	10	--	<50	--	<10	--
DEC											
02...	--	260	--	<1.0	--	10	--	<50	--	<10	--
FEB 2004											
19...	--	110	--	<1.0	--	10	--	<50	--	110	--
APR											
08...	--	130	--	<1.0	--	40	--	<50	--	<10	--
JUN											
24...	--	140	--	<1.0	--	20	--	<50	--	190	--
AUG											
18...	--	160	--	<1.0	--	20	--	<50	--	<10	--
01473170 Valley Creek at Wilson Road near Valley Forge, PA (LAT 40 04 53N LONG 075 27 25W)											
OCT 2003											
01...	--	60	--	<1.0	--	10	--	<50	--	<10	<5
DEC											
02...	--	50	--	<1.0	--	<10	--	<50	--	<10	<5
FEB 2004											
25...	--	60	--	<1.0	--	10	--	<50	--	<10	<5
APR											
06...	--	80	--	<1.0	--	10	--	<50	--	<10	<5
JUN											
14...	--	160	--	<1.0	--	10	--	<50	--	120	<5
AUG											
19...	--	80	--	<1.0	--	<10	--	<50	--	<10	<5
01474010 Schuylkill River at Falls Bridge, Philadelphia, PA (LAT 40 00 30N LONG 075 11 52W)											
OCT 2003											
06...	--	150	--	<1.0	--	40	--	<50	--	20	<5
DEC											
10...	--	140	--	<1.0	--	60	--	<50	--	<10	<5
FEB 2004											
12...	--	320	--	<1.0	--	50	--	<50	--	10	<5
APR											
13...	--	1750	--	5.0	--	220	--	<50	--	30	<5
JUN											
15...	--	150	--	<1.0	--	60	--	<50	--	100	<5
AUG											
24...	--	490	--	1.6	--	90	--	<50	--	20	<5

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Pressure, osmotic water, unfltrd mosm/kg (82550)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
01494990 Big Elk Creek near Lewisville, PA (LAT 39 43 48N LONG 075 50 54W)													
OCT 2003													
01...	1030	1028	9813	59	--	12.1	7.4	7.3	179	166	13.2	59	--
DEC													
03...	1110	1028	9813	69	--	14.2	7.0	7.4	171	177	2.7	56	--
FEB 2004													
24...	0930	1028	9813	64	--	13.8	7.1	7.5	177	177	4.1	54	--
APR													
06...	0920	1028	9813	72	--	13.8	6.7	7.4	177	182	4.8	58	--
JUN													
14...	1000	1028	9813	50	--	9.8	7.1	6.6	185	183	16.9	57	--
AUG													
19...	0900	1028	9813	51	--	9.4	7.3	6.6	183	179	20.1	59	--

Date	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)
01494990 Big Elk Creek near Lewisville, PA (LAT 39 43 48N LONG 075 50 54W)													
OCT 2003													
01...	12.7	--	6.6	30	--	--	--	10.7	152	<2	<.020	4.31	<.040
DEC													
03...	12.8	--	5.9	24	--	--	--	11.7	172	16	<.020	4.86	<.040
FEB 2004													
24...	12.3	--	5.7	22	--	--	--	10.9	6	<2	<.020	5.06	<.040
APR													
06...	12.6	--	6.4	25	--	--	--	12.1	78	6	<.020	4.23	<.040
JUN													
14...	12.8	--	6.1	37	--	--	--	10.5	178	2	.020	4.40	<.040
AUG													
19...	13.7	--	6.0	36	--	--	--	9.9	138	<2	<.020	4.37	<.040

Date	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coliform, M-FC 0.45µMF col/ 100 mL (31616)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recoverable, µg/L (01042)	Cyanide amenable to chlorination wat unf mg/L (00722)
01494990 Big Elk Creek near Lewisville, PA (LAT 39 43 48N LONG 075 50 54W)													
OCT 2003													
01...	.02	.018	4.5	1.9	--	--	--	<200	--	--	--	<10	--
DEC													
03...	.02	.015	5.0	1.3	--	--	--	<200	--	--	--	<10	--
FEB 2004													
24...	.01	.018	5.2	1.2	--	--	--	<200	--	--	--	<10	--
APR													
06...	.02	.023	4.5	2.1	--	--	--	<200	--	--	--	<10	--
JUN													
14...	.03	.028	4.5	2.1	--	--	--	<200	--	--	--	<10	--
AUG													
19...	.01	.018	4.4	1.7	--	--	--	<200	--	--	--	<10	--

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recoverable, µg/L (01092)	Phenolic compounds, water, unfltrd µg/L (32730)
01494990 Big Elk Creek near Lewisville, PA (LAT 39 43 48N LONG 075 50 54W)											
OCT 2003											
01...	--	160	--	<1.0	--	20	--	<50	--	<10	--
DEC											
03...	--	180	--	<1.0	--	30	--	<50	--	<10	--
FEB 2004											
24...	--	140	--	<1.0	--	30	--	<50	--	<10	--
APR											
06...	--	280	--	<1.0	--	60	--	<50	--	<10	--
JUN											
14...	--	260	--	<1.0	--	40	--	<50	--	30	--
AUG											
19...	--	200	--	<1.0	--	30	--	<50	--	20	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS LAKE ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Sampling depth, meters (00098)	Transparency Secchi disc, meters (00078)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)
01427252 Duck Harbor Pond near Lookout, PA (LAT 41 45 11N LONG 075 12 01W)													
JUL 2004													
13...	1140	1028	9813	17.0	--	.1	6.5	61	7.3	18	6.0	.7	24
13...	1150	1028	9813	1.0	.4	8.2	7.2	41	22.9	17	5.8	.6	16
01446590 Minsi Lake near Roseto, PA (LAT 40 54 43N LONG 075 10 15W)													
JUL 2004													
12...	1000	1028	9813	4.5	--	5.0	7.1	84	23.7	32	9.4	1.9	29
12...	1020	1028	9813	1.0	.4	8.9	8.9	86	26.3	32	9.8	1.9	25
01447100 Gouldsboro Lake at Gouldsboro, PA (LAT 41 14 07N LONG 075 27 09W)													
JUL 2004													
12...	1300	1028	9813	1.0	.3	7.2	7.0	99	23.5	15	4.8	.8	10
01464640 Lake Galena near Chalfont, PA (LAT 40 19 01N LONG 075 12 15W)													
SEP 2004													
07...	1220	1028	9813	12.0	--	.5	8.4	246	12.6	72	17.7	6.8	80
07...	1230	1028	9813	1.0	.4	11.2	9.3	187	23.6	60	15.0	5.5	46
01472124 Hopewell Lake at Hopewell, PA (LAT 40 12 16N LONG 075 46 43W)													
SEP 2004													
14...	1000	1028	9813	5.0	--	.7	7.9	215	16.3	39	11.9	2.4	59
14...	1010	1028	9813	1.0	2.3	8.8	7.9	63	23.1	18	4.6	1.6	15
0148064640 Struble Lake near Honey Brook, PA (LAT 40 06 28N LONG 075 51 51W)													
SEP 2004													
14...	1245	1028	9813	4.0	--	.5	8.1	180	22.1	68	16.6	6.3	61
14...	1255	1028	9813	1.0	.5	12.5	9.2	170	23.6	68	16.6	6.4	56

Date	Sulfate water, fltrd, mg/L (00945)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Chlorophyll a phytoplankton, uncorr, µg/L (32230)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recoverable, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recoverable, µg/L (01045)
01427252 Duck Harbor Pond near Lookout, PA (LAT 41 45 11N LONG 075 12 01W)													
JUL 2004													
13...	3.5	6	.580	.099	1.1	5.1	.007	16	24	<4	<4	2830	3200
13...	4.6	14	<.020	.021	.57	4.1	--	20	32	<4	<4	50	80
01446590 Minsi Lake near Roseto, PA (LAT 40 54 43N LONG 075 10 15W)													
JUL 2004													
12...	5.3	<2	<.020	.026	.56	5.4	.007	--	--	<4	<4	--	--
12...	6.3	2	<.020	.018	.21	5.0	--	35	39	<4	<4	80	140
01447100 Gouldsboro Lake at Gouldsboro, PA (LAT 41 14 07N LONG 075 27 09W)													
JUL 2004													
12...	4.1	4	<.020	.018	.35	5.5	.007	31	34	<4	<4	100	160
01464640 Lake Galena near Chalfont, PA (LAT 40 19 01N LONG 075 12 15W)													
SEP 2004													
07...	3.4	4	2.26	.549	2.9	5.6	--	11	56	<4	<4	1620	1990
07...	14.3	10	.050	.067	1.6	8.4	--	17	100	<4	<4	640	650
01472124 Hopewell Lake at Hopewell, PA (LAT 40 12 16N LONG 075 46 43W)													
SEP 2004													
14...	<1.0	26	2.09	.036	3.0	9.5	--	12	94	<4	<4	18800	22300
14...	5.3	6	<.020	.021	.23	3.5	--	<10	19	<4	<4	100	220
0148064640 Struble Lake near Honey Brook, PA (LAT 40 06 28N LONG 075 51 51W)													
SEP 2004													
14...	8.9	8	.850	.063	1.6	6.6	--	<10	100	<4	<4	60	640
14...	9.1	22	<.020	.078	1.6	8.7	--	<10	73	<4	<4	30	270

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS LAKE ANALYSES

Date	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
01427252 Duck Harbor Pond near Lookout, PA (LAT 41 45 11N LONG 075 12 01W)						
JUL 2004						
13...	<1.0	<1.0	2220	2400	<5.0	<5.0
13...	<1.0	<1.0	30	60	<5.0	<5.0
01446590 Minsi Lake near Roseto, PA (LAT 40 54 43N LONG 075 10 15W)						
JUL 2004						
12...	<1.0	<1.0	--	--	<5.0	<5.0
12...	<1.0	<1.0	<2.0	20	<5.0	<5.0
01447100 Gouldsboro Lake at Gouldsboro, PA (LAT 41 14 07N LONG 075 27 09W)						
JUL 2004						
12...	<1.0	<1.0	30	90	<5.0	<5.0
01464640 Lake Galena near Chalfont, PA (LAT 40 19 01N LONG 075 12 15W)						
SEP 2004						
07...	<1.0	<1.0	2550	2570	<5.0	<5.0
07...	<1.0	<1.0	30	40	<5.0	<5.0
01472124 Hopewell Lake at Hopewell, PA (LAT 40 12 16N LONG 075 46 43W)						
SEP 2004						
14...	--	--	5630	6100	<5.0	<5.0
14...	<1.0	<1.0	5.5	60	<5.0	<5.0
0148064640 Struble Lake near Honey Brook, PA (LAT 40 06 28N LONG 075 51 51W)						
SEP 2004						
14...	<1.0	<1.0	250	530	<5.0	<5.0
14...	<1.0	<1.0	5.2	80	<5.0	<5.0

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. A dash (--) indicates there were no observations of the organism in the sample. Samples represent counts per 100 animal (approximate) subsamples.

BIOLOGICAL DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**
BENTHIC MACROINVERTEBRATES

Station number	01427000	01431600	01432119	01440650	01444800	01451070
Date	11/03/03	08/19/03	08/19/03	08/21/03	10/27/03	10/24/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Platyhelminthes						
Turbellaria (FLATWORMS)						
Tricladida						
Planariidae	--	--	--	--	--	6
Nemertea (PROBOSCIS WORMS)						
Enopla						
Hoplonemertea						
Tetrastemmatidae						
Prostoma	--	--	--	2	--	3
Mollusca						
Gastropoda (SNAILS)						
Basommatophora						
Ancylidae						
Ferrissia	1	2	--	--	--	--
Hydrobiidae						
Amnicola	--	--	--	--	2	--
Bivalvia (CLAMS)						
Veneroida						
Corbiculidae						
Corbicula fluminea	--	--	--	--	--	--
Sphaeriidae	--	--	--	--	--	--
Pisidium	1	--	--	--	--	--
Sphaerium	--	4	3	1	--	--
Annelida						
Oligochaeta (AQUATIC EARTHWORMS)						
Lumbriculida						
Lumbriculidae	--	4	--	6	3	12
Tubificida						
Naididae	--	--	--	--	--	--
Arthropoda						
Acariformes						
Hydrachnidia (WATER MITES)	3	1	2	1	1	--
Crustacea						
Copepoda						
Cyclopidae	1	--	--	--	--	--
Amphipoda (SCUDS)						
Crangonyctidae						
Crangonyx	--	--	--	--	--	--
Gammaridae						
Gammarus	--	--	--	--	--	1
Insecta						
Ephemeroptera (MAYFLIES)						
Baetidae						
Acentrella	3	5	6	20	3	1
Baetis	1	7	16	1	--	1
Centroptilum	--	--	1	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**
BENTHIC MACROINVERTEBRATES

01452040	01473030	01473170	01474010	01494990	Station number
10/24/03	09/09/03	09/10/03	09/12/03	09/08/03	Date
Count	Count	Count	Count	Count	Benthic macroinvertebrate
					Platyhelminthes
					Turbellaria (FLATWORMS)
					Tricladida
24	10	2	1	2	Planariidae
					Nemertea (PROBOSCIS WORMS)
					Enopla
					Hoplonemertea
					Tetrastemmatidae
1	--	--	--	7	*Prostoma*
					Mollusca
					Gastropoda (SNAILS)
					Basommatophora
					Ancylidae
--	--	--	1	--	*Ferrissia*
					Hydrobiidae
--	3	--	--	--	*Amnicola*
					Bivalvia (CLAMS)
					Veneroida
					Corbiculidae
--	--	--	8	--	*Corbicula fluminea*
1	--	--	--	--	Sphaeriidae
--	--	--	--	1	*Pisidium*
--	1	--	6	--	*Sphaerium*
					Annelida
					Oligochaeta (AQUATIC EARTHWORMS)
					Lumbriculida
1	--	2	--	--	Lumbriculidae
					Tubificida
--	--	--	--	2	Naididae
					Arthropoda
					Acariformes
4	--	--	--	5	Hydrachnidia (WATER MITES)
					Crustacea
					Copepoda
--	--	--	--	--	Cyclopidae
					Amphipoda (SCUDS)
					Crangonyctidae
3	--	--	--	--	*Crangonyx*
					Gammaridae
2	--	3	5	--	*Gammarus*
					Insecta
					Ephemeroptera (MAYFLIES)
					Baetidae
--	--	1	4	18	*Acentrella*
1	43	12	15	16	*Baetis*
--	--	--	--	--	*Centroptilum*

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**
BENTHIC MACROINVERTEBRATES

Station number	01427000	01431600	01432119	01440650	01444800	01451070
Date	11/03/03	08/19/03	08/19/03	08/21/03	10/27/03	10/24/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Ephemeroptera (MAYFLIES)						
Caenidae						
Caenis	--	--	--	--	--	--
Ephemerellidae	--	--	--	--	--	--
Attenella	--	--	--	9	--	--
Dannella	--	26	2	--	5	1
Ephemerella	11	--	--	--	--	--
Serratella	19	--	6	2	13	2
Heptageniidae	--	--	--	--	--	--
Epeorus	10	--	2	6	--	6
Stenonema	4	9	21	14	9	1
Isonychiidae						
Isonychia	1	11	1	--	--	--
Leptophlebiidae						
Paraleptophlebia	5	--	--	--	--	--
Tricorythidae						
Tricorythodes	--	--	--	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)						
Gomphidae	--	1	--	--	--	1
Lanthus	1	--	--	1	--	--
Plecoptera (STONEFLIES)						
Nemouridae	1	--	--	--	--	--
Perlidae						
Acroneuria	--	--	1	2	--	--
Agnetina	--	3	--	--	1	2
Paragnetina	--	--	--	--	1	--
Perlesta	--	--	--	--	1	--
Perlodidae						
Isoperla	7	--	--	--	--	--
Taeniopterygidae						
Taenionema	2	--	--	--	--	--
Taeniopteryx	3	--	--	--	1	6
Megaloptera						
Corydalidae (FISHFLIES AND DOBSONFLIES)						
Corydalus	--	--	2	1	1	--
Nigronia	--	--	--	1	--	--
Trichoptera (CADDISFLIES)						
Apataniidae						
Apatania	4	--	--	3	--	--
Brachycentridae						
Brachycentrus	--	--	1	--	--	--
Micrasema	--	--	--	--	1	--
Glossosomatidae						
Protoptila	--	--	1	--	1	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**
BENTHIC MACROINVERTEBRATES

01452040	01473030	01473170	01474010	01494990	Station number
10/24/03	09/09/03	09/10/03	09/12/03	09/08/03	Date
Count	Count	Count	Count	Count	Benthic macroinvertebrate
					Ephemeroptera (MAYFLIES)
					Caenidae
--	1	--	--	--	*Caenis*
1	--	--	--	--	Ephemerellidae
--	6	--	--	--	*Attenella*
--	--	--	--	--	*Dannella*
--	--	--	--	--	*Ephemerella*
--	--	--	--	1	*Serratella*
--	--	--	--	2	Heptageniidae
--	1	--	--	--	*Epeorus*
2	14	--	5	--	*Stenonema*
					Isonychiidae
--	1	--	--	4	*Isonychia*
					Leptophlebiidae
1	--	--	--	--	*Paraleptophlebia*
					Tricorythidae
1	--	--	1	1	*Tricorythodes*
					Odonata (DRAGONFLIES AND DAMSELFLIES)
--	--	--	--	--	Gomphidae
--	--	--	--	--	*Lanthus*
					Plecoptera (STONEFLIES)
--	--	--	--	--	Nemouridae
					Perlidae
--	--	--	--	--	*Acroneuria*
--	--	--	--	--	*Agnetina*
--	--	--	--	--	*Paragnetina*
--	--	--	--	--	*Perlesta*
					Perlodidae
--	--	--	--	--	*Isoperla*
					Taeniopterygidae
--	--	--	--	--	*Taenionema*
--	--	--	--	--	*Taeniopteryx*
					Megaloptera
					Corydalidae (FISHFLIES AND DOBSONFLIES)
--	--	--	--	2	*Corydalus*
--	--	--	--	--	*Nigronia*
					Trichoptera (CADDISFLIES)
					Apataniidae
--	--	--	--	--	*Apatania*
					Brachycentridae
--	--	--	--	--	*Brachycentrus*
--	--	--	--	--	*Micrasema*
					Glossosomatidae
--	--	--	--	--	*Protoptila*

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**
BENTHIC MACROINVERTEBRATES

Station number	01427000	01431600	01432119	01440650	01444800	01451070
Date	11/03/03	08/19/03	08/19/03	08/21/03	10/27/03	10/24/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Trichoptera (CADDISFLIES)						
Hydropsychidae						
Cheumatopsyche	--	8	11	6	11	4
Hydropsyche	10	12	10	2	13	14
Macrostemum	--	--	--	--	1	--
Potamyia	2	--	--	--	--	--
Hydroptilidae						
Hydroptila	1	--	--	1	--	--
Leucotrichia	--	2	--	--	--	--
Lepidostomatidae						
Lepidostoma	1	--	4	2	5	--
Leptoceridae						
Mystacides	1	--	--	--	--	--
Odontoceridae						
Psilotreta	1	--	--	--	--	--
Philopotamidae						
Chimarra	--	1	1	1	18	4
Wormaldia	--	1	--	--	--	--
Polycentropodidae						
Polycentropus	1	--	--	--	--	--
Rhyacophilidae						
Rhyacophila	1	3	--	--	--	--
Lepidoptera (MOTHS AND BUTTERFLIES)						
Pyralididae						
Petrophila	--	--	--	--	2	--
Coleoptera (BEETLES)						
Elmidae (RIFFLE BEETLES)						
Macronychus	--	--	--	2	--	--
Optioservus	2	4	6	4	2	3
Oulimnius	--	--	1	1	--	2
Promoresia	5	--	--	--	--	--
Stenelmis	--	8	8	8	7	2
Psephenidae (WATER PENNIES)						
Psephenus	1	--	2	3	--	2
Diptera (TRUE FLIES)						
Chironomidae (MIDGES)	20	29	6	17	23	23
Empididae (DANCE FLIES)						
Chelifera	--	--	2	--	--	--
Hemerodromia	1	--	--	1	--	1
Simuliidae (BLACK FLIES)						
Prosimulium	1	--	--	--	--	--
Simulium	1	--	--	4	--	--
Tipulidae (CRANE FLIES)						
Antocha	--	--	--	--	--	2
Tipula	1	--	--	--	--	--
Total organisms	128	141	116	122	125	100
Total Taxa	34	20	24	28	23	23

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**
BENTHIC MACROINVERTEBRATES

01452040	01473030	01473170	01474010	01494990	Station number
10/24/03	09/09/03	09/10/03	09/12/03	09/08/03	Date
Count	Count	Count	Count	Count	Benthic macroinvertebrate
					Trichoptera (CADDISFLIES)
					Hydropsychidae
3	3	11	26	5	*Cheumatopsyche*
4	--	7	10	8	*Hydropsyche*
--	--	--	--	--	*Macrostemum*
--	--	--	--	--	*Potamyia*
					Hydroptilidae
--	--	--	--	--	*Hydroptila*
5	1	--	--	1	*Leucotrichia*
					Lepidostomatidae
--	--	--	--	--	*Lepidostoma*
					Leptoceridae
--	--	--	--	--	*Mystacides*
					Odontoceridae
--	--	--	--	--	*Psilotreta*
					Philopotamidae
2	24	11	1	--	*Chimarra*
--	--	1	--	--	*Wormaldia*
					Polycentropodidae
--	--	--	--	--	*Polycentropus*
					Rhyacophilidae
--	--	--	--	1	*Rhyacophila*
					Lepidoptera (MOTHS AND BUTTERFLIES)
					Pyralididae
--	1	--	--	--	*Petrophila*
					Coleoptera (BEETLES)
					Elmidae (RIFFLE BEETLES)
--	--	--	--	--	*Macronychus*
4	2	10	2	1	*Optioservus*
--	--	9	--	1	*Oulimnius*
--	--	--	--	--	*Promoresia*
5	21	9	45	--	*Stenelmis*
					Psephenidae (WATER PENNIES)
--	1	3	--	--	*Psephenus*
					Diptera (TRUE FLIES)
32	5	27	2	40	Chironomidae (MIDGES)
					Empididae (DANCE FLIES)
--	--	2	--	--	*Chelifera*
2	--	--	--	2	*Hemerodromia*
					Simuliidae (BLACK FLIES)
--	--	--	--	--	*Prosimulium*
7	8	10	2	7	*Simulium*
					Tipulidae (CRANE FLIES)
1	--	--	--	1	*Antocha*
--	--	--	--	--	*Tipula*
107	146	120	134	128	Total organisms
22	18	16	16	22	Total Taxa

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. A dash (--) indicates there were no observations of the organism in the sample. Samples represent counts per 200 animal (approximate) subsamples.

BIOLOGICAL DATA, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**
BENTHIC MACROINVERTEBRATES AT REFERENCE SITES

Station number	01429301	01438760	01447300	01449375	01457790	01458900	01472150
Date	12/10/02	11/20/02	11/20/02	11/20/02	11/14/02	11/14/02	11/14/02
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count	Count
Platyhelminthes							
Turbellaria (FLATWORMS)							
Tricladida							
Planariidae	--	--	--	1	8	3	2
Mollusca							
Gastropoda (SNAILS)							
Basommatophora							
Ancylidae							
Ferrissia	--	--	--	--	--	--	8
Hydrobiidae							
Amnicola	--	--	--	--	1	--	--
Lymnaeidae							
Fossaria	--	--	--	--	--	10	1
Physidae							
Physa	--	--	--	--	2	3	1
Planorbidae							
Gyraulus	--	--	--	--	--	7	--
Planorbella	--	--	--	--	--	3	14
Pleuroceridae							
Elimia	--	--	--	--	--	--	4
Bivalvia (CLAMS)							
Sphaeriidae							
Sphaerium	6	--	--	2	--	--	2
Annelida							
Oligochaeta (AQUATIC EARTHWORMS)							
Lumbricina	1	--	2	--	--	1	4
Lumbriculida							
Lumbriculidae	--	3	--	--	22	1	--
Tubificida							
Enchytraeidae	--	--	--	--	--	1	--
Naididae	--	--	4	1	--	--	--
Tubificidae	1	--	--	--	--	--	--
Arthropoda							
Acariformes							
Hydrachnidia (WATER MITES)	4	--	--	--	--	--	3
Crustacea							
Amphipoda (SCUDS)							
Gammaridae							
Gammarus	--	--	--	--	29	--	--
Decapoda							
Cambaridae (CRAYFISH)	--	1	--	--	--	--	--
Insecta							
Ephemeroptera (MAYFLIES)							
Caenidae							
Caenis	9	--	--	--	--	8	22
Ephemerellidae							
Drunella	2	--	--	--	--	--	--
Ephemerella	26	29	--	--	14	8	6
Eurylophella	2	1	23	1	--	1	--
Serratella	8	--	--	20	14	1	3

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**
BENTHIC MACROINVERTEBRATES AT REFERENCE SITES

Station number	01429301	01438760	01447300	01449375	01457790	01458900	01472150
Date	12/10/02	11/20/02	11/20/02	11/20/02	11/14/02	11/14/02	11/14/02
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count	Count
Ephemeroptera (MAYFLIES)							
Heptageniidae	--	--	--	--	1	2	--
Epeorus	2	49	--	5	--	--	--
Leucrocuta	1	5	--	3	1	--	--
Stenacron	--	--	1	--	--	--	1
Stenonema	10	1	10	10	6	2	20
Isonychiidae							
Isonychia	--	1	--	--	--	9	4
Leptophlebiidae							
Habrophlebia	--	--	4	--	--	--	--
Paraleptophlebia	21	21	5	24	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)							
Coenagrionidae							
Argia	--	--	--	--	--	3	4
Gomphidae							
Lanthus	--	2	2	1	--	--	2
Plecoptera (STONEFLIES)							
Capniidae							
Allocapnia	4	--	--	--	1	2	1
Paracapnia	4	--	4	1	--	--	--
Chloroperlidae							
Sweltsa	--	5	--	6	--	--	--
Leuctridae							
Leuctra	--	3	--	--	--	--	--
Nemouridae							
Amphinemura	--	--	--	1	--	--	--
Peltoperlidae							
Tallaperla	--	3	1	6	--	--	--
Perlidae							
Acroneuria	--	3	2	3	--	--	5
Agnetina	--	3	--	--	1	--	--
Perlodidae							
Isoperla	--	--	--	1	--	--	--
Pteronarcyidae							
Pteronarcys	--	--	--	1	--	--	--
Taeniopterygidae	--	--	--	1	--	--	--
Taenionema	5	--	--	--	1	7	2
Taeniopteryx	4	--	6	6	--	--	19
Megaloptera							
Corydalidae (FISHFLIES AND DOBSONFLIES)							
Nigronia	1	1	2	3	--	--	--
Trichoptera (CADDISFLIES)							
Apataniidae							
Apatania	--	--	--	--	--	1	5
Brachycentridae							
Brachycentrus	--	--	--	--	--	1	--
Micrasema	--	--	--	6	--	--	--
Glossosomatidae							
Agapetus	--	--	--	2	--	--	--
Glossosoma	--	--	--	--	2	--	--
Helicopsychidae							
Helicopsyche	--	--	--	--	2	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PENNSYLVANIA WATER-QUALITY NETWORK

BIOLOGICAL DATA, **WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**
BENTHIC MACROINVERTEBRATES AT REFERENCE SITES

Station number	01429301	01438760	01447300	01449375	01457790	01458900	01472150
Date	12/10/02	11/20/02	11/20/02	11/20/02	11/14/02	11/14/02	11/14/02
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count	Count
Trichoptera (CADDISFLIES)							
Hydropsychidae							
Cheumatopsyche	14	3	--	4	16	57	41
Diplectrona	--	14	8	10	--	--	--
Hydropsyche	21	5	6	5	9	30	8
Hydroptilidae							
Hydroptila	--	--	3	4	--	1	--
Lepidostomatidae							
Lepidostoma	7	12	11	14	9	1	--
Leptoceridae							
Setodes	2	--	--	--	--	--	--
Limnephilidae							
Hydatophylax	--	--	1	--	--	--	--
Odontoceridae							
Psilotreta	5	--	--	1	--	--	--
Philopotamidae							
Chimarra	1	--	7	--	32	23	7
Dolophilodes	--	5	1	3	--	--	--
Polycentropodidae							
Polycentropus	--	--	--	--	2	--	--
Rhyacophilidae							
Rhyacophila	2	2	2	11	--	--	--
Uenoidae							
Neophylax	2	2	--	1	--	--	--
Coleoptera (BEETLES)							
Elmidae (RIFFLE BEETLES)	--	--	--	--	--	--	1
Optioservus	35	--	--	--	39	--	21
Oulimnius	--	--	--	3	--	--	--
Promoresia	--	--	1	37	--	--	1
Stenelmis	4	--	--	--	1	--	15
Hydrophilidae							
Berosus	--	--	--	--	--	2	--
Psephenidae (WATER PENNIES)							
Psephenus	6	--	--	--	10	3	6
Diptera (TRUE FLIES)							
Athericidae							
Atherix	1	--	2	--	--	--	--
Ceratopogonidae (BITING MIDGES)	--	--	--	1	--	--	--
Chironomidae (MIDGES)	40	29	66	46	14	17	13
Empididae (DANCE FLIES)							
Hemerodromia	--	--	1	--	--	1	2
Muscidae							
Limnophora	--	--	--	1	--	--	--
Simuliidae (BLACK FLIES)	--	--	1	--	--	--	--
Tipulidae (CRANE FLIES)							
Antocha	3	--	--	--	1	--	--
Dicranota	2	2	--	3	--	--	--
Hexatoma	2	--	--	2	--	--	--
Limnophila	--	1	--	--	--	--	--
Tipula	--	--	--	--	--	2	2
Total Organisms	258	206	176	251	238	211	250
Total Taxa	34	26	26	38	25	30	33

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK

Water-quality and benthic macroinvertebrate samples were collected from selected streams in Chester County in the fall of 2003 as part of the Stream Conditions of Chester County Biological Monitoring Network. The biological monitoring program was initiated in 1969 with the goals of evaluating stream quality and long-term changes in stream quality of selected streams in Chester County. Benthic macroinvertebrates are macroscopic animals that inhabit the bottoms of aquatic habitats. Freshwater forms include aquatic insects, clams, crustaceans, snails, and worms. Samples are collected annually from similar habitats of the selected streams. By sampling in similar habitats with similar physical conditions it can be assumed that water quality is the determining factor controlling community structure. Benthic macroinvertebrate sampling was conducted following a single habitat approach. A cobble-riffle habitat was used because macroinvertebrate diversity and abundance is usually highest there. Samples were collected using a Hess sampler with a mesh size of 500 mm. Three samples were collected from areas of various velocities from within the riffle. Samples were composited and the entire sample was sorted and identified. Identifications were made to the lowest practical level (family or genus) by a U.S. Geological Survey biologist.

TABLE 3.--Stream conditions of Chester County biological monitoring network station list.

STATION NUMBER	STATION NAME	LATITUDE	LONGITUDE	DRAINAGE AREA (mi^2)
01472080	PIGEON CREEK NEAR SLONAKER, PA	40°12’03”	75°37’10”	12.0
[a]01472157	FRENCH CREEK NEAR PHOENIXVILLE, PA	40°09’05"	75°36’06"	59.1
01472190	PICKERING CREEK NEAR PHOENIXVILLE, PA	40°06’33”	75°31’42”	31.4
[a]01473169	VALLEY CREEK AT PA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA	40°04’45"	75°27’40"	20.8
[a]01475850	CRUM CREEK NEAR NEWTOWN SQUARE, PA	39°58’35"	75°26’13"	15.8
01476450	RIDLEY CREEK AT PA ROUTE 3 NEAR WILLISTOWN, PA	39°58’01”	75°28’58”	13.9
01476835	EAST BRANCH CHESTER CREEK AT WESTTOWN, PA	39°56’26”	75°32’30”	10.4
01478120	EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA	39°49’42”	75°46’52”	11.3
01478230	MIDDLE BRANCH WHITE CLAY CREEK NEAR AVONDALE, PA	39°45’02”	75°46’19”	25.5
01479700	WEST BRANCH RED CLAY CR NR KENNETT SQUARE, PA	39°48’39”	75°42’18”	16.9
01479800	EAST BRANCH RED CLAY CREEK NEAR FIVE POINTS, PA	39°49’10”	75°41’29”	10.2
[a]01480300	WEST BRANCH BRANDYWINE CR NR HONEY BROOK, PA	40°04’22"	75°55’40"	18.7
[a]01480617	WEST BRANCH BRANDYWINE CREEK AT MODENA, PA	39°57’42"	75°48’06"	55.0
01480629	BUCK RUN AT DOE RUN, PA	39°55’46”	75°49’24”	22.6
01480640	WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA	39°55’34”	75°39’47”	134
01480648	EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA	40°05’41”	75°51’14”	5.98
014806512	EAST BRANCH BRANDYWINE CR AT LEWIS MILLS, PA	40°06’20”	75°49’35”	8.18
01480653	EAST BRANCH BRANDYWINE CR AT GLENMOORE, PA	40°05’48”	75°46’44”	16.5
01480658	INDIAN RUN AT GLENMOORE, PA	40°04’32”	75°46’55”	4.27
01480660	EAST BRANCH BRANDYWINE CREEK AT LYNDELL, PA	40°03’34”	75°44’39”	27.1
[a]01480675	MARSH CREEK NEAR GLENMOORE, PA	40°05’52”	75°44’31”	8.57
[a]01480700	EB BRANDYWINE CREEK NEAR DOWNINGTOWN, PA	40°02’05”	75°42’32”	60.6
01480800	EB BRANDYWINE CREEK AT DOWNINGTOWN, PA	40°00’20”	75°42’20”	81.6
[a]01480870	EAST BRANCH BRANDYWINE CR BL DOWNINGTOWN, PA	39°58’07"	75°40’25"	89.9
01480950	EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA	39°55’35"	75°38’54"	123
01494953	BIG ELK CREEK AT MAPLE GROVE, PA	39°45’44”	75°55’16”	26.6

[a] Other data for this station can be found in the continuous station records section of this report.

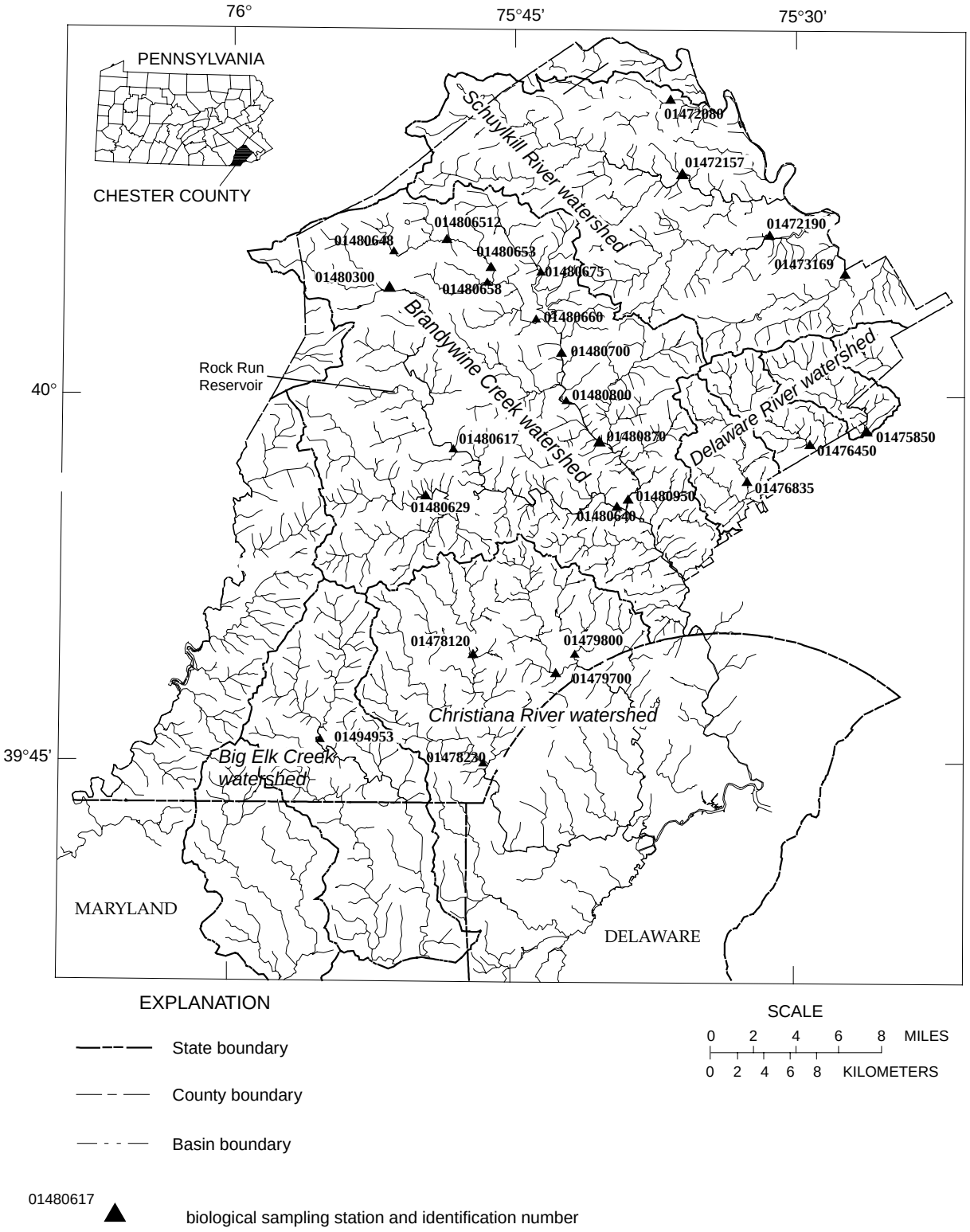


Figure 14.--Biological sampling locations and major drainage basin divides in Chester County.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct. wat unf lab, µS/cm 25 degC (90095)	Specif. conduct. wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)													
OCT 2003 07...	0900	1028	80020	18	12.4	6.6	7.3	152	156	9.6	12.6	4.68	1.63
01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)													
OCT 2003 21...	0830	1028	80020	41	10.9	7.5	7.7	238	238	11.2	23.9	7.84	2.56
01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)													
OCT 2003 06...	1000	1028	80020	18	11.0	6.9	7.7	296	306	10.7	20.7	11.5	2.48
01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)													
OCT 2003 20...	1320	1028	80020	11	12.9	7.6	7.6	352	353	12.4	30.1	14.1	3.61
01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)													
OCT 2003 14...	1330	1028	80020	15	14.5	8.5	8.3	343	348	13.8	37.8	16.1	3.51
01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)													
OCT 2003 14...	1200	1028	80020	18	12.5	8.2	8.0	216	219	13.2	18.4	7.79	3.47
01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)													
OCT 2003 08...	1130	1028	80020	28	11.9	7.9	7.8	384	404	12.7	37.7	14.5	5.62
01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)													
OCT 2003 08...	0930	1028	80020	13	11.0	7.5	7.7	371	385	12.1	37.2	14.0	4.16
01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)													
OCT 2003 20...	1100	1028	80020	35	13.6	7.7	7.6	228	226	10.4	21.8	8.60	2.77
01480640 West Branch Brandywine Creek at Wawaset, PA (LAT 39 55 34N LONG 075 39 47W)													
NOV 2003 10...	1200	1028	80020	304	12.7	7.6	7.6	226	222	6.3	20.8	7.97	2.84
01480648 East Branch Brandywine Creek near Cupola, PA (LAT 40 05 41N LONG 075 51 14W)													
NOV 2003 17...	1230	1028	80020	7.3	12.5	7.7	7.5	201	214	9.9	20.2	6.78	3.39
01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)													
OCT 2003 22...	1000	1028	80020	19	10.6	7.4	7.7	200	223	12.2	20.6	6.70	2.74
014806512 East Branch Brandywine Creek at Lewis Mills, PA (LAT 40 06 20N LONG 075 49 35W)													
NOV 2003 17...	1130	1028	80020	10	12.9	8.1	7.7	206	216	9.3	21.1	6.60	2.87

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chlor-ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Alum-inum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)
01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)													
OCT 2003 07...	7.99	29	11.4	15.5	13.8	<.04	2.53	E.005	.03	--	--	22	--
01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)													
OCT 2003 21...	12.1	67	27.6	18.7	16.0	<.04	1.65	<.008	<.02	--	--	26	--
01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)													
OCT 2003 06...	17.9	62	37.9	14.7	16.4	<.04	3.56	E.005	.11	--	--	39	--
01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)													
OCT 2003 20...	19.8	86	57.2	14.0	18.4	<.04	2.54	.018	.12	--	--	37	--
01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)													
OCT 2003 14...	9.05	104	22.3	12.8	26.9	<.04	4.71	.021	E.01	--	--	20	--
01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)													
OCT 2003 14...	10.1	46	20.1	12.0	16.5	<.04	4.30	E.004	.03	--	--	34	--
01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)													
OCT 2003 08...	13.4	80	32.5	14.4	39.1	<.04	5.79	.009	.11	19	<2	43	<.2
01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)													
OCT 2003 08...	13.2	82	37.2	16.0	32.2	<.04	3.62	.009	E.01	10	<2	25	<.2
01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)													
OCT 2003 20...	9.24	47	19.8	9.4	15.4	E.02	5.13	E.007	<.02	--	--	23	--
01480640 West Branch Brandywine Creek at Wawaset, PA (LAT 39 55 34N LONG 075 39 47W)													
NOV 2003 10...	9.98	56	18.4	11.8	18.3	<.04	3.80	.011	E.01	--	--	34	--
01480648 East Branch Brandywine Creek near Cupola, PA (LAT 40 05 41N LONG 075 51 14W)													
NOV 2003 17...	7.37	49	13.9	11.7	14.4	E.03	3.66	.033	<.02	14	<2	23	<.2
01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)													
OCT 2003 22...	9.19	49	15.4	17.1	13.2	<.04	3.35	E.005	<.02	18	<2	31	<.2
014806512 East Branch Brandywine Creek at Lewis Mills, PA (LAT 40 06 20N LONG 075 49 35W)													
NOV 2003 17...	8.19	57	14.6	13.7	14.7	<.04	3.58	.018	<.02	--	--	22	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Chromium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Manganese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)									
OCT 2003 07...	--	--	50	--	--	--	--	--	--
01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)									
OCT 2003 21...	--	--	166	--	--	--	--	--	--
01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)									
OCT 2003 06...	--	--	51	--	--	--	--	--	--
01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)									
OCT 2003 20...	--	--	54	--	--	--	--	--	--
01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)									
OCT 2003 14...	--	--	25	--	--	--	--	--	--
01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)									
OCT 2003 14...	--	--	18	--	--	--	--	--	--
01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)									
OCT 2003 08...	<.8	2.7	39	<1	22.7	<.02	<1.8	E1.3	6
01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)									
OCT 2003 08...	E.4	1.9	13	<1	16.9	<.02	<1.8	E1.8	<3
01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)									
OCT 2003 20...	--	--	71	--	--	--	--	--	--
01480640 West Branch Brandywine Creek at Wawaset, PA (LAT 39 55 34N LONG 075 39 47W)									
NOV 2003 10...	--	--	99	--	--	--	--	--	--
01480648 East Branch Brandywine Creek near Cupola, PA (LAT 40 05 41N LONG 075 51 14W)									
NOV 2003 17...	<.8	1.5	66	<1	27.9	<.02	<1.8	E1.1	E2
01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)									
OCT 2003 22...	<.8	<1.2	49	<1	12.6	<.02	<1.8	<2.0	E2
014806512 East Branch Brandywine Creek at Lewis Mills, PA (LAT 40 06 20N LONG 075 49 35W)									
NOV 2003 17...	--	--	63	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
01480658 Indian Run at Glenmoore, PA (LAT 40 04 32N LONG 075 46 55W)													
NOV 2003 17...	0900	1028	80020	8.9	12.1	7.5	7.9	165	178	8.6	17.7	4.54	1.23
01480660 East Branch Brandywine Creek at Lyndell, PA (LAT 40 03 34N LONG 075 44 39W)													
DEC 2003 01...	0830	1028	80020	57	13.1	7.4	7.5	177	179	5.7	16.0	5.04	1.99
01480800 East Branch Brandywine Creek at Downingtown, PA (LAT 40 00 20N LONG 075 42 20W)													
DEC 2003 01...	1100	1028	80020	195	12.6	7.5	7.5	215	219	7.4	19.9	7.09	2.41
01480950 East Branch Brandywine Creek at Wawaset, PA (LAT 39 55 35N LONG 075 38 54W)													
NOV 2003 10...	0830	1028	80020	305	11.8	7.6	7.5	270	264	6.7	24.7	8.95	2.69
01494953 Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)													
OCT 2003 14...	1000	1028	80020	26	11.4	7.8	7.3	190	191	13.3	13.8	7.18	2.88

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)
01480658 Indian Run at Glenmoore, PA (LAT 40 04 32N LONG 075 46 55W)													
NOV 2003 17...	8.18	55	12.7	22.3	9.2	<.04	2.25	<.008	<.02	--	--	21	--
01480660 East Branch Brandywine Creek at Lyndell, PA (LAT 40 03 34N LONG 075 44 39W)													
DEC 2003 01...	7.16	47	13.3	15.8	13.4	<.04	2.77	E.005	E.01	31	<2	20	<.2
01480800 East Branch Brandywine Creek at Downingtown, PA (LAT 40 00 20N LONG 075 42 20W)													
DEC 2003 01...	10.4	50	21.1	12.6	15.5	E.03	2.25	E.007	<.02	17	<2	24	<.2
01480950 East Branch Brandywine Creek at Wawaset, PA (LAT 39 55 35N LONG 075 38 54W)													
NOV 2003 10...	14.3	61	27.5	12.5	17.4	<.04	2.63	E.007	.07	--	--	58	--
01494953 Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)													
OCT 2003 14...	9.67	35	20.0	8.0	9.4	<.04	5.42	.009	<.02	--	--	20	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Chromium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Manganese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
01480658 Indian Run at Glenmoore, PA (LAT 40 04 32N LONG 075 46 55W)									
NOV 2003									
17...	--	--	46	--	--	--	--	--	--
01480660 East Branch Brandywine Creek at Lyndell, PA (LAT 40 03 34N LONG 075 44 39W)									
DEC 2003									
01...	<.8	<1.2	152	<1	10.5	<.02	<1.8	E1.1	3
01480800 East Branch Brandywine Creek at Downingtown, PA (LAT 40 00 20N LONG 075 42 20W)									
DEC 2003									
01...	<.8	<1.2	109	<1	37.1	<.02	<1.8	<2.0	<3
01480950 East Branch Brandywine Creek at Wawaset, PA (LAT 39 55 35N LONG 075 38 54W)									
NOV 2003									
10...	--	--	60	--	--	--	--	--	--
01494953 Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)									
OCT 2003									
14...	--	--	31	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m^2. A dash (--) indicates there were no observations of the organism in the sample.

Station number	01472080	01472190	01476450	01476835	01478120	01478230
Date	10/07/03	10/21/03	10/06/03	10/20/03	10/14/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Platyhelminthes						
Turbellaria (FLATWORMS)						
Tricladida						
Planariidae	11	12	129	19	39	1
Nematoda (NEMATODES)	--	2	2	--	11	--
Nemertea (PROBOSCIS WORMS)						
Enopla						
Hoplonemertea						
Tetrastemmatidae						
Prostoma	14	--	62	5	--	3
Mollusca						
Gastropoda (SNAILS)						
Basommatophora						
Ancylidae						
Ferrissia	--	5	2	5	--	1
Physidae						
Physa	--	--	--	1	--	--
Planorbidae	--	--	1	--	--	--
Menetus dilatatus	--	--	--	--	1	--
Bivalvia (CLAMS)						
Veneroida						
Corbiculidae						
Corbicula fluminea	--	--	2	--	--	--
Sphaeriidae	6	--	--	4	--	--
Pisidium	--	--	--	--	--	--
Sphaerium	--	--	7	--	--	--
Annelida						
Oligochaeta (AQUATIC EARTHWORMS)						
Lumbriculida						
Lumbriculidae	5	23	15	18	10	3
Tubificida						
Naididae	--	8	--	--	--	2
Tubificidae	1	1	--	--	--	3
Arthropoda						
Acariformes						
Hydrachnidia (WATER MITES)	9	59	15	20	32	48
Crustacea						
Copepoda	--	--	--	--	--	--
Amphipoda (SCUDS)						
Crangonyctidae						
Crangonyx	--	--	12	11	1	--
Stygonectes	--	--	--	--	--	--
Gammaridae						
Gammarus	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Platyhelminthes
						Turbellaria (FLATWORMS)
						Tricladida
8	30	147	16	9	12	Planariidae
--	--	1	--	--	1	Nematoda (NEMATODES)
						Nemertea (PROBOSCIS WORMS)
						Enopla
						Hoplonemertea
						Tetrastemmatidae
--	9	15	13	4	17	*Prostoma*
						Mollusca
						Gastropoda (SNAILS)
						Basommatophora
						Ancylidae
--	12	2	1	--	4	*Ferrissia*
						Physidae
--	--	--	--	--	1	*Physa*
--	--	2	--	--	--	Planorbidae
--	--	--	--	--	--	*Menetus dilatatus*
						Bivalvia (CLAMS)
						Veneroida
						Corbiculidae
--	--	--	29	--	--	*Corbicula fluminea*
--	--	--	--	2	2	Sphaeriidae
1	--	--	--	--	--	*Pisidium*
1	2	82	--	--	--	*Sphaerium*
						Annelida
						Oligochaeta (AQUATIC EARTHWORMS)
						Lumbriculida
--	2	3	3	--	3	Lumbriculidae
						Tubificida
3	--	--	--	1	--	Naididae
--	--	--	--	--	--	Tubificidae
						Arthropoda
						Acariformes
7	23	53	8	35	40	Hydrachnidia (WATER MITES)
						Crustacea
--	1	3	--	--	--	Copepoda
						Amphipoda (SCUDS)
						Crangonyctidae
--	--	--	3	4	--	*Crangonyx*
--	13	2	--	--	--	*Stygonectes*
						Gammaridae
--	44	--	--	--	--	*Gammarus*

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472190	01476450	01476835	01478120	01478230
Date	10/07/03	10/21/03	10/06/03	10/20/03	10/14/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Arthropoda						
Isopoda (AQUATIC SOWBUGS)						
Asellidae						
Caecidotea	--	--	--	--	2	--
Decapoda						
Cambaridae (CRAYFISH)	--	--	--	--	--	--
Insecta						
Ephemeroptera (MAYFLIES)						
Baetidae						
Acentrella	1	23	--	12	20	151
Baetis	7	3	74	23	1	5
Caenidae						
Caenis	--	1	--	--	4	--
Ephemeridae						
Ephemera	--	--	--	--	1	--
Ephemerellidae						
Ephemerella	--	--	--	--	--	--
Eurylophella	--	--	2	--	--	--
Serratella	2	96	25	6	28	3
Heptageniidae						
Epeorus	--	--	--	--	--	--
Stenonema	22	31	18	1	14	10
Isonychiidae						
Isonychia	--	26	28	--	1	6
Leptohyphidae						
Tricorythodes	--	--	--	1	--	--
Leptophlebiidae	2	--	--	--	--	--
Paraleptophelbia	--	--	--	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)						
Aeshnidae						
Boyeria	--	--	--	--	--	--
Coenagrionidae						
Argia	--	--	2	--	--	--
Gomphidae	1	--	--	2	--	--
Plecoptera (STONEFLIES)						
Capniidae	5	4	--	--	--	--
Leuctridae	--	--	--	--	--	--
Perlidae						
Acroneuria	7	11	--	--	--	--
Agnetina	--	1	--	--	--	--
Paragnetina	1	--	--	--	--	--
Taeniopterygidae						
Strophopteryx	--	--	--	--	--	--
Taeniopteryx	--	108	--	5	2	70

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Arthropoda
						Isopoda (AQUATIC SOWBUGS)
						Asellidae
44	7	1	--	7	--	*Caecidotea*
						Decapoda
--	--	--	--	--	1	Cambaridae (CRAYFISH)
						Insecta
						Ephemeroptera (MAYFLIES)
						Baetidae
--	1	47	4	--	25	*Acentrella*
1	1	12	1	5	4	*Baetis*
						Caenidae
--	1	--	5	--	8	*Caenis*
						Ephemeridae
--	--	--	--	--	--	*Ephemera*
						Ephemerellidae
--	--	--	--	4	--	*Ephemerella*
--	--	--	--	1	3	*Eurylophella*
2	3	888	8	32	105	*Serratella*
						Heptageniidae
--	--	21	--	--	--	*Epeorus*
2	42	86	58	36	261	*Stenonema*
						Isonychiidae
--	--	91	7	--	74	*Isonychia*
						Leptohyphidae
--	--	--	1	--	--	*Tricorythodes*
--	--	1	--	--	--	Leptophlebiidae
--	--	--	--	4	--	*Paraleptophelbia*
						Odonata (DRAGONFLIES AND DAMSELFLIES)
						Aeshnidae
--	1	--	--	--	--	*Boyeria*
						Coenagrionidae
--	--	--	2	--	--	*Argia*
2	2	2	--	1	31	Gomphidae
						Plecoptera (STONEFLIES)
1	--	--	--	6	--	Capniidae
--	--	--	--	--	1	Leuctridae
						Perlidae
--	1	--	--	5	26	*Acroneuria*
--	--	--	--	--	--	*Agnetina*
--	--	--	--	--	5	*Paragnetina*
						Taeniopterygidae
--	--	--	2	--	--	*Strophopteryx*
--	--	10	17	7	28	*Taeniopteryx*

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472190	01476450	01476835	01478120	01478230
Date	10/07/03	10/21/03	10/06/03	10/20/03	10/14/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Megaloptera						
Corydalidae (FISHFLIES AND DOBSONFLIES)						
Corydalus	1	6	--	--	--	4
Nigronia	--	--	--	--	--	--
Sialidae (ALDERFLIES)						
Sialis	1	--	--	--	--	--
Trichoptera (CADDISFLIES)						
Apataniidae						
Apatania	--	1	--	--	--	--
Brachycentridae						
Micrasema	2	--	22	--	1	2
Glossosomatidae						
Glossosoma	--	3	2	--	--	1
Hydropsychidae						
Cheumatopsyche	116	143	1156	237	101	61
Diplectrona	--	--	--	--	--	--
Hydropsyche	113	256	781	279	105	219
Potamyia	--	--	--	--	--	2
Hydroptilidae						
Hydroptila	--	--	--	2	1	--
Leucotrichia	--	1	6	1	4	12
Lepidostomatidae						
Lepidostoma	2	--	--	--	--	--
Leptoceridae						
Oecetis	--	--	--	--	--	--
Philopotamidae						
Chimarra	30	68	85	29	47	24
Dolophilodes	--	7	--	--	--	1
Wormaldia	--	--	--	--	--	--
Polycentropodidae						
Neureclipsis	--	--	--	--	--	--
Polycentropus	--	--	--	--	--	--
Psychomyiidae						
Psychomyia	--	2	2	--	--	--
Rhyacophilidae						
Rhyacophila	3	--	--	--	--	--
Uenoidae						
Neophylax	--	--	--	--	--	--
Lepidoptera						
Pyralididae(MOTHS)						
Petrophila	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Megaloptera
						Corydalidae (FISHFLIES AND DOBSON FLIES)
--	--	5	--	1	10	*Corydalus*
--	2	--	--	--	9	*Nigronia*
						Sialidae (ALDERFLIES)
--	--	--	--	--	1	*Sialis*
						Trichoptera (CADDISFLIES)
						Apataniidae
--	--	--	--	1	1	*Apatania*
						Brachycentridae
2	--	--	--	4	2	*Micrasema*
						Glossosomatidae
--	1	--	--	1	5	*Glossosoma*
						Hydropsychidae
49	82	84	166	59	165	*Cheumatopsyche*
--	--	2	2	--	--	*Diplectrona*
73	328	338	442	90	151	*Hydropsyche*
--	--	--	--	--	4	*Potamyia*
						Hydroptilidae
--	--	--	--	1	--	*Hydroptila*
1	4	63	12	--	3	*Leucotrichia*
						Lepidostomatidae
--	--	--	3	--	--	*Lepidostoma*
						Leptoceridae
--	--	--	1	1	1	*Oecetis*
						Philopotamidae
--	151	303	25	29	127	*Chimarra*
5	--	--	--	--	--	*Dolophilodes*
--	--	2	--	--	--	*Wormaldia*
						Polycentropodidae
--	--	--	1	--	1	*Neureclipsis*
--	--	--	--	--	4	*Polycentropus*
						Psychomyiidae
--	--	--	5	--	--	*Psychomyia*
						Rhyacophilidae
--	--	--	--	--	6	*Rhyacophila*
						Uenoidae
--	--	--	4	3	--	Neophylax
						Lepidoptera
						Pyralididae(MOTHS)
--	--	--	--	1	--	*Petrophila*

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472190	01476450	01476835	01478120	01478230
Date	10/07/03	10/21/03	10/06/03	10/20/03	10/14/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Coleoptera (BEETLES)						
Dryopidae						
Helichus	--	--	--	--	--	--
Dytiscidae						
Helophorus	--	--	--	1	--	--
Elmidae (RIFFLE BEETLES)						
Ancyronyx	--	--	--	--	--	--
Dubiraphia	--	--	--	3	--	--
Macronychus	--	--	--	5	--	--
Microcylloepus	--	--	--	--	--	--
Optioservus	85	77	294	430	107	36
Oulimnius	36	33	49	14	25	31
Promoresia	7	--	--	--	--	--
Stenelmis	198	33	340	685	133	2
Hydrophilidae						
Berosus	--	--	1	--	--	--
Psephenidae (WATER PENNIES)						
Ectopria	2	--	--	--	--	--
Psephenus	17	8	91	55	25	--
Ptilodactylidae						
Anchytarsus	--	--	2	--	--	--
Diptera (TRUE FLIES)						
Athericidae						
Atherix	--	--	--	--	1	--
Ceratopogonidae	--	1	--	1	2	--
Chironomidae (MIDGES)	87	310	117	638	485	545
Empididae (DANCE FLIES)						
Hemerodromia	1	7	7	18	45	10
Simuliidae (BLACK FLIES)						
Simulium	106	24	61	101	33	65
Tipulidae (CRANE FLIES)						
Antocha	3	15	11	44	9	4
Dicranota	--	--	7	--	--	--
Hexatoma	14	--	--	--	--	--
Tipula	1	2	--	--	--	--
Total organisms	919	1411	3430	2676	1291	1325
Total number of taxa	35	36	34	32	31	29

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Coleoptera (BEETLES)
						Dryopidae
--	2	--	--	1	1	*Helichus*
						Dytiscidae
--	--	--	--	--	--	*Helophorus*
						Elmidae (RIFFLE BEETLES)
--	1	--	2	--	--	*Ancyronyx*
--	3	1	--	2	2	*Dubiraphia*
--	2	--	--	16	--	*Macronychus*
--	--	2	--	5	--	*Microcylloepus*
15	181	236	89	216	149	*Optioservus*
4	38	61	6	11	37	*Oulimnius*
--	--	--	--	--	--	*Promoresia*
14	410	191	19	425	163	*Stenelmis*
						Hydrophilidae
--	--	--	1	--	--	*Berosus*
						Psephenidae (WATER PENNIES)
--	--	--	--	--	--	*Ectopria*
4	52	45	8	75	24	*Psephenus*
						Ptilodactylidae
--	1	--	--	1	1	*Anchytarsus*
						Diptera (TRUE FLIES)
						Athericidae
--	--	--	--	--	--	*Atherix*
--	--	1	--	5	--	Ceratopogonidae
22	76	603	196	178	155	Chironomidae (MIDGES)
						Empididae (DANCE FLIES)
2	11	15	27	5	63	*Hemerodromia*
						Simuliidae (BLACK FLIES)
24	59	190	35	142	46	*Simulium*
						Tipulidae (CRANE FLIES)
1	18	14	107	63	31	*Antocha*
--	--	--	--	--	--	*Dicranota*
--	1	--	--	10	--	*Hexatoma*
--	1	--	--	3	1	*Tipula*
288	1619	3625	1329	1512	1815	Total organisms
24	39	38	37	44	48	Total number of taxa

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Platyhelminthes						
Turbellaria (FLATWORMS)						
Tricladida						
Planariidae	1	18	8	1	--	--
Nematoda (NEMATODES)	--	2	1	1	8	--
Nemertea (PROBOSCIS WORMS)						
Enopla						
Hoplonemertea						
Tetrastemmatidae						
Prostoma	26	28	6	--	2	62
Mollusca						
Gastropoda (SNAILS)						
Basommatophora						
Ancylidae						
Ferrissia	3	5	7	--	--	--
Bivalvia (CLAMS)						
Veneroida						
Corbiculidae						
Corbicula fluminea	--	--	--	--	2	--
Sphaeriidae	--	4	--	--	--	--
Pisidium	--	--	3	--	9	--
Sphaerium	--	--	--	--	2	--
Annelida						
Oligochaeta (AQUATIC EARTHWORMS)						
Lumbriculida						
Lumbriculidae	7	49	9	10	9	--
Tubificida						
Naididae	--	--	1	3	1	2
Tubificidae	--	9	--	--	--	--
Arthropoda						
Acariformes						
Hydrachnidia (WATER MITES)	15	18	8	35	23	3
Crustacea						
Copepoda	1	--	--	--	--	--
Amphipoda (SCUDS)						
Crangonyctidae						
Stygonectes	--	--	1	--	--	--
Gammaridae						
Gammarus	--	--	--	--	9	--
Decapoda						
Cambaridae (CRAYFISH)	1	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Insecta						
Ephemeroptera (MAYFLIES)						
Baetidae						
Baetis	--	--	1	--	2	1
Acentrella	--	1	--	--	--	117
Caenidae						
Caenis	--	--	--	1	2	1
Ephemerellidae						
Ephemerella	--	--	2	--	--	--
Serratella	3	18	8	--	7	4
Heptageniidae						
Epeorus	--	--	3	--	--	--
Stenacron	2	--	--	--	--	--
Stenonema	70	11	14	1	11	2
Isonychiidae						
Isonychia	--	--	1	--	--	13
Leptohyphidae						
Tricorythodes	--	--	1	--	1	--
Leptophlebiidae	--	3	--	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)						
Gomphidae	1	4	3	--	1	--
Plecoptera (STONEFLIES)						
Capniidae						
Allocapnia	59	123	13	--	--	--
Chloroperlidae						
Utaperla	--	117	1	--	--	--
Nemouridae	--	--	2	--	--	--
Perlidae						
Acroneuria	6	8	8	--	1	--
Paragnetina	--	--	1	--	--	--
Taeniopterygidae						
Strophopteryx	29	27	170	--	--	--
Taeniopteryx	75	78	25	1	1	1
Megaloptera						
Corydalidae (FISHFLIES AND DOBSONFLIES)						
Corydalus	--	--	3	--	1	--
Nigronia	--	--	3	--	--	1
Sialidae (ALDERFLIES)						
Sialis	6	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Trichoptera (CADDISFLIES)						
Apataniidae						
Apatania	--	6	6	--	--	--
Brachycentridae						
Micrasema	--	--	2	2	2	--
Glossosomatidae						
Glossosoma	1	11	39	1	--	--
Protoptila	--	--	--	--	10	--
Hydropsychidae						
Cheumatopsyche	209	51	114	6	145	13
Diplectrona	--	18	--	--	--	--
Hydropsyche	53	51	267	37	288	24
Hydroptilidae						
Hydroptila	--	1	--	2	1	--
Leucotrichia	--	--	--	5	3	5
Leptoceridae						
Oecetis	--	--	1	--	--	--
Limnephilidae						
Hydatophylax	--	2	--	--	--	--
Philopotamidae						
Chimarra	11	10	3	--	56	6
Dolophilodes	--	10	2	--	--	--
Polycentropodidae						
Neureclipsis	--	--	--	--	1	--
Polycentropus	10	6	9	1	--	--
Psychomyiidae						
Psychomyia	--	--	--	5	--	--
Rhyacophilidae						
Rhyacophila	--	11	1	--	--	--
Uenoidae						
Neophylax	1	2	17	--	--	--
Lepidoptera						
Pyralididae(MOTHS)						
Petrophila	--	1	--	--	2	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Coleoptera (BEETLES)						
Elmidae (RIFFLE BEETLES)						
Ancyronyx	--	--	--	--	3	--
Dubiraphia	--	--	--	--	4	--
Macronychus	3	--	--	--	--	--
Optioservus	14	23	56	177	226	5
Oulimnius	6	20	14	5	10	5
Promoresia	--	--	5	4	--	--
Stenelmis	42	1	10	6	912	4
Hydrophilidae						
Berosus	--	--	--	1	2	--
Psephenidae (WATER PENNIES)						
Psephenus	18	18	31	4	62	2
Ptilodactylidae						
Anchytarsus	--	2	--	--	--	--
Diptera (TRUE FLIES)						
Ceratopogonidae	--	1	--	--	--	--
Chironomidae (MIDGES)	177	118	150	293	263	327
Empididae (DANCE FLIES)						
Chelifera	4	--	--	--	--	2
Hemerodromia	10	1	7	14	27	9
Simuliidae (BLACK FLIES)						
Prosimilium	--	16	4	--	--	--
Simulium	11	2	--	1	77	74
Tipulidae (CRANE FLIES)						
Antocha	15	3	11	33	58	1
Dicranota	--	5	--	--	--	--
Hexatoma	--	1	--	--	--	--
Tipula	--	2	--	--	--	--
Total organisms	890	916	1052	650	2244	684
Total number of taxa	32	45	46	26	38	24

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

Miscellaneous water-quality data were collected for several projects in cooperation with the Schuylkill Conservation District and the Schuylkill Headwaters Association, Inc. These projects involve assessing the characteristics and remediation of abandoned mine drainage in the Upper Schuylkill River Basin. For additional information, contact Charles Cravotta at the USGS Pennsylvania Water Science Center, 215 Limekiln Road, New Cumberland, PA 17070; 717-730-6900, (email: cravotta@usgs.gov).

TABLE 4.--Acid mine drainage project station list.

Station number	Location	Latitude	Longitude	Drainage area (mi^2)
404512076025501	Bell Water Level Tunnel, nr Mary D, PA	40° 45’ 10”	76° 02’ 53"	n.a.
0146742498	Bell Water Level Tunnel, 225 M DS, nr Middleport, PA	40° 45’ 14”	76° 02’ 57"	0.02
404513076025811	Bell Wetland, Cell A Outflow Pipe	40° 45’ 13”	76° 02’ 58"	n.a.
404511076025811	Bell Wetland, Cell B Outflow Pipe	40° 45’ 11”	76° 02’ 58	n.a.
404513076025812	Bell Wetland, Cell A Spillway	40° 45’ 13”	76° 02’ 58	n.a.
404511076025812	Bell Wetland, Cell B Spillway	40° 45’ 11”	76° 02’ 58	n.a.
404511076025813	Bell Wetland, Cell B, Flush Pipe	40° 45’ 11”	76° 02’ 58	n.a.
404513076025818	Bell Wetland, Cell A, Vertical Pipe 18 inches to base	40° 45’ 13”	76° 02’ 58"	n.a.
404513076025836	Bell Wetland, Cell A, Vertical Pipe 36 inches to base	40° 45’ 13”	76° 02’ 58"	n.a.
404513076025854	Bell Wetland, Cell A, Vertical Pipe 54 inches to base	40° 45’ 13”	76° 02’ 58"	n.a.
404513076025872	Bell Wetland, Cell A, Vertical Pipe 72 inches to base	40° 45’ 13”	76° 02’ 58"	n.a.
404511076025818	Bell Wetland, Cell B, Vertical Pipe 18 inches to base	40° 45’ 11”	76° 02’ 58"	n.a.
404511076025836	Bell Wetland, Cell B, Vertical Pipe 36 inches to base	40° 45’ 11”	76° 02’ 58"	n.a.
404511076025854	Bell Wetland, Cell B, Vertical Pipe 54 inches to base	40° 45’ 11”	76° 02’ 58"	n.a.
404511076025872	Bell Wetland, Cell B, Vertical Pipe 72 inches to base	40° 45’ 11”	76° 02’ 58"	n.a.
0146742494	Schuylkill River ab Bell Tunnel at Mary D, PA	40° 45’ 16”	76° 02’ 54"	3.29
0146742500	Schuylkill River bl Bell Tunnel at Mary D, PA	40° 45’ 12”	76° 03’ 01"	3.35
01467448	Schuylkill River at Middleport, PA	40° 43’ 43”	76° 05’ 14"	14.5
403958076191401	Otto Air Shaft, nr Branchdale, PA	40° 39’ 58”	76° 19’ 14"	n.a.
0146784350	Otto Air Shaft, 400 M DS, nr Llewellyn, PA	40° 40’ 07”	76° 19’ 07"	0.09
0146784338	Muddy Branch ab Otto Mine Discharge nr Branchdale, PA	40° 40’ 08”	76° 19’ 07"	1.66
0146784354	Muddy Branch bl Otto Mine Discharge ab Steins, PA	40° 40’ 03”	76° 18’ 24"	2.25
0146784358	Muddy Branch bl Otto Mine Discharge bl Steins, PA	40° 39’ 53”	76° 18’ 10"	3.03

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel

REMARKS.--Some values for "dissolved" parameters exceeded values for the corresponding "total" parameter. These results are within the limits of analytical precision and methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1200	1028	1028	2.0	389	12	4.3	38	3.9	4.1
NOV										
05...	0945	1028	1028	3.4	510	4.0	3.6	32	4.1	4.4
DEC										
16...	1115	1028	1028	4.0	340	8.0	4.1	36	4.3	4.3
23...	0830	1028	1028	--	--	--	--	--	4.1	4.1
APR										
15...	1145	1028	89203	1.8	604	9.4	7.7	69	4.0	4.0
MAY										
18...	1100	1028	89203	2.3	608	9.0	6.7	59	3.9	3.9
JUN										
16...	1100	1028	89203	2.3	500	6.0	7.0	61	4.1	4.1
JUL										
15...	1115	1028	89203	2.9	582	3.1	7.0	62	4.0	4.0
AUG										
16...	1230	1028	89203	3.5	485	9.0	6.5	57	4.3	4.2
SEP										
15...	1445	1028	89203	1.4	565	--	9.9	89	3.9	3.9
15...	1446	1028	1028	1.4	570	--	9.9	89	3.9	3.9
30...	1630	1028	--	--	244	4.0	6.8	60	4.0	--

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
OCT										
06...	325	9.60	18.4	18.1	14.1	13.8	.990	.975	2.45	2.40
NOV										
05...	300	9.60	16.9	17.1	12.8	12.8	.501	.481	2.54	2.54
DEC										
16...	250	9.50	13.9	14.0	10.7	10.8	.460	.470	2.21	2.21
23...	303	10.0	--	--	--	--	--	--	--	--
APR										
15...	279	9.74	16.7	16.1	12.8	12.1	.900	.900	2.60	2.40
MAY										
18...	269	9.60	16.5	17.0	12.9	13.2	.900	.900	2.60	2.50
JUN										
16...	285	9.70	18.1	18.1	14.5	14.5	1.00	1.00	3.50	2.80
JUL										
15...	274	9.67	17.2	18.5	13.6	14.6	1.00	.900	2.70	2.70
AUG										
16...	211	9.69	13.5	13.0	10.8	10.4	.900	.900	2.40	2.40
SEP										
15...	309	9.89	17.2	17.5	13.9	14.1	1.00	1.00	2.30	2.50
15...	310	9.90	15.8	15.7	13.2	13.1	.950	.970	3.06	2.92
30...	298	9.59	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	.000	--	3.68	<.010	10.7	10.8	129	200	.010	<.030
NOV										
05...	.000	--	3.47	<.010	11.7	11.8	107	107	.020	<.030
DEC										
16...	.000	--	3.06	<.010	10.7	10.9	92.0	90.0	.040	<.030
23...	.000	--	2.72	<.010	--	--	119	--	.010	<.030
APR										
15...	.000	17.0	3.32	--	--	--	111	--	.020	--
MAY										
18...	.000	15.0	3.34	--	--	--	108	--	.010	--
JUN										
16...	.000	18.8	3.69	--	--	--	117	--	.010	--
JUL										
15...	.000	--	3.46	--	--	--	108	--	.010	--
AUG										
16...	.000	--	3.40	<.010	--	--	80.7	--	.020	<.030
SEP										
15...	.000	--	2.87	--	--	--	115	--	--	--
15...	.000	--	--	--	11.8	11.7	--	100	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	<.001	1150	1150	<.020	<.020	<.200	<.200
NOV									
05...	<.020	<.000	<.000	1260	1280	1.80	1.80	<1.00	<1.00
DEC									
16...	<.020	<.000	<.000	1250	1300	1.80	1.70	<1.00	<1.00
23...	<.020	--	--	--	--	--	--	--	--
APR									
15...	--	--	--	1300	1200	--	--	--	--
MAY									
18...	--	--	--	900	1000	--	--	--	--
JUN									
16...	--	--	--	1100	1200	--	--	--	--
JUL									
15...	--	--	--	900	900	--	--	--	--
AUG									
16...	<.020	--	--	800	800	--	--	--	--
SEP									
15...	--	--	--	1300	1400	--	--	--	--
15...	--	<.010	<.010	1160	1190	<.300	<.300	2.00	3.00
30...	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, fltrd, ug/L (01010)	Beryll- ium, water, unfltrd recover -able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	19.0	19.0	1.20	1.30	<.010	<.010	.100	.370	.140
NOV									
05...	22.1	21.7	1.40	1.30	<.200	<.200	.090	.170	.160
DEC									
16...	21.8	21.6	1.40	1.40	<.200	<.200	.100	.400	.280
23...	--	--	--	--	--	--	.130	--	--
APR									
15...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
JUN									
16...	--	--	--	--	--	--	--	--	--
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.060	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	20.8	20.4	1.70	1.80	<.200	<.200	--	.150	.160
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom- ium, water, fltrd, ug/L (01030)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
OCT										
06...	3.50	3.40	.078	.084	<1.00	<1.00	45.5	44.5	5.10	5.00
NOV										
05...	4.30	4.31	.100	.100	<1.00	<1.00	49.6	48.1	6.60	7.00
DEC										
16...	4.02	4.06	.090	.100	<1.00	<1.00	43.7	43.5	11.5	11.7
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	.120	.120	<1.00	<1.00	52.1	51.5	8.00	7.90
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT										
06...	.300	.310	.170	.160	.090	.082	.350	.360	.039	.030
NOV										
05...	.350	.360	.230	.230	.110	.100	.530	.540	<.050	.050
DEC										
16...	.340	.340	.220	.220	.100	.100	.450	.430	.050	<.050
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	<.050	<.050
30...	--	--	--	--	--	--	--	--	--	--

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT										
06...	<.020	<.020	.062	.057	2700	3250	1.60	1.60	.890	.910
NOV										
05...	<.050	<.050	.068	.071	3340	3760	2.09	2.06	1.30	1.40
DEC										
16...	<.050	<.050	.069	.068	1280	2110	1.91	1.93	1.40	1.40
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	2970	3390	--	--	--	--
MAY										
18...	--	--	--	--	2450	3300	--	--	--	--
JUN										
16...	--	--	--	--	3090	3630	--	--	--	--
JUL										
15...	--	--	--	--	2530	3290	--	--	--	--
AUG										
16...	--	--	--	--	2100	3330	--	--	--	--
SEP										
15...	--	--	--	--	2220	2970	--	--	--	--
15...	<.050	<.050	--	--	2020	2700	--	--	1.20	1.30
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover -able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
OCT										
06...	20.0	20.0	1660	1650	.031	.038	1.70	1.70	54.0	53.0
NOV										
05...	18.9	18.3	1630	1600	<2.00	<2.00	2.15	2.22	55.0	55.0
DEC										
16...	17.0	17.4	1280	1290	<2.00	<2.00	2.03	2.01	49.4	49.9
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	1690	1610	--	--	--	--	60.0	60.0
MAY										
18...	--	--	1630	1670	--	--	--	--	55.0	55.0
JUN										
16...	--	--	1960	1920	--	--	--	--	65.0	60.0
JUL										
15...	--	--	1490	1440	--	--	--	--	65.0	65.0
AUG										
16...	--	--	1050	1000	--	--	--	--	45.0	45.0
SEP										
15...	--	--	1430	1450	--	--	--	--	65.0	65.0
15...	14.9	14.9	1600	1600	<2.00	<2.00	--	--	62.2	61.1
30...	--	--	--	--	--	--	--	--	--	--

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT										
06...	.420	.420	<.020	<.020	1.60	1.50	.370	.360	<.200	<.200
NOV										
05...	.560	.540	<.300	<.300	2.01	2.00	.440	.440	<1.00	<1.00
DEC										
16...	.500	.500	<.300	<.300	1.80	1.83	.430	.420	<1.00	<1.00
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	1.91	1.93	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	<.010	<.010	126	124	.051	.054	<.050	<.050	<.020	<.020
NOV										
05...	<3.00	<3.00	126	128	.069	.064	<.100	<.100	<.200	<.200
DEC										
16...	<3.00	<3.00	105	105	.058	.066	<.100	<.100	<.200	<.200
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	114	114	--	--	<.100	<.100	<.200	<.200
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.024	.026	<.020	<.020	<.100	<.100	.140	.140	1.40	1.40
NOV										
05...	.030	.030	<.500	<.500	<.500	<.500	.170	.180	1.78	1.82
DEC										
16...	.020	.030	<.500	<.500	<.500	<.500	.180	.180	1.68	1.68
23...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	1.56	2.12	<.500	<.500	<.500	<.500	8.91	10.9	106	108
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404512076025501 -- Bell Water Level Tunnel--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	178	178	.140	.140
NOV				
05...	171	168	.190	.190
DEC				
16...	169	170	.200	.210
23...	--	--	--	--
APR				
15...	170	160	--	--
MAY				
18...	170	180	--	--
JUN				
16...	215	210	--	--
JUL				
15...	195	225	--	--
AUG				
16...	155	155	--	--
SEP				
15...	195	195	--	--
15...	208	204	.220	.210
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1145	1028	1028	2.0	534	25	9.9	88	3.9	4.1
NOV										
05...	0930	1028	1028	3.4	500	3.0	7.3	64	4.2	4.5
DEC										
16...	1015	1028	--	--	--	--	--	--	--	--
16...	1030	1028	1028	4.0	360	6.0	7.4	64	4.4	4.3
APR										
15...	1015	1028	89203	2.7	345	10	10.3	90	5.8	5.8
MAY										
18...	0945	1028	89203	3.2	353	6.0	10.1	91	5.7	5.6
JUN										
16...	0945	1028	89203	3.1	350	1.0	9.9	92	5.5	5.4
JUL										
15...	1000	1028	89203	3.3	311	5.7	9.4	85	5.2	5.2
AUG										
16...	0945	1028	89203	3.3	369	5.4	9.8	88	5.2	5.1
SEP										
15...	1045	1028	--	2.4	355	--	10.2	94	6.0	5.6
15...	1330	1028	89203	2.4	256	--	9.7	90	5.8	5.6
30...	1615	1028	--	--	437	5.0	9.5	86	5.0	--

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
OCT										
06...	324	10.3	17.9	18.0	13.7	14.3	.990	1.05	2.35	2.40
NOV										
05...	290	9.60	17.3	17.3	12.8	12.9	.476	.491	2.48	2.48
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	250	9.40	13.9	14.1	10.7	10.7	.475	.480	2.19	2.19
APR										
15...	267	9.48	24.8	24.5	13.5	12.8	1.30	1.40	2.80	2.80
MAY										
18...	243	10.7	22.2	23.2	13.1	13.5	1.00	1.00	2.50	2.60
JUN										
16...	257	11.6	22.1	23.5	14.4	14.6	1.10	1.10	3.00	2.70
JUL										
15...	238	10.9	21.7	23.1	13.9	14.7	1.00	1.00	2.90	2.60
AUG										
16...	195	10.3	16.9	16.2	11.4	11.1	1.00	.900	2.30	2.30
SEP										
15...	272	11.0	--	--	--	--	--	--	--	--
15...	277	12.3	24.5	25.0	14.7	15.0	1.00	1.10	2.30	2.40
30...	273	11.0	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	.000	--	3.50	<.010	11.1	11.1	128	200	.010	<.030
NOV										
05...	.000	--	3.86	<.010	11.4	11.4	108	107	.020	<.030
DEC										
16...	--	--	3.20	<.010	--	--	96.7	--	.030	<.030
16...	.000	--	3.20	<.010	10.6	10.7	90.0	90.0	.030	<.030
APR										
15...	7.00	.000	3.40	--	--	--	116	--	.020	--
MAY										
18...	5.10	7.80	3.51	--	--	--	107	--	.020	--
JUN										
16...	4.20	10.6	3.68	--	--	--	116	--	.010	--
JUL										
15...	2.70	--	3.45	--	--	--	106	--	.010	--
AUG										
16...	2.90	--	3.48	<.010	--	--	82.7	--	.020	<.030
SEP										
15...	5.50	--	--	--	--	--	--	--	--	--
15...	5.50	--	3.46	--	--	--	115	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	<.001	1200	1200	<.020	<.020	<.200	<.200
NOV									
05...	<.020	<.000	<.000	1210	1220	1.90	1.90	<1.00	<1.00
DEC									
16...	<.020	--	--	--	--	--	--	--	--
16...	<.020	<.000	<.000	1250	1300	1.70	1.70	<1.00	<1.00
APR									
15...	--	--	--	200	800	--	--	--	--
MAY									
18...	--	--	--	400	600	--	--	--	--
JUN									
16...	--	--	--	600	800	--	--	--	--
JUL									
15...	--	--	--	600	700	--	--	--	--
AUG									
16...	<.020	--	--	700	700	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	200	1000	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, fltrd, ug/L (01010)	Beryll- ium, water, unfltrd recover -able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	20.0	20.0	1.30	1.20	<.010	<.010	.090	.180	.170
NOV									
05...	21.6	21.6	1.30	1.40	<.200	<.200	.090	.160	.140
DEC									
16...	--	--	--	--	--	--	.120	--	--
16...	21.6	22.1	1.30	1.30	<.200	<.200	.120	.250	.190
APR									
15...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
JUN									
16...	--	--	--	--	--	--	--	--	--
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.090	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom- ium, water, fltrd, ug/L (01030)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
OCT										
06...	3.60	3.60	.078	.080	<1.00	<1.00	43.5	45.0	5.20	5.40
NOV										
05...	4.28	4.34	.100	.100	<1.00	<1.00	48.0	47.4	6.60	6.90
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	4.00	4.02	.080	.090	<1.00	<1.00	41.5	41.0	11.2	11.4
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT										
06...	.310	.320	.170	.180	.096	.094	.390	.390	.041	.038
NOV										
05...	.360	.340	.210	.230	.110	.110	.510	.490	<.050	<.050
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	.330	.320	.190	.200	.099	.100	.460	.440	<.050	<.050
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT										
06...	<.020	<.020	.064	.066	2500	3300	1.70	1.70	.980	1.00
NOV										
05...	<.050	<.050	.071	.076	2880	3170	2.04	2.07	1.20	1.30
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	<.050	<.050	.068	.070	1090	1640	1.91	1.92	1.40	1.40
APR										
15...	--	--	--	--	1450	1840	--	--	--	--
MAY										
18...	--	--	--	--	1050	1530	--	--	--	--
JUN										
16...	--	--	--	--	1710	2280	--	--	--	--
JUL										
15...	--	--	--	--	1430	2170	--	--	--	--
AUG										
16...	--	--	--	--	1590	2100	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	1050	1720	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover-able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
OCT										
06...	20.0	19.5	1640	1640	.038	.038	1.90	1.80	51.5	52.0
NOV										
05...	18.6	18.5	1600	1600	<2.00	<2.00	2.06	2.18	54.5	55.4
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	17.1	17.6	1280	1300	<2.00	<2.00	1.95	1.98	47.7	47.3
APR										
15...	--	--	1730	1640	--	--	--	--	50.0	75.0
MAY										
18...	--	--	1550	1590	--	--	--	--	55.0	55.0
JUN										
16...	--	--	1780	1800	--	--	--	--	60.0	60.0
JUL										
15...	--	--	1390	1350	--	--	--	--	60.0	65.0
AUG										
16...	--	--	1030	1000	--	--	--	--	45.0	45.0
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	1230	1240	--	--	--	--	60.0	60.0
30...	--	--	--	--	--	--	--	--	--	--

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT										
06...	.450	.460	<.020	<.020	1.60	1.60	.370	.400	<.200	<.200
NOV										
05...	.540	.540	<.300	<.300	2.02	2.06	.430	.430	<1.00	<1.00
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	.500	.500	<.300	<.300	1.82	1.80	.420	.420	<1.00	<1.00
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	.015	<.010	122	128	.053	.056	<.050	<.050	<.020	<.020
NOV										
05...	<3.00	<3.00	128	126	.064	.067	<.100	<.100	<.200	<.200
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	<3.00	<3.00	104	105	.060	.062	<.100	<.100	<.200	<.200
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.026	.025	<.020	<.020	<.100	<.100	.150	.150	1.40	1.50
NOV										
05...	.030	.030	<.500	<.500	<.500	<.500	.190	.180	1.78	1.80
DEC										
16...	--	--	--	--	--	--	--	--	--	--
16...	.030	.030	<.500	<.500	<.500	<.500	.170	.170	1.65	1.68
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742498 -- Bell Water Level Tunnel, 225 M DS, nr Middleport--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	172	178	.150	.150
NOV				
05...	162	165	.190	.200
DEC				
16...	--	--	--	--
16...	164	164	.200	.200
APR				
15...	160	155	--	--
MAY				
18...	160	165	--	--
JUN				
16...	190	190	--	--
JUL				
15...	180	195	--	--
AUG				
16...	150	155	--	--
SEP				
15...	--	--	--	--
15...	185	190	--	--
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025811 -- Bell Wetland Cell A Outflow Pipe

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
JUL										
15...	1015	1028	89203	.67	372	1.1	8.0	71	6.1	6.2
AUG										
16...	1000	1028	89203	.27	351	.7	7.5	67	6.3	6.6
APR										
15...	1045	1028	89203	.67	387	2.7	9.0	79	5.9	5.9
MAY										
18...	1000	1028	89203	.67	365	2.0	8.3	74	5.9	5.9
JUN										
16...	1000	1028	89203	.33	345	2.0	9.2	84	6.3	6.4
SEP										
15...	1130	1028	--	.67	406	--	9.4	85	5.6	6.0
15...	1415	1028	89203	.67	396	--	8.9	80	6.0	6.0
15...	1416	1028	1028	.67	400	--	8.9	80	6.0	6.0

Date	Specif. conduct-tance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
JUL										
15...	255	9.93	31.8	33.4	14.5	15.1	1.00	.900	2.70	2.60
AUG										
16...	245	10.1	35.3	36.2	12.2	12.2	1.00	1.00	2.30	2.30
APR										
15...	271	9.12	27.0	25.8	13.4	12.7	1.00	1.00	2.60	2.50
MAY										
18...	256	10.4	26.2	26.8	13.5	13.4	.900	.900	2.50	2.50
JUN										
16...	290	10.5	32.9	35.6	15.0	14.8	1.00	1.00	2.60	2.60
SEP										
15...	296	10.2	--	--	--	--	--	--	--	--
15...	304	10.4	31.1	31.2	15.1	15.4	1.00	1.00	2.50	2.40
15...	300	10.4	27.1	28.2	13.4	13.8	.960	.970	2.74	2.70

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
JUL										
15...	20.4	--	3.43	--	--	--	107	--	.050	--
AUG										
16...	38.8	--	3.24	<.010	--	--	85.4	--	.020	<.030
APR										
15...	10.9	<8.60	3.36	--	--	--	116	--	.040	--
MAY										
18...	12.2	<2.00	4.61	--	--	--	108	--	.020	--
JUN										
16...	27.6	<19.6	3.70	--	--	--	115	--	.050	--
SEP										
15...	18.6	--	--	--	--	--	--	--	--	--
15...	18.6	--	2.93	--	--	--	117	--	--	--
15...	19.0	--	--	--	11.1	11.6	--	101	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025811 -- Bell Wetland Cell A Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
JUL									
15...	--	--	--	200	300	--	--	--	--
AUG									
16...	<.020	--	--	<100	200	--	--	--	--
APR									
15...	--	--	--	300	600	--	--	--	--
MAY									
18...	--	--	--	300	500	--	--	--	--
JUN									
16...	--	--	--	<100	300	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	200	800	--	--	--	--
15...	--	<.010	<.010	39.9	660	2.30	5.50	2.00	3.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.080	--	--
APR									
15...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
JUN									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	20.4	20.8	.800	.900	<.200	<.200	--	.130	.130

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	114	124	.090	.100	<1.00	<1.00	33.6	35.6	3.30	4.10

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025811 -- Bell Wetland Cell A Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	9.40	10.9	4.88	6.89	2.46	3.10	14.0	14.2	<.050	<.050

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
JUL										
15...	--	--	--	--	490	640	--	--	--	--
AUG										
16...	--	--	--	--	160	190	--	--	--	--
APR										
15...	--	--	--	--	1150	1360	--	--	--	--
MAY										
18...	--	--	--	--	960	1240	--	--	--	--
JUN										
16...	--	--	--	--	460	600	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	620	1070	--	--	--	--
15...	<.050	<.050	1.76	2.00	474	878	65.3	68.5	.100	.400

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
JUL										
15...	--	--	1100	1040	--	--	--	--	55.0	55.0
AUG										
16...	--	--	530	520	--	--	--	--	35.0	35.0
APR										
15...	--	--	1700	1640	--	--	--	--	60.0	50.0
MAY										
18...	--	--	1560	1560	--	--	--	--	55.0	55.0
JUN										
16...	--	--	1330	1460	--	--	--	--	55.0	50.0
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	1040	1050	--	--	--	--	55.0	55.0
15...	15.3	17.1	1090	1120	<2.00	<2.00	54.6	57.3	51.3	52.0

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025811 -- Bell Wetland Cell A Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
JUL 15...	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	14.3	16.8	<.300	<.300	1.94	1.92	12.7	12.8	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover-able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
JUL 15...	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	120	124	1.62	2.04	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
JUL 15...	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	.650	.970	<.500	<.500	<.500	<.500	4.18	5.34	51.7	59.4

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025811 -- Bell Wetland Cell A Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
JUL				
15...	155	170	--	--
AUG				
16...	95.0	95.0	--	--
APR				
15...	145	150	--	--
MAY				
18...	160	165	--	--
JUN				
16...	155	155	--	--
SEP				
15...	--	--	--	--
15...	190	185	--	--
15...	182	188	<.100	.150

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025811 -- Bell Wetland Cell B Outflow Pipe

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
MAY										
18...	1015	1028	89203	.33	375	1.0	7.8	70	5.8	5.7
JUL										
15...	1030	1028	89203	.13	257	.0	6.8	62	6.3	6.3
AUG										
16...	1030	1028	89203	.13	259	.6	5.6	50	6.0	6.6
APR										
15...	1100	1028	89203	.22	365	8.5	6.4	55	6.4	6.4
JUN										
16...	1015	1028	89203	.19	346	1.0	6.9	62	6.4	6.4
SEP										
15...	1115	1028	--	.13	217	--	7.0	64	6.3	6.2
15...	1345	1028	89203	.15	198	--	6.2	56	6.3	6.2
15...	1346	1028	1028	.15	200	--	6.2	56	6.3	6.2

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	Potas-sium, water, fltrd, mg/L (00935)	Potas-sium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
MAY										
18...	251	10.4	24.6	24.7	13.5	13.5	1.30	1.30	2.70	2.60
JUL										
15...	271	10.5	35.6	37.5	15.2	15.7	1.70	1.60	2.90	2.80
AUG										
16...	243	10.2	28.6	29.6	13.2	13.1	1.50	1.50	2.20	2.40
APR										
15...	310	9.01	39.8	41.1	15.0	15.3	3.70	3.70	3.20	3.10
JUN										
16...	290	10.8	32.9	34.9	15.4	15.1	1.70	1.60	2.60	2.70
SEP										
15...	305	10.3	--	--	--	--	--	--	--	--
15...	311	10.3	32.5	32.6	16.3	16.5	1.50	1.50	2.40	2.40
15...	310	10.3	30.9	31.6	15.2	15.8	1.55	1.51	2.87	2.88

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
MAY										
18...	9.50	3.60	3.48	--	--	--	106	--	.030	--
JUL										
15...	33.8	--	3.56	--	--	--	105	--	.040	--
AUG										
16...	28.4	--	4.90	<.010	--	--	85.6	--	.050	.030
APR										
15...	29.4	<25.2	3.89	--	--	--	119	--	.060	--
JUN										
16...	26.0	<17.9	3.81	--	--	--	115	--	.050	--
SEP										
15...	28.8	--	--	--	--	--	--	--	--	--
15...	28.8	--	4.79	--	--	--	114	--	--	--
15...	29.0	--	--	--	12.0	12.2	--	103	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025811 -- Bell Wetland Cell B Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
MAY									
18...	--	--	--	400	500	--	--	--	--
JUL									
15...	--	--	--	<100	<100	--	--	--	--
AUG									
16...	<.020	--	--	<100	<100	--	--	--	--
APR									
15...	--	--	--	100	400	--	--	--	--
JUN									
16...	--	--	--	<100	<100	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	<100	<100	--	--	--	--
15...	--	<.010	<.010	22.9	35.0	62.7	58.0	<1.00	1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
MAY									
18...	--	--	--	--	--	--	--	--	--
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.080	--	--
APR									
15...	--	--	--	--	--	--	--	--	--
JUN									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	18.6	18.7	.400	.400	<.200	<.200	--	.070	.100

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	50.2	51.8	.080	.070	<1.00	<1.00	29.4	31.4	.960	1.60

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025811 -- Bell Wetland Cell B Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	3.72	3.17	1.98	2.46	.970	1.07	4.64	5.90	<.050	<.050

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
MAY										
18...	--	--	--	--	280	400	--	--	--	--
JUL										
15...	--	--	--	--	390	390	--	--	--	--
AUG										
16...	--	--	--	--	210	210	--	--	--	--
APR										
15...	--	--	--	--	280	430	--	--	--	--
JUN										
16...	--	--	--	--	310	290	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	90.0	110	--	--	--	--
15...	<.050	<.050	.560	.640	51.0	53.0	30.5	33.6	<.050	<.050

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
MAY										
18...	--	--	1600	1610	--	--	--	--	55.0	55.0
JUL										
15...	--	--	1100	1050	--	--	--	--	50.0	50.0
AUG										
16...	--	--	850	830	--	--	--	--	40.0	40.0
APR										
15...	--	--	1690	1730	--	--	--	--	50.0	45.0
JUN										
16...	--	--	1570	1700	--	--	--	--	55.0	55.0
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	920	930	--	--	--	--	45.0	45.0
15...	14.7	14.0	984	998	<2.00	<2.00	20.3	21.4	45.5	46.3

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025811 -- Bell Wetland Cell B Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	5.70	5.92	<.300	<.300	2.24	2.30	4.72	3.98	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover-able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	130	132	.600	.780	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	.270	.340	<.500	<.500	<.500	<.500	1.42	2.17	23.0	24.2

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025811 -- Bell Wetland Cell B Outflow Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
MAY				
18...	160	160	--	--
JUL				
15...	120	140	--	--
AUG				
16...	140	120	--	--
APR				
15...	110	115	--	--
JUN				
16...	150	150	--	--
SEP				
15...	--	--	--	--
15...	135	135	--	--
15...	134	137	<.100	<.100

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025812 -- Bell Wetland Cell A Spillway

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
APR										
15...	1115	1028	89203	.91	586	7.3	9.7	88	4.2	4.2
MAY										
18...	1030	1028	89203	--	572	8.0	8.2	73	4.0	4.2
JUN										
16...	1030	1028	89203	.33	457	5.0	8.4	77	4.3	4.2
JUL										
15...	1045	1028	89203	1.1	547	3.1	8.7	79	4.0	4.0
AUG										
16...	1015	1028	89203	1.9	484	4.2	7.9	71	4.3	4.2
SEP										
15...	1115	1028	--	.01	--	--	--	--	--	--
15...	1430	1028	1028	.00	488	--	9.4	99	4.2	--

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
APR										
15...	269	10.5	20.3	19.1	14.5	13.6	1.30	1.30	3.20	2.90
MAY										
18...	256	10.6	17.4	17.5	13.0	13.2	.900	.900	2.60	2.70
JUN										
16...	275	10.9	18.2	18.5	14.4	14.4	1.00	1.00	2.70	2.60
JUL										
15...	266	10.9	17.3	19.1	13.6	14.8	.900	.900	2.60	2.70
AUG										
16...	202	10.6	13.7	13.5	10.8	10.7	.900	.900	2.30	2.10
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	295	18.4	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Bromine water unfltrd mg/L (71871)
APR										
15...	.000	3.41	--	114	.030	--	--	1300	1300	--
MAY										
18...	.000	3.31	--	107	.030	--	--	900	900	--
JUN										
16...	.000	3.63	--	116	.030	--	--	1100	1100	--
JUL										
15...	.000	3.42	--	106	.020	--	--	900	900	--
AUG										
16...	.000	3.41	<.010	82.1	.020	<.030	<.020	800	800	.080
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	.000	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025812 -- Bell Wetland Cell A Spillway--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
APR								
15...	3140	3410	1950	1830	60.0	55.0	185	175
MAY								
18...	2190	2940	1660	1670	55.0	60.0	175	175
JUN								
16...	2720	3430	1960	1920	60.0	65.0	205	205
JUL								
15...	2370	3030	1450	1450	65.0	70.0	200	225
AUG								
16...	2010	2590	1050	1020	50.0	50.0	155	150
SEP								
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025812 -- Bell Wetland Cell B Spillway

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
APR										
15...	1130	1028	89203	.91	567	8.4	9.8	88	4.4	4.4
MAY										
18...	1045	1028	89203	--	589	8.0	8.5	78	3.9	4.2
JUN										
16...	1045	1028	89203	.19	462	5.0	8.6	79	4.4	4.2
JUL										
15...	1100	1028	89203	1.1	514	3.2	8.2	75	4.0	4.0
AUG										
16...	1045	1028	89203	1.0	480	4.3	8.0	71	4.4	4.3
SEP										
15...	1400	1028	1028	.42	523	--	9.0	84	4.0	3.9
15...	1100	1028	--	.54	418	--	8.6	78	4.1	3.9
15...	1401	1028	1028	<.76	520	--	9.0	84	4.0	3.9

Date	Specif. conduct-tance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
APR										
15...	263	10.5	18.5	21.2	12.7	14.5	.900	1.20	2.50	2.90
MAY										
18...	262	10.6	17.8	17.6	13.3	13.4	.900	.900	2.70	2.60
JUN										
16...	274	11.3	19.0	19.1	14.4	14.4	1.00	1.00	2.60	2.60
JUL										
15...	255	11.2	17.7	18.6	13.7	14.1	.900	.900	2.70	2.50
AUG										
16...	206	10.4	14.2	13.9	11.0	10.9	.900	.900	2.30	2.30
SEP										
15...	298	12.3	18.5	18.3	14.1	14.1	1.00	1.00	2.30	2.40
15...	289	10.8	--	--	--	--	--	--	--	--
15...	300	12.3	16.4	16.2	12.8	13.0	1.02	.960	2.37	2.54

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
APR										
15...	.000	18.4	3.29	--	--	--	115	--	.010	--
MAY										
18...	.000	14.6	3.32	--	--	--	109	--	.010	--
JUN										
16...	.000	18.3	3.69	--	--	--	117	--	.010	--
JUL										
15...	.000	--	3.44	--	--	--	106	--	.030	--
AUG										
16...	.000	--	3.39	<.010	--	--	82.5	--	.020	.030
SEP										
15...	.000	--	3.02	--	--	--	115	--	--	--
15...	.000	--	--	--	--	--	--	--	--	--
15...	.000	--	--	--	11.7	11.7	--	101	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025812 -- Bell Wetland Cell B Spillway--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
APR									
15...	--	--	--	1100	1400	--	--	--	--
MAY									
18...	--	--	--	900	1000	--	--	--	--
JUN									
16...	--	--	--	1100	1100	--	--	--	--
JUL									
15...	--	--	--	900	800	--	--	--	--
AUG									
16...	<.020	--	--	800	800	--	--	--	--
SEP									
15...	--	--	--	1300	1300	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	<.010	<.010	1120	1160	10.8	8.60	2.00	2.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
APR									
15...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
JUN									
16...	--	--	--	--	--	--	--	--	--
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.100	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	20.1	19.9	1.80	1.80	<.200	<.200	--	.150	.160

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	242	240	.120	.110	<1.00	<1.00	52.9	51.1	7.60	7.60

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025812 -- Bell Wetland Cell B Spillway--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	21.9	21.2	11.6	12.3	6.08	6.35	27.9	28.3	<.050	<.050

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
APR										
15...	--	--	--	--	2540	3430	--	--	--	--
MAY										
18...	--	--	--	--	2260	3000	--	--	--	--
JUN										
16...	--	--	--	--	2700	3200	--	--	--	--
JUL										
15...	--	--	--	--	2230	2770	--	--	--	--
AUG										
16...	--	--	--	--	2030	2580	--	--	--	--
SEP										
15...	--	--	--	--	2020	2530	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	4.08	4.03	1700	2400	118	115	1.10	1.20

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
APR										
15...	--	--	1680	1930	--	--	--	--	60.0	65.0
MAY										
18...	--	--	1680	1680	--	--	--	--	60.0	60.0
JUN										
16...	--	--	1930	1970	--	--	--	--	65.0	60.0
JUL										
15...	--	--	1440	1400	--	--	--	--	65.0	65.0
AUG										
16...	--	--	1050	1030	--	--	--	--	50.0	50.0
SEP										
15...	--	--	1420	1430	--	--	--	--	65.0	60.0
15...	--	--	--	--	--	--	--	--	--	--
15...	18.4	18.1	1580	1580	<2.00	<2.00	120	117	58.0	59.4

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025812 -- Bell Wetland Cell B Spillway--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	31.7	31.9	<.300	<.300	1.94	1.91	26.2	25.9	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover-able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	115	117	4.08	3.85	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	2.02	2.01	<.500	<.500	<.500	<.500	10.5	11.1	105	105

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025812 -- Bell Wetland Cell B Spillway--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
APR				
15...	160	165	--	--
MAY				
18...	180	180	--	--
JUN				
16...	205	205	--	--
JUL				
15...	195	210	--	--
AUG				
16...	160	155	--	--
SEP				
15...	195	195	--	--
15...	--	--	--	--
15...	196	198	.200	.210

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025813 -- Bell Cell B Flush Pipe

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
MAY 18...	1327	1028	89203	--	--	--	--	--	--	5.2

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
MAY 18...	271	10.2	36.5	48.5	14.1	20.1	2.70	3.30	2.90	3.10

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Bromine water unfltrd mg/L (71871)
MAY 18...	2.10	4.35	--	118	.020	--	--	<100	22400	--

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
MAY 18...	490	93300	1540	1700	45.0	80.0	115	350

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025818 -- Bell Cell A Vertical Pipe

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
AUG										
16...	1130	1028	89203	.00	386	22	8.3	79	5.7	6.4
SEP										
15...	1730	1028	89203	--	325	--	7.9	78	5.9	6.2
15...	1731	1028	1028	--	330	--	7.9	78	5.9	6.2

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
AUG										
16...	226	13.2	28.9	--	11.6	--	1.00	--	2.60	--
SEP										
15...	285	14.3	--	--	--	--	--	--	--	--
15...	290	14.3	22.1	23.1	13.8	14.6	.920	1.00	2.71	2.94

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
AUG										
16...	25.8	--	--	--	--	--	--	--	--	--
SEP										
15...	7.00	--	2.87	--	--	--	116	--	--	--
15...	7.00	--	--	--	11.4	12.3	--	104	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
AUG									
16...	--	--	--	<100	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	<.010	<.010	218	778	47.7	54.2	<1.00	2.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
AUG									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	20.8	21.8	1.10	1.40	<.200	<.200	--	.140	.160

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025818 -- Bell Cell A Vertical Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	209	215	.110	.120	<1.00	<1.00	39.1	40.9	5.60	6.20

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro-pium, water, fltrd, ug/L (50574)	Europ-ium, water, unfltrd ug/L (01236)	Gado-linium, water, fltrd, ug/L (50575)	Gado-linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	14.4	17.0	10.6	10.4	3.69	4.16	20.1	20.6	<.050	<.050

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
AUG										
16...	--	--	--	--	540	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	3.12	3.58	903	1490	110	111	.400	.830

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover -able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
AUG										
16...	--	--	730	--	--	--	--	--	40.0	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	14.8	15.4	1400	1480	<2.00	<2.00	94.7	93.0	57.3	61.8

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	23.9	25.4	<.300	<.300	1.96	2.08	25.8	27.6	1.50	9.30

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025818 -- Bell Cell A Vertical Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	114	122	3.61	2.92	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	1.23	1.77	<.500	<.500	<.500	<.500	7.95	8.75	90.4	98.3

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
AUG				
16...	130	--	--	--
SEP				
15...	--	--	--	--
15...	202	211	.140	.180

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025836 -- Bell Cell A Vertical Pipe

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
SEP										
15...	1745	1028	89203	--	409	--	8.3	81	5.0	5.0
15...	1746	1028	1028	--	410	--	8.3	81	5.0	5.0

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
SEP										
15...	280	14.1	--	--	--	--	--	--	--	--
15...	280	14.1	19.6	20.2	13.7	13.8	.970	1.04	2.87	3.00

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
SEP										
15...	1.00	--	2.90	--	--	--	117	--	--	--
15...	1.00	--	--	--	11.6	12.2	--	100	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	<.010	<.010	802	918	44.3	46.9	<1.00	<1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	20.6	21.2	1.40	1.40	<.200	<.200	--	.160	.150

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	241	256	.100	.120	<1.00	<1.00	43.8	44.5	6.30	6.90

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025836 -- Bell Cell A Vertical Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dysprosium, water, fltrd, ug/L (82331)	Dysprosium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Europium, water, fltrd, ug/L (50574)	Europium, water, unfltrd ug/L (01236)	Gadolinium, water, fltrd, ug/L (50575)	Gadolinium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	19.4	19.4	12.2	13.4	4.80	5.89	22.0	22.9	<.050	<.050

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	4.16	4.18	1160	1780	118	124	.680	.900

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover -able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	15.2	14.7	1540	1540	<2.00	<2.00	109	112	58.3	63.0

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	27.4	29.3	<.300	<.300	1.84	1.91	32.0	32.8	<1.00	<1.00

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	116	118	3.83	3.83	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	1.58	1.64	<.500	<.500	<.500	<.500	10.6	9.40	105	109

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
SEP				
15...	--	--	--	--
15...	199	208	.190	.200

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025854 -- Bell Cell A Vertical Pipe 3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
SEP										
15...	1800	1028	89203	--	400	--	8.3	81	5.1	5.0
15...	1801	1028	1028	--	400	--	8.3	81	5.1	5.0

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
SEP										
15...	290	14.5	--	--	--	--	--	--	--	--
15...	290	14.5	21.4	21.9	13.7	13.9	.995	.990	2.81	3.00

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
SEP										
15...	3.40	--	2.88	--	--	--	117	--	--	--
15...	3.40	--	--	--	11.9	12.2	--	102	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	<.010	<.010	642	862	49.5	45.7	<1.00	<1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	21.0	21.1	1.40	1.60	<.200	<.200	--	.150	.150

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	237	240	.110	.120	<1.00	<1.00	42.3	42.3	6.50	6.90

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025854 -- Bell Cell A Vertical Pipe 3--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	17.7	18.2	13.5	12.5	5.26	4.85	22.9	23.7	.050	<.050

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	4.64	4.15	1120	1750	117	120	.600	.850

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	14.7	16.1	1520	1500	<2.00	<2.00	109	109	58.7	60.7

Date	Praseo- dymium, water, fltrd, ug/L (50582)	Praseo- dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid- ium, water, fltrd, ug/L (01135)	Rubid- ium, water, unfltrd ug/L (01137)	Samar- ium, water, fltrd, ug/L (82323)	Samar- ium, water, unfltrd ug/L (82322)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	28.7	28.2	<.300	<.300	1.97	1.91	32.8	30.5	<1.00	1.20

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Stront- ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall- ium, water, fltrd, ug/L (01057)	Thall- ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	118	118	3.70	3.47	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung- sten, water, fltrd, ug/L (01155)	Tung- sten, water, unfltrd ug/L (01154)	Vanad- ium, water, fltrd, ug/L (01085)	Vanad- ium, water, unfltrd ug/L (01087)	Ytterb- ium, water, fltrd, ug/L (01194)	Ytterb- ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	1.75	1.35	<.500	<.500	<.500	<.500	7.76	9.07	104	104

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
SEP				
15...	--	--	--	--
15...	202	204	.170	.180

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025872 -- Bell Cell A Vertical Pipe 4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
AUG										
16...	1145	1028	89203	.00	422	88	8.7	84	5.1	5.0
SEP										
15...	1815	1028	89203	--	451	--	8.2	80	4.6	4.5
15...	1816	1028	1028	--	450	--	8.2	80	4.6	4.5

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
AUG										
16...	201	14.0	14.7	--	10.7	--	.900	--	2.30	--
SEP										
15...	284	14.2	--	--	--	--	--	--	--	--
15...	280	14.2	19.1	19.9	13.4	13.7	.975	1.03	2.90	2.84

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
AUG										
16...	2.70	--	--	--	--	--	--	--	--	--
SEP										
15...	.000	--	2.90	--	--	--	116	--	--	--
15...	.000	--	--	--	12.1	12.1	--	100	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
AUG									
16...	--	--	--	700	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	<.010	<.010	905	938	41.8	48.7	<1.00	<1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
AUG									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	20.6	21.0	1.70	1.60	<.200	<.200	--	.140	.140

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025872 -- Bell Cell A Vertical Pipe 4--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	255	257	.120	.110	<1.00	<1.00	42.7	44.8	7.20	7.60

Date	Dyspros-ium, water, fltrd, ug/L (82331)	Dyspros-ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro-pium, water, fltrd, ug/L (50574)	Europ-ium, water, unfltrd ug/L (01236)	Gado-linium, water, fltrd, ug/L (50575)	Gado-linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	20.0	21.0	12.7	12.9	5.59	5.53	24.0	22.2	.060	.070

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)
AUG										
16...	--	--	--	--	1730	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	4.38	4.30	1390	2010	122	122	.930	1.00

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover-able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
AUG										
16...	--	--	1000	--	--	--	--	--	45.0	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	15.2	16.9	1570	1570	<2.00	<2.00	116	116	61.5	60.9

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	30.3	29.5	<.300	<.300	1.88	1.88	32.7	31.4	1.70	<1.00

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404513076025872 -- Bell Cell A Vertical Pipe 4--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	116	117	3.96	3.68	<.100	<.100	<.200	.320

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	1.86	2.26	<.500	<.500	<.500	<.500	11.3	10.3	112	111

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
AUG				
16...	160	--	--	--
SEP				
15...	--	--	--	--
15...	208	208	.170	.200

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025818 -- Bell Cell B Vertical Pipe

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
AUG										
16...	1100	1028	89203	.00	379	38	8.8	87	5.4	5.2
SEP										
15...	1615	1028	89203	--	151	--	3.9	37	6.3	6.4
15...	1616	1028	1028	--	150	--	3.9	37	6.3	6.4

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
AUG										
16...	211	14.4	16.8	--	10.7	--	1.00	--	2.40	--
SEP										
15...	339	13.3	--	--	--	--	--	--	--	--
15...	340	13.3	34.2	34.0	15.7	15.6	1.65	1.58	2.71	2.73

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
AUG										
16...	2.60	--	--	--	--	--	--	--	--	--
SEP										
15...	41.0	--	2.98	--	--	--	113	--	--	--
15...	41.0	--	--	--	12.1	11.9	--	100	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
AUG									
16...	--	--	--	400	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	.060	.060	12.6	27.1	57.8	44.4	1.00	<1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
AUG									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	18.6	18.4	.400	.400	<.200	<.200	--	.040	.080

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025818 -- Bell Cell B Vertical Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	42.7	49.9	.100	.100	<1.00	<1.00	27.1	25.4	.890	1.70

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro-pium, water, fltrd, ug/L (50574)	Europ-ium, water, unfltrd ug/L (01236)	Gado-linium, water, fltrd, ug/L (50575)	Gado-linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	3.21	2.49	1.99	2.66	.990	1.04	4.47	4.80	<.050	<.050

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
AUG										
16...	--	--	--	--	1550	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	.740	.790	240	258	29.0	31.9	<.050	.070

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover -able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
AUG										
16...	--	--	990	--	--	--	--	--	45.0	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	15.7	15.0	1060	1060	<2.00	<2.00	21.2	22.3	42.4	42.1

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	5.57	6.51	<.300	<.300	2.53	2.48	4.29	3.87	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025818 -- Bell Cell B Vertical Pipe--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	134	133	.560	.590	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	.250	.410	<.500	<.500	<.500	<.500	2.01	2.21	23.9	24.5

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
AUG				
16...	245	--	--	--
SEP				
15...	--	--	--	--
15...	84.9	114	<.100	<.100

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025836 -- Bell Cell B Vertical Pipe 2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
SEP										
15...	1630	1028	89203	--	141	--	3.4	33	6.4	6.5
15...	1631	1028	1028	--	140	--	3.4	33	6.4	6.5

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
SEP										
15...	337	13.2	--	--	--	--	--	--	--	--
15...	340	13.2	34.2	34.7	15.7	15.9	1.60	1.58	2.91	3.06

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
SEP										
15...	40.6	--	3.07	--	--	--	114	--	--	--
15...	41.0	--	--	--	11.9	12.2	--	101	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	.050	.060	12.1	23.5	54.9	44.5	1.00	1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	18.2	18.7	.300	.400	<.200	<.200	--	.030	.070

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	38.9	48.2	.110	.090	<1.00	<1.00	26.0	27.6	.680	1.90

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025836 -- Bell Cell B Vertical Pipe 2--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	2.53	3.89	2.34	1.81	.800	1.15	4.40	5.59	<.050	<.050

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	.580	.840	222	250	26.7	30.8	<.050	.060

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	15.6	14.2	1060	1070	<2.00	<2.00	18.5	22.9	43.9	44.2

Date	Praseo- dymium, water, fltrd, ug/L (50582)	Praseo- dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid- ium, water, fltrd, ug/L (01135)	Rubid- ium, water, unfltrd ug/L (01137)	Samar- ium, water, fltrd, ug/L (82323)	Samar- ium, water, unfltrd ug/L (82322)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	5.30	6.18	<.300	<.300	2.50	2.47	3.07	3.88	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Stront- ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall- ium, water, fltrd, ug/L (01057)	Thall- ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	134	136	.520	.710	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung- sten, water, fltrd, ug/L (01155)	Tung- sten, water, unfltrd ug/L (01154)	Vanad- ium, water, fltrd, ug/L (01085)	Vanad- ium, water, unfltrd ug/L (01087)	Ytterb- ium, water, fltrd, ug/L (01194)	Ytterb- ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	.330	.270	<.500	<.500	<.500	4.75	1.94	2.08	21.2	23.9

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025836 -- Bell Cell B Vertical Pipe 2--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
SEP				
15...	--	--	--	--
15...	74.5	114	<.100	<.100

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025854 -- Bell Cell B Vertical Pipe 3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
SEP										
15...	1700	1028	89203	--	128	--	3.9	38	6.3	6.4
15...	1701	1028	1028	--	130	--	3.9	38	6.3	6.4

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
SEP										
15...	322	13.8	--	--	--	--	--	--	--	--
15...	320	13.8	31.1	30.9	15.4	15.5	1.55	1.47	2.68	2.87

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
SEP										
15...	31.0	--	2.94	--	--	--	112	--	--	--
15...	31.0	--	--	--	12.6	12.2	--	102	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	.115	.180	21.0	99.0	68.0	58.1	<1.00	<1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	20.1	19.8	.600	.700	<.200	<.200	--	<.020	.120

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	74.5	102	.100	.110	<1.00	<1.00	34.1	32.0	<.500	4.10

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025854 -- Bell Cell B Vertical Pipe 3--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	5.43	8.59	4.02	6.12	1.34	2.18	6.90	11.3	<.050	<.050

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	1.00	1.55	130	174	47.6	58.2	<.050	.100

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	18.9	14.8	1230	1200	<2.00	<2.00	33.4	44.1	51.7	50.6

Date	Praseo- dymium, water, fltrd, ug/L (50582)	Praseo- dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid- ium, water, fltrd, ug/L (01135)	Rubid- ium, water, unfltrd ug/L (01137)	Samar- ium, water, fltrd, ug/L (82323)	Samar- ium, water, unfltrd ug/L (82322)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	8.92	12.4	<.300	<.300	2.43	2.53	5.87	7.51	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Stront- ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall- ium, water, fltrd, ug/L (01057)	Thall- ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	132	132	.800	1.54	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung- sten, water, fltrd, ug/L (01155)	Tung- sten, water, unfltrd ug/L (01154)	Vanad- ium, water, fltrd, ug/L (01085)	Vanad- ium, water, unfltrd ug/L (01087)	Ytterb- ium, water, fltrd, ug/L (01194)	Ytterb- ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	.380	.780	<.500	<.500	<.500	<.500	2.50	4.48	36.9	53.0

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025854 -- Bell Cell B Vertical Pipe 3--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
SEP				
15...	--	--	--	--
15...	77.7	150	<.100	<.100

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025872 -- Bell Cell B Vertical Pipe 4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
AUG										
16...	1115	1028	89203	.00	432	82	8.4	81	4.6	4.4
SEP										
15...	1715	1028	89203	--	127	--	2.0	19	7.3	7.4
15...	1716	1028	1028	--	130	--	2.0	19	7.3	7.4

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
AUG										
16...	205	13.6	14.0	--	10.6	--	.900	--	2.30	--
SEP										
15...	455	13.0	--	--	--	--	--	--	--	--
15...	460	13.0	71.8	73.5	13.4	13.6	1.36	1.38	3.27	3.08

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
AUG										
16...	.000	--	--	--	--	--	--	--	--	--
SEP										
15...	108	--	3.07	--	--	--	122	--	--	--
15...	110	--	--	--	9.15	9.05	--	110	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
AUG									
16...	--	--	--	800	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	--	<.010	<.010	17.9	91.5	34.7	46.2	<1.00	<1.00

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
AUG									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
15...	15.9	16.6	<.050	.100	<.200	<.200	--	<.020	<.020

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025872 -- Bell Cell B Vertical Pipe 4--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	1.52	8.06	.070	.070	<1.00	<1.00	2.91	3.31	<.500	.780

Date	Dyspros-ium, water, fltrd, ug/L (82331)	Dyspros-ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro-pium, water, fltrd, ug/L (50574)	Europ-ium, water, unfltrd ug/L (01236)	Gado-linium, water, fltrd, ug/L (50575)	Gado-linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.005	1.04	.320	1.14	<.005	.450	.370	2.15	<.050	<.050

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)
AUG										
16...	--	--	--	--	1860	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<.050	<.050	.059	.170	182	364	1.08	4.70	<.050	.070

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover-able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
AUG										
16...	--	--	1000	--	--	--	--	--	45.0	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	12.1	14.1	180	196	<2.00	<2.00	.890	4.52	13.6	12.8

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	.200	1.26	<.300	<.300	2.06	2.10	.220	1.77	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

404511076025872 -- Bell Cell B Vertical Pipe 4--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	<3.00	<3.00	148	150	<.005	.270	<.100	<.100	<.200	<.200

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
AUG										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
15...	.065	.190	<.500	<.500	<.500	<.500	.630	.900	2.53	7.48

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
AUG				
16...	160	--	--	--
SEP				
15...	--	--	--	--
15...	9.70	12.2	.590	.630

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742494 -- Schuylkill R ab Bell Tunnel at Mary D, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1230	1028	1028	2.9	399	3.0	10.7	96	6.0	6.3
NOV										
05...	1030	1028	1028	4.4	420	8.0	10.4	97	5.9	6.3
DEC										
16...	1130	1028	1028	8.1	260	8.0	11.9	95	5.9	6.0
APR										
15...	1215	1028	89203	7.2	395	10	11.4	101	6.0	6.1
MAY										
18...	1130	1028	89203	3.7	384	6.0	9.8	99	6.2	6.0
JUL										
15...	1215	1028	89203	6.0	339	6.6	9.5	98	6.2	6.3
AUG										
16...	1300	1028	89203	5.7	344	5.8	10.1	104	6.1	6.2
JUN										
16...	1200	1028	89203	5.9	373	11	9.2	97	6.1	6.2
SEP										
15...	1215	1028	89203	1.4	393	--	9.1	93	6.0	6.0
30...	1645	1028	--	--	360	5.0	9.4	95	6.0	--

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
OCT										
06...	221	10.3	13.9	13.6	8.60	8.50	1.50	1.45	6.10	5.90
NOV										
05...	190	12.3	13.3	13.3	7.63	7.68	.801	.851	4.97	4.93
DEC										
16...	230	5.60	13.4	13.5	7.86	7.88	.751	.751	11.3	11.3
APR										
15...	160	9.91	12.5	11.9	7.10	6.50	1.40	1.50	7.90	7.80
MAY										
18...	208	15.6	15.4	15.1	9.00	9.00	1.50	1.50	7.30	7.30
JUL										
15...	175	16.8	12.8	13.7	7.70	8.10	1.30	1.20	6.10	5.80
AUG										
16...	159	17.0	11.7	12.4	7.50	7.40	1.40	1.30	4.80	4.60
JUN										
16...	185	17.9	13.0	13.3	8.10	8.20	1.40	1.40	6.30	6.40
SEP										
15...	247	16.3	18.1	18.6	11.3	11.4	1.90	1.90	6.80	6.60
30...	181	15.9	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	8.40	--	9.99	<.010	8.46	8.61	72.8	91.0	.400	<.030
NOV										
05...	8.60	--	7.04	<.010	8.88	8.88	65.0	65.0	.320	<.030
DEC										
16...	6.50	--	20.4	<.010	7.92	8.13	58.0	59.0	.340	<.030
APR										
15...	5.60	3.00	13.9	--	--	--	54.0	--	.410	--
MAY										
18...	7.30	2.00	12.3	--	--	--	66.5	--	.440	--
JUL										
15...	7.30	--	8.09	--	--	--	52.7	--	.340	--
AUG										
16...	7.60	--	6.65	<.010	--	--	49.8	--	.310	.030
JUN										
16...	7.50	<.800	9.26	--	--	--	58.6	--	.350	--
SEP										
15...	8.40	--	13.3	--	--	--	79.8	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742494 -- Schuylkill R ab Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	.008	59.5	915	<.020	.020	<.200	<.200
NOV									
05...	<.020	<.000	.000	50.1	725	1.20	1.30	<1.00	<1.00
DEC									
16...	<.020	<.000	.000	104	778	1.30	1.30	<1.00	<1.00
APR									
15...	--	--	--	<100	800	--	--	--	--
MAY									
18...	--	--	--	<100	700	--	--	--	--
JUL									
15...	--	--	--	<100	500	--	--	--	--
AUG									
16...	<.020	--	--	<100	500	--	--	--	--
JUN									
16...	--	--	--	<100	800	--	--	--	--
SEP									
15...	--	--	--	<100	600	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	17.5	16.5	.180	.240	<.010	<.010	.090	.240	.190
NOV									
05...	20.0	20.1	.100	.200	<.200	<.200	.070	.200	.170
DEC									
16...	22.1	22.9	.200	.200	<.200	<.200	.090	.290	.200
APR									
15...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.080	--	--
JUN									
16...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT										
06...	1.50	1.90	.067	.070	<1.00	<1.00	11.0	11.0	3.50	2.90
NOV										
05...	1.28	1.64	.070	.070	<1.00	<1.00	10.4	10.8	2.10	3.00
DEC										
16...	1.15	1.46	.060	.060	<1.00	<1.00	9.24	12.2	2.00	3.00
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742494 -- Schuylkill R ab Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT										
06...	.160	.260	.090	.130	.043	.064	.210	.310	<.020	<.020
NOV										
05...	.140	.220	.058	.100	.040	.054	.190	.290	<.050	<.050
DEC										
16...	.120	.180	.067	.098	.030	.050	.180	.260	<.050	<.050
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT										
06...	<.020	<.020	.034	.050	230	375	.750	.870	.130	.320
NOV										
05...	<.050	<.050	.030	.040	161	338	.670	.800	.100	.400
DEC										
16...	<.050	<.050	.020	.030	256	503	.580	.730	.100	.590
APR										
15...	--	--	--	--	200	620	--	--	--	--
MAY										
18...	--	--	--	--	210	430	--	--	--	--
JUL										
15...	--	--	--	--	140	410	--	--	--	--
AUG										
16...	--	--	--	--	260	480	--	--	--	--
JUN										
16...	--	--	--	--	160	480	--	--	--	--
SEP										
15...	--	--	--	--	240	350	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
OCT										
06...	14.5	14.5	930	920	.062	.051	.870	1.20	20.0	18.5
NOV										
05...	11.9	12.0	794	805	<2.00	<2.00	.730	.940	17.2	17.2
DEC										
16...	11.7	11.6	688	709	<2.00	<2.00	.610	.860	16.6	17.7
APR										
15...	--	--	680	660	--	--	--	--	10.0	15.0
MAY										
18...	--	--	910	910	--	--	--	--	20.0	20.0
JUL										
15...	--	--	600	590	--	--	--	--	20.0	20.0
AUG										
16...	--	--	560	550	--	--	--	--	20.0	20.0
JUN										
16...	--	--	830	840	--	--	--	--	20.0	20.0
SEP										
15...	--	--	940	940	--	--	--	--	25.0	25.0
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742494 -- Schuylkill R ab Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT										
06...	.210	.260	<.020	<.020	1.80	1.80	.150	.250	<.200	<.200
NOV										
05...	.170	.240	<.300	<.300	2.51	2.46	.140	.220	<1.00	<1.00
DEC										
16...	.150	.200	<.300	<.300	1.85	1.86	.110	.190	<1.00	<1.00
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover-able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	.190	.110	71.5	70.0	.029	.046	<.050	<.050	<.020	<.020
NOV										
05...	<3.00	<3.00	71.3	71.0	.020	.040	<.100	<.100	<.200	<.200
DEC										
16...	<3.00	<3.00	70.3	71.2	.020	.030	<.100	<.100	<.200	<.200
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.013	.019	<.020	<.020	<.100	<.100	.069	.100	.920	1.20
NOV										
05...	.009	.020	<.500	<.500	<.500	<.500	.060	.090	.820	1.18
DEC										
16...	.009	.010	<.500	<.500	<.500	<.500	.050	.080	.760	1.04
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742494 -- Schuylkill R ab Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	45.5	44.5	.009	.023
NOV				
05...	45.0	44.5	<.100	<.100
DEC				
16...	50.0	50.0	<.100	<.100
APR				
15...	35.0	90.0	--	--
MAY				
18...	40.0	40.0	--	--
JUL				
15...	40.0	45.0	--	--
AUG				
16...	45.0	45.0	--	--
JUN				
16...	45.0	50.0	--	--
SEP				
15...	50.0	45.0	--	--
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742500 -- Schuylkill River bl Bell Tunnel at Mary D, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1130	1028	1028	5.0	489	16	10.8	96	4.8	5.1
NOV										
05...	0915	1028	1028	7.8	470	57	9.9	90	4.9	5.1
DEC										
16...	1000	1028	1028	4.1	290	7.0	10.9	91	5.4	5.2
JUN										
16...	0930	1028	89203	9.1	340	11	9.7	98	6.0	6.0
JUL										
15...	0945	1028	89203	9.2	358	6.1	9.5	94	6.0	5.8
AUG										
16...	0930	1028	89203	9.0	365	12	10.1	97	5.7	5.3
APR										
15...	1000	1028	89203	9.9	377	14	11.7	98	6.0	6.0
MAY										
18...	0930	1028	89203	6.8	346	7.0	10.2	98	6.0	5.9
SEP										
15...	1030	1028	89203	2.8	343	--	9.7	93	6.1	5.8
30...	1600	1028	--	--	375	7.0	9.7	95	5.8	--

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
OCT										
06...	251	10.0	16.1	16.1	11.0	11.3	1.30	1.35	4.40	4.45
NOV										
05...	250	10.9	15.7	15.8	10.4	10.6	1.05	1.20	3.80	3.54
DEC										
16...	220	7.30	13.8	14.2	9.07	9.31	.651	.701	4.28	4.39
JUN										
16...	200	15.7	15.0	15.5	9.40	9.60	1.30	1.30	5.00	5.00
JUL										
15...	195	15.0	15.4	16.2	9.40	10.0	1.20	1.20	5.00	5.10
AUG										
16...	173	13.5	13.5	14.0	9.00	9.20	1.20	1.20	3.60	3.60
APR										
15...	196	7.66	15.0	14.5	8.40	8.20	1.50	1.40	6.50	6.30
MAY										
18...	211	13.4	18.6	18.1	10.8	10.7	1.30	1.30	5.20	5.40
SEP										
15...	256	13.6	21.3	21.4	13.2	13.3	1.40	1.40	4.30	4.40
30...	219	14.1	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	2.60	--	6.63	<.010	10.3	10.6	98.1	140	.210	<.030
NOV										
05...	3.30	--	9.54	<.010	10.8	11.1	85.0	90.0	.140	<.030
DEC										
16...	2.60	--	10.6	<.010	9.63	9.84	80.0	80.0	.190	<.030
JUN										
16...	6.00	1.80	7.56	--	--	--	74.3	--	.260	--
JUL										
15...	4.50	--	9.37	--	--	--	68.8	--	.260	--
AUG										
16...	3.00	--	5.93	<.010	--	--	64.7	--	.180	<.030
APR										
15...	5.60	<4.20	25.1	--	--	--	67.8	--	.360	--
MAY										
18...	5.40	<3.00	8.68	--	--	--	84.6	--	.240	--
SEP										
15...	5.50	--	7.77	--	--	--	98.2	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742500 -- Schuylkill River bl Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	<.001	555	1300	<.020	<.020	<.200	<.200
NOV									
05...	<.020	.000	.000	622	1540	1.70	1.80	<1.00	<1.00
DEC									
16...	<.020	<.000	.000	614	1060	1.30	1.50	<1.00	<1.00
JUN									
16...	--	--	--	200	800	--	--	--	--
JUL									
15...	--	--	--	200	600	--	--	--	--
AUG									
16...	<.020	--	--	300	700	--	--	--	--
APR									
15...	--	--	--	100	900	--	--	--	--
MAY									
18...	--	--	--	200	700	--	--	--	--
SEP									
15...	--	--	--	200	800	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	17.5	18.5	.660	.810	<.010	<.010	.100	.160	.170
NOV									
05...	21.6	23.2	.800	.900	<.200	<.200	.100	.180	.170
DEC									
16...	22.0	22.1	.800	.800	<.200	<.200	.090	.250	.250
JUN									
16...	--	--	--	--	--	--	--	--	--
JUL									
15...	--	--	--	--	--	--	--	--	--
AUG									
16...	--	--	--	--	--	--	.080	--	--
APR									
15...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
SEP									
15...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT										
06...	2.20	4.20	.068	.078	<1.00	<1.00	30.0	34.5	3.00	4.80
NOV										
05...	2.62	4.10	.080	.100	<1.00	<1.00	30.6	33.5	4.60	7.70
DEC										
16...	2.32	2.52	.080	.080	<1.00	<1.00	25.3	24.9	6.20	7.40
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742500 -- Schuylkill River bl Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT										
06...	.210	.430	.120	.230	.053	.140	.260	.550	<.020	.020
NOV										
05...	.230	.440	.130	.250	.066	.120	.310	.590	<.050	.080
DEC										
16...	.190	.260	.120	.130	.058	.073	.270	.310	.050	<.050
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT										
06...	<.020	<.020	.042	.084	1240	2850	1.10	1.70	.440	1.60
NOV										
05...	<.050	<.050	.040	.080	1450	3170	1.26	1.85	.670	2.80
DEC										
16...	<.050	<.050	.040	.054	628	1040	1.12	1.22	.710	.900
JUN										
16...	--	--	--	--	590	1070	--	--	--	--
JUL										
15...	--	--	--	--	550	920	--	--	--	--
AUG										
16...	--	--	--	--	770	1440	--	--	--	--
APR										
15...	--	--	--	--	540	910	--	--	--	--
MAY										
18...	--	--	--	--	640	1010	--	--	--	--
SEP										
15...	--	--	--	--	720	1200	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
OCT										
06...	18.0	18.0	1280	1380	.024	.032	1.10	2.50	39.5	38.0
NOV										
05...	16.0	16.6	1200	1300	<2.00	<2.00	1.33	2.22	36.0	38.8
DEC										
16...	14.7	15.3	1020	1030	<2.00	<2.00	1.14	1.33	31.7	33.3
JUN										
16...	--	--	970	1110	--	--	--	--	30.0	30.0
JUL										
15...	--	--	830	800	--	--	--	--	30.0	30.0
AUG										
16...	--	--	760	770	--	--	--	--	30.0	30.0
APR										
15...	--	--	910	880	--	--	--	--	50.0	25.0
MAY										
18...	--	--	1190	1200	--	--	--	--	35.0	35.0
SEP										
15...	--	--	1070	1070	--	--	--	--	40.0	40.0
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742500 -- Schuylkill River bl Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT										
06...	.280	.580	<.020	<.020	1.60	1.70	.240	.580	<.200	<.200
NOV										
05...	.330	.540	<.300	<.300	2.60	2.92	.260	.500	<1.00	<1.00
DEC										
16...	.290	.320	<.300	<.300	2.13	2.18	.250	.310	<1.00	<1.00
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover-able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	.051	.029	91.5	97.0	.038	.080	<.050	<.050	<.020	<.020
NOV										
05...	<3.00	<3.00	99.2	102	.050	.080	<.100	<.100	<.200	<.200
DEC										
16...	<3.00	<3.00	86.5	88.4	.040	.040	<.100	<.100	<.200	<.200
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.017	.035	<.020	<.020	<.100	<.100	.100	.210	1.00	1.70
NOV										
05...	.020	.030	<.500	<.500	<.500	<.500	.120	.200	1.28	2.03
DEC										
16...	.010	.020	<.500	<.500	<.500	<.500	.100	.130	1.12	1.29
JUN										
16...	--	--	--	--	--	--	--	--	--	--
JUL										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
15...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146742500 -- Schuylkill River bl Bell Tunnel at Mary D, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	100	104	.060	.140
NOV				
05...	106	116	<.100	.170
DEC				
16...	121	121	<.100	<.100
JUN				
16...	90.0	85.0	--	--
JUL				
15...	80.0	90.0	--	--
AUG				
16...	90.0	105	--	--
APR				
15...	65.0	75.0	--	--
MAY				
18...	95.0	90.0	--	--
SEP				
15...	115	115	--	--
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

01467448 -- Schuylkill River at Middleport, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	0930	1028	1028	31	389	13	11.5	99	6.1	6.9
SEP										
30...	1415	1028	--	102	244	15	10.2	101	7.2	--

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recoverable, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recoverable, mg/L (00929)
OCT										
06...	186	8.50	12.7	12.4	7.70	7.75	.735	.755	3.05	3.05
SEP										
30...	256	14.7	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	11.3	--	8.15	<.010	6.85	6.95	69.0	86.0	.080	<.030
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	<.001	38.0	540	<.020	<.020	<.200	<.200
SEP									
30...	--	--	--	--	--	--	--	--	--

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	25.5	25.5	.240	.530	<.010	<.010	.050	.200	.200
SEP									
30...	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

01467448 -- Schuylkill River at Middleport, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
OCT 06...	1.20	1.60	.044	.048	<1.00	<1.00	17.0	18.0	1.50	2.80
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro-pium, water, fltrd, ug/L (50574)	Europ-ium, water, unfltrd ug/L (01236)	Gado-linium, water, fltrd, ug/L (50575)	Gado-linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT 06...	.110	.170	.065	.092	.023	.039	.110	.200	<.020	<.020
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT 06...	<.020	<.020	.022	.035	575	840	.730	.840	.100	.380
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover -able, ug/L (01062)	Neodym-ium, water, fltrd, ug/L (50579)	Neodym-ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
OCT 06...	10.0	9.85	899	908	.048	.043	.600	.820	23.5	26.5
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT 06...	.160	.210	<.020	<.020	1.10	1.10	.097	.180	<.200	<.200
SEP 30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

01467448 -- Schuylkill River at Middleport, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	.054	<.010	118	115	.018	.029	<.050	<.050	<.020	<.020
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.008	.012	.035	.033	<.100	<.100	.044	.070	.600	.800
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	71.5	71.5	.020	.043
SEP				
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

403958076191401 -- Otto Air Shaft

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
DEC										
16...	1345	1028	1028	6.2	390	39	.9	8	5.9	5.8
MAR										
31...	1230	1028	89203	6.2	528	.0	.5	5	5.7	6.0
JUN										
03...	1530	1028	89203	5.1	309	6.0	.7	9	6.2	6.2
JUL										
26...	1130	1028	89203	4.0	213	5.6	.3	2	6.0	5.9
SEP										
30...	1300	1028	89203	--	260	14	.9	90	5.9	6.2

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	Potas-sium, water, fltrd, mg/L (00935)	Potas-sium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
DEC										
16...	510	12.0	39.8	37.6	35.6	34.1	.551	.551	7.27	6.81
MAR										
31...	480	12.0	38.4	35.1	33.7	29.9	1.20	1.10	7.40	6.60
JUN										
03...	462	12.0	37.0	37.8	34.8	35.9	1.30	1.30	7.30	8.30
JUL										
26...	440	12.0	36.9	38.5	33.9	34.5	1.10	1.10	7.30	7.20
SEP										
30...	481	12.1	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
DEC										
16...	27.0	--	2.06	<.010	12.3	12.0	244	224	<.010	<.030
MAR										
31...	41.0	--	3.15	--	--	--	214	--	.010	--
JUN										
03...	4.10	--	2.42	--	--	--	205	--	--	--
JUL										
26...	42.5	--	3.13	--	--	--	190	--	.030	--
SEP										
30...	41.0	--	--	--	--	--	--	--	--	--

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
DEC									
16...	<.020	<.000	<.000	194	3280	2.20	3.10	1.00	2.00
MAR									
31...	--	--	--	200	1400	--	--	--	--
JUN									
03...	--	--	--	300	2000	--	--	--	--
JUL									
26...	--	--	--	200	1300	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

403958076191401 -- Otto Air Shaft--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC									
16...	23.6	22.6	1.00	2.20	<.200	<.200	.110	1.16	.540
MAR									
31...	--	--	--	--	--	--	--	--	--
JUN									
03...	--	--	--	--	--	--	--	--	--
JUL									
26...	--	--	--	--	--	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
DEC										
16...	10.9	13.2	.140	.140	<1.00	<1.00	58.6	58.0	1.10	10.0
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro-pium, water, fltrd, ug/L (50574)	Europ-ium, water, unfltrd ug/L (01236)	Gado-linium, water, fltrd, ug/L (50575)	Gado-linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
DEC										
16...	.950	1.36	.540	.760	.210	.320	1.09	1.54	.080	.080
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	German-ium, water, fltrd, ug/L (01125)	German-ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha-num, water, fltrd, ug/L (01180)	Lantha-num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
DEC										
16...	<.050	.050	.180	.260	4980	6660	5.30	5.80	.300	3.00
MAR										
31...	--	--	--	--	11000	10100	--	--	--	--
JUN										
03...	--	--	--	--	9010	9460	--	--	--	--
JUL										
26...	--	--	--	--	11100	11100	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

403958076191401 -- Otto Air Shaft--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
DEC 16...	23.5	22.2	2180	2100	<2.00	<2.00	4.80	6.48	87.8	85.7
MAR 31...	--	--	2450	2180	--	--	--	--	80.0	70.0
JUN 03...	--	--	2180	2250	--	--	--	--	85.0	90.0
JUL 26...	--	--	1920	1950	--	--	--	--	85.0	85.0
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Praseo- dymium, water, fltrd, ug/L (50582)	Praseo- dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid- ium, water, fltrd, ug/L (01135)	Rubid- ium, water, unfltrd ug/L (01137)	Samar- ium, water, fltrd, ug/L (82323)	Samar- ium, water, unfltrd ug/L (82322)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
DEC 16...	1.27	1.67	<.300	<.300	2.39	2.20	.930	1.45	<1.00	<1.00
MAR 31...	--	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Stront- ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall- ium, water, fltrd, ug/L (01057)	Thall- ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
DEC 16...	<3.00	<3.00	355	339	.170	.240	<.100	<.100	<.200	<.200
MAR 31...	--	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung- sten, water, fltrd, ug/L (01155)	Tung- sten, water, unfltrd ug/L (01154)	Vanad- ium, water, fltrd, ug/L (01085)	Vanad- ium, water, unfltrd ug/L (01087)	Ytterb- ium, water, fltrd, ug/L (01194)	Ytterb- ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
DEC 16...	.070	.110	<.500	<.500	<.500	<.500	.380	.690	4.73	5.69
MAR 31...	--	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

403958076191401 -- Otto Air Shaft--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
DEC				
16...	220	224	<.100	.580
MAR				
31...	180	120	--	--
JUN				
03...	155	165	--	--
JUL				
26...	135	140	--	--
SEP				
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784350 -- Otto Air Shaft, 400 M DS, nr Llewellyn, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1645	1028	1028	13	309	18	9.9	92	6.3	6.5
DEC										
16...	1315	1028	1028	6.2	370	30	10.2	94	6.3	6.3
MAR										
31...	1200	1028	89203	6.2	546	5.0	9.8	91	5.6	6.5
JUN										
03...	1500	1028	89203	5.1	264	7.0	9.5	98	6.7	6.8
JUL										
26...	1115	1028	89203	4.0	220	7.4	10.6	99	6.7	6.4
SEP										
30...	1245	1028	89203	--	242	14	9.8	92	6.4	6.5

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Potassium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
OCT										
06...	506	12.0	31.5	32.6	30.3	30.4	1.05	1.05	5.85	6.00
DEC										
16...	490	11.6	37.0	38.4	32.9	33.4	.551	.551	6.74	6.86
MAR										
31...	477	11.9	39.1	38.0	33.4	31.4	1.20	1.00	7.70	6.90
JUN										
03...	461	12.2	37.1	37.0	34.8	34.5	1.30	1.30	7.00	7.50
JUL										
26...	436	12.2	36.8	39.9	33.1	35.8	1.20	1.10	7.60	7.30
SEP										
30...	478	12.2	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	36.4	--	2.27	<.010	10.2	10.6	220	340	.010	<.030
DEC										
16...	39.0	--	2.19	<.010	11.3	12.4	221	241	.040	<.030
MAR										
31...	38.8	--	2.82	--	--	--	212	--	.030	--
JUN										
03...	13.5	--	2.36	--	--	--	206	--	--	--
JUL										
26...	17.7	--	2.69	--	--	--	189	--	.010	--
SEP										
30...	44.0	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784350 -- Otto Air Shaft, 400 M DS, nr Llewellyn, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	<.001	105	1850	<.020	<.020	1.40	1.70
DEC									
16...	<.020	<.000	<.000	80.0	3410	2.00	3.00	<1.00	2.00
MAR									
31...	--	--	--	100	1500	--	--	--	--
JUN									
03...	--	--	--	200	1900	--	--	--	--
JUL									
26...	--	--	--	200	1000	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	22.5	23.0	1.00	1.80	<.010	<.010	.080	.120	.140
DEC									
16...	22.1	22.6	.900	2.20	<.200	<.200	.120	.460	.520
MAR									
31...	--	--	--	--	--	--	--	--	--
JUN									
03...	--	--	--	--	--	--	--	--	--
JUL									
26...	--	--	--	--	--	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT										
06...	8.90	11.0	.130	.140	<1.00	<1.00	55.0	59.5	<.500	3.00
DEC										
16...	9.10	13.4	.130	.140	<1.00	<1.00	54.2	53.6	.740	10.4
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784350 -- Otto Air Shaft, 400 M DS, nr Llewellyn, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dysprosium, water, fltrd, ug/L (82331)	Dysprosium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Europium, water, fltrd, ug/L (50574)	Europium, water, unfltrd ug/L (01236)	Gadolinium, water, fltrd, ug/L (50575)	Gadolinium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT										
06...	.750	1.10	.420	.640	.170	.260	.760	1.20	.020	.025
DEC										
16...	.710	1.40	.420	.840	.170	.340	.860	1.54	.070	.090
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Germanium, water, fltrd, ug/L (01125)	Germanium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lanthanum, water, fltrd, ug/L (01180)	Lanthanum, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)
OCT										
06...	.026	<.020	.160	.240	6800	7450	4.40	5.00	<.050	.710
DEC										
16...	<.050	<.050	.140	.270	4620	7040	4.62	5.95	.720	2.60
MAR										
31...	--	--	--	--	10600	10100	--	--	--	--
JUN										
03...	--	--	--	--	8850	8920	--	--	--	--
JUL										
26...	--	--	--	--	10100	11100	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover-able, ug/L (01132)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Molybdenum, water, fltrd, ug/L (01060)	Molybdenum, water, unfltrd recover-able, ug/L (01062)	Neodymium, water, fltrd, ug/L (50579)	Neodymium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
OCT										
06...	21.5	21.5	2030	2030	.080	.110	4.20	5.60	78.5	79.0
DEC										
16...	21.6	22.4	2060	2100	<2.00	<2.00	3.89	6.77	81.3	85.1
MAR										
31...	--	--	2460	2280	--	--	--	--	70.0	85.0
JUN										
03...	--	--	2180	2190	--	--	--	--	85.0	85.0
JUL										
26...	--	--	1930	1960	--	--	--	--	85.0	90.0
SEP										
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784350 -- Otto Air Shaft, 400 M DS, nr Llewellyn, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT										
06...	1.10	1.40	<.020	<.020	2.10	2.10	.750	1.20	<.200	<.200
DEC										
16...	1.03	1.70	<.300	<.300	2.22	2.30	.720	1.56	<1.00	<1.00
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	<.010	<.010	334	345	.130	.180	<.050	<.050	<.030	<.030
DEC										
16...	<3.00	<3.00	334	342	.130	.250	<.100	<.100	<.200	<.200
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.063	.096	<.020	<.020	<.100	<.100	.320	.560	3.80	4.90
DEC										
16...	.054	.120	<.500	<.500	<.500	<.500	.290	.700	3.82	5.91
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	172	178	.035	.420
DEC				
16...	205	224	<.100	.620
MAR				
31...	180	130	--	--
JUN				
03...	155	155	--	--
JUL				
26...	125	140	--	--
SEP				
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784338 -- Muddy Branch ab Otto Mine Discharge nr Branchdale, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1700	1028	1028	6.2	337	9.0	9.7	90	6.4	6.4
DEC										
16...	1330	1028	1028	6.6	320	150	11.7	98	6.6	6.4
MAR										
31...	1215	1028	89203	.64	475	10	10.2	91	6.5	6.5
JUN										
03...	1515	1028	89203	.30	282	6.0	7.8	80	6.8	6.7
JUL										
26...	1100	1028	89203	1.0	248	8.5	8.9	90	6.7	6.5
SEP										
30...	1230	1028	89203	--	270	11	9.7	96	6.6	6.5

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	Potas-sium, water, fltrd, mg/L (00935)	Potas-sium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
OCT										
06...	460	12.0	46.6	42.9	20.5	18.9	2.20	2.05	6.00	5.45
DEC										
16...	430	7.70	35.1	36.9	14.8	15.2	.901	.951	18.4	18.6
MAR										
31...	413	10.0	46.8	45.9	19.5	18.9	2.20	2.00	10.1	10.5
JUN										
03...	431	16.1	48.2	48.3	21.6	21.7	2.40	2.40	9.00	9.20
JUL										
26...	404	15.5	46.2	46.4	20.2	20.0	2.00	1.80	8.50	7.70
SEP										
30...	454	14.7	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	13.1	--	7.40	<.010	16.6	17.1	201	320	.110	<.030
DEC										
16...	11.0	--	30.5	<.010	14.4	16.0	132	134	.260	<.030
MAR										
31...	15.8	--	17.0	--	--	--	167	--	.200	--
JUN										
03...	37.0	--	12.0	--	--	--	185	--	--	--
JUL										
26...	40.3	--	9.32	--	--	--	163	--	.160	--
SEP										
30...	16.0	--	--	--	--	--	--	--	--	--

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	<.001	.015	60.0	885	.022	.075	<.200	<.200
DEC									
16...	<.020	<.000	.000	134	1740	2.30	2.70	<1.00	1.00
MAR									
31...	--	--	--	<100	800	--	--	--	--
JUN									
03...	--	--	--	<100	900	--	--	--	--
JUL									
26...	--	--	--	<100	500	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784338 -- Muddy Branch ab Otto Mine Discharge nr Branchdale, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, fltrd, ug/L (01010)	Beryll- ium, water, unfltrd recover -able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT 06...	21.0	21.5	.380	.790	<.010	<.010	.130	.420	.360
DEC 16...	21.6	29.3	.200	.800	<.200	<.200	.160	.310	.310
MAR 31...	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom- ium, water, fltrd, ug/L (01030)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
OCT 06...	1.70	2.30	.094	.100	<1.00	<1.00	28.5	33.5	1.10	4.70
DEC 16...	.700	3.64	.070	.150	<1.00	<1.00	23.6	25.9	1.40	7.90
MAR 31...	--	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT 06...	.210	.360	.130	.180	.041	.070	.230	.360	.050	.028
DEC 16...	.081	.480	.050	.290	.020	.100	.092	.570	<.050	.200
MAR 31...	--	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--	--

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT 06...	<.020	.028	.047	.075	1300	1750	1.00	1.30	.087	.410
DEC 16...	<.050	.050	.020	.097	1450	4070	.440	1.79	.400	5.30
MAR 31...	--	--	--	--	1100	2250	--	--	--	--
JUN 03...	--	--	--	--	790	1090	--	--	--	--
JUL 26...	--	--	--	--	1140	1430	--	--	--	--
SEP 30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784338 -- Muddy Branch ab Otto Mine Discharge nr Branchdale, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
OCT										
06...	41.0	38.0	1840	1920	.057	.240	.830	1.30	62.5	64.5
DEC										
16...	28.1	29.1	1300	1380	<2.00	<2.00	.360	2.02	44.4	47.0
MAR										
31...	--	--	1840	1800	--	--	--	--	50.0	55.0
JUN										
03...	--	--	1960	2250	--	--	--	--	65.0	65.0
JUL										
26...	--	--	1690	1570	--	--	--	--	65.0	60.0
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Praseo- dymium, water, fltrd, ug/L (50582)	Praseo- dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid- ium, water, fltrd, ug/L (01135)	Rubid- ium, water, unfltrd ug/L (01137)	Samar- ium, water, fltrd, ug/L (82323)	Samar- ium, water, unfltrd ug/L (82322)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
OCT										
06...	.210	.300	<.020	<.020	2.50	2.70	.150	.270	<.200	.240
DEC										
16...	.090	.490	<.300	<.300	2.37	2.72	.060	.380	<1.00	<1.00
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Stront- ium, water, unfltrd recover -able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall- ium, water, fltrd, ug/L (01057)	Thall- ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	<.010	.770	228	220	.034	.057	<.050	<.050	<.020	<.030
DEC										
16...	<3.00	<3.00	193	204	.020	.085	<.100	<.100	<.200	<.200
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784338 -- Muddy Branch ab Otto Mine Discharge nr Branchdale, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	.016	.029	<.020	.086	<.100	<.100	.089	.160	1.20	2.00
DEC										
16...	.006	.040	<.500	<.500	<.500	1.00	.040	.230	.580	2.63
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	130	132	.034	.066
DEC				
16...	92.3	106	<.100	.130
MAR				
31...	80.0	85.0	--	--
JUN				
03...	115	110	--	--
JUL				
26...	105	115	--	--
SEP				
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784354 -- Muddy Branch bl Otto Mine Discharge ab Steins, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1515	1028	--	--	--	--	--	--	--	--
06...	1600	1028	1028	7.7	283	13	10.1	95	6.7	6.9
DEC										
16...	1245	1028	1028	13	250	54	11.6	100	6.4	6.4
MAR										
31...	1115	1028	89203	6.8	417	26	10.5	95	6.0	6.6
JUN										
03...	1415	1028	89203	5.4	225	10	9.6	93	7.1	6.9
JUL										
26...	1030	1028	89203	5.0	225	11	10.4	101	7.1	6.7
SEP										
30...	1145	1028	89203	11	220	15	10.1	97	6.8	6.5

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	Potas-sium, water, fltrd, mg/L (00935)	Potas-sium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	448	12.6	--	--	--	--	--	--	--	--
DEC										
16...	470	9.80	33.2	36.4	25.4	26.7	.651	.701	10.1	10.2
MAR										
31...	444	10.9	37.8	37.5	28.4	27.0	1.40	1.20	8.50	7.60
JUN										
03...	442	13.7	38.2	37.3	31.4	31.2	1.50	1.40	7.40	7.50
JUL										
26...	423	13.8	37.6	39.7	28.6	30.8	1.30	1.30	7.40	7.70
SEP										
30...	439	13.5	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Silica, water, unfltrd mg/L (00956)	Sulfate water, fltrd, mg/L (00945)	Sulfate water unfltrd mg/L (00946)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)
OCT										
06...	--	--	3.60	<.010	--	--	188	--	.070	<.030
06...	30.6	--	3.62	<.010	--	--	208	--	.040	<.030
DEC										
16...	19.0	--	11.2	<.010	11.4	12.5	169	175	.140	<.030
MAR										
31...	26.2	--	6.58	--	--	--	191	--	.100	--
JUN										
03...	31.0	--	4.49	--	--	--	192	--	--	--
JUL										
26...	32.2	--	4.70	--	--	--	173	--	.090	--
SEP										
30...	31.0	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784354 -- Muddy Branch bl Otto Mine Discharge ab Steins, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT									
06...	<.020	--	--	--	--	--	--	--	--
06...	<.020	--	--	--	--	--	--	--	--
DEC									
16...	<.020	<.000	.000	13.0	2440	1.80	2.50	<1.00	1.00
MAR									
31...	--	--	--	<100	1200	--	--	--	--
JUN									
03...	--	--	--	<100	1400	--	--	--	--
JUL									
26...	--	--	--	<100	700	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

Date	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (00998)	Bismuth water, fltrd, ug/L (01015)	Bismuth water unfltrd ug/L (01017)	Bromine water unfltrd mg/L (71871)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT									
06...	--	--	--	--	--	--	.080	--	--
06...	--	--	--	--	--	--	.110	--	--
DEC									
16...	20.7	23.6	.300	1.50	<.200	<.200	.090	.360	.440
MAR									
31...	--	--	--	--	--	--	--	--	--
JUN									
03...	--	--	--	--	--	--	--	--	--
JUL									
26...	--	--	--	--	--	--	--	--	--
SEP									
30...	--	--	--	--	--	--	--	--	--

Date	Cerium, water, fltrd, ug/L (01110)	Cerium, water, unfltrd ug/L (01112)	Cesium, water, fltrd, ug/L (01115)	Cesium, water, unfltrd ug/L (01117)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	2.83	8.20	.090	.120	<1.00	<1.00	39.0	40.0	.560	7.90
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784354 -- Muddy Branch bl Otto Mine Discharge ab Steins, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dyspros ium, water, fltrd, ug/L (82331)	Dyspros ium, water, unfltrd ug/L (82330)	Erbium, water, fltrd, ug/L (50573)	Erbium, water, unfltrd ug/L (01246)	Euro- pium, water, fltrd, ug/L (50574)	Europ- ium, water, unfltrd ug/L (01236)	Gado- linium, water, fltrd, ug/L (50575)	Gado- linium, water, unfltrd ug/L (01219)	Gallium water, fltrd, ug/L (01120)	Gallium water, unfltrd ug/L (01122)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	.160	.930	.100	.540	.040	.220	.220	1.07	<.050	.100
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	German- ium, water, fltrd, ug/L (01125)	German- ium, water, unfltrd ug/L (01127)	Holmium water, fltrd, ug/L (50577)	Holmium water unfltrd ug/L (01247)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lantha- num, water, fltrd, ug/L (01180)	Lantha- num, water, unfltrd ug/L (01182)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	<.050	<.050	.040	.190	2500	5040	1.80	3.67	.300	3.40
MAR										
31...	--	--	--	--	5580	7290	--	--	--	--
JUN										
03...	--	--	--	--	5130	5900	--	--	--	--
JUL										
26...	--	--	--	--	5390	6440	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Lithium water, fltrd, ug/L (01130)	Lithium water unfltrd recover -able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Neodym- ium, water, fltrd, ug/L (50579)	Neodym- ium, water, unfltrd ug/L (01237)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	21.4	21.1	1660	1780	<2.00	<2.00	1.01	4.26	61.5	64.8
MAR										
31...	--	--	2090	2010	--	--	--	--	70.0	70.0
JUN										
03...	--	--	2040	2040	--	--	--	--	75.0	75.0
JUL										
26...	--	--	1820	1810	--	--	--	--	70.0	75.0
SEP										
30...	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784354 -- Muddy Branch bl Otto Mine Discharge ab Steins, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Praseo-dymium, water, fltrd, ug/L (50582)	Praseo-dymium, water, unfltrd ug/L (01238)	Rhenium water, fltrd, ug/L (50583)	Rhenium water unfltrd ug/L (01242)	Rubid-ium, water, fltrd, ug/L (01135)	Rubid-ium, water, unfltrd ug/L (01137)	Samar-ium, water, fltrd, ug/L (82323)	Samar-ium, water, unfltrd ug/L (82322)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	.300	1.06	<.300	<.300	2.14	2.17	.160	.990	<1.00	<1.00
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Stront-ium, water, fltrd, ug/L (01080)	Stront-ium, water, unfltrd recover-able, ug/L (01082)	Terbium water, fltrd, ug/L (50586)	Terbium water unfltrd ug/L (01218)	Thall-ium, water, fltrd, ug/L (01057)	Thall-ium, water, unfltrd ug/L (01059)	Thorium water, fltrd, ug/L (82365)	Thorium water unfltrd ug/L (82364)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	<3.00	<3.00	278	284	.030	.170	<.100	<.100	<.200	<.200
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Thulium water, fltrd, ug/L (50587)	Thulium water unfltrd ug/L (01245)	Tung-sten, water, fltrd, ug/L (01155)	Tung-sten, water, unfltrd ug/L (01154)	Vanad-ium, water, fltrd, ug/L (01085)	Vanad-ium, water, unfltrd ug/L (01087)	Ytterb-ium, water, fltrd, ug/L (01194)	Ytterb-ium, water, unfltrd ug/L (01196)	Yttrium water, fltrd, ug/L (01201)	Yttrium water unfltrd ug/L (01203)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	.010	.082	<.500	<.500	<.500	<.500	.060	.480	1.29	4.19
MAR										
31...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
OCT				
06...	--	--	--	--
06...	--	--	--	--
DEC				
16...	143	167	<.100	.410
MAR				
31...	105	115	--	--
JUN				
03...	125	135	--	--
JUL				
26...	105	115	--	--
SEP				
30...	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
ACID MINE DRAINAGE PROJECTS IN THE UPPER SCHUYLKILL RIVER BASIN

0146784358 -- Muddy Branch bl Otto Mine Discharge bl Steins, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT										
06...	1515	1028	1028	6.6	277	15	10.2	95	6.7	6.7
06...	1600	1028	--	--	--	--	--	--	--	--
MAR										
31...	1015	1028	89203	8.8	425	15	10.9	97	6.5	7.0
JUN										
03...	1315	1028	89203	7.2	225	11	9.4	92	7.0	6.7
SEP										
30...	1045	1028	89203	22	222	13	9.8	96	6.7	6.7

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, fltrd, mg/L (00925)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	Potas-sium, water, fltrd, mg/L (00935)	Potas-sium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, fltrd, mg/L (00930)	Sodium, water, unfltrd recover-able, mg/L (00929)
OCT										
06...	478	12.2	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
MAR										
31...	401	10.0	35.8	33.1	25.6	23.5	1.20	1.20	7.10	6.70
JUN										
03...	406	14.4	36.0	36.3	28.4	28.3	1.40	1.40	7.00	7.00
SEP										
30...	372	13.9	--	--	--	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Bromine water unfltrd mg/L (71871)
OCT										
06...	30.0	3.60	<.010	188	.070	<.030	<.020	--	--	.080
06...	--	3.62	<.010	208	.040	<.030	<.020	--	--	.110
MAR										
31...	34.1	6.30	--	166	.100	--	--	<100	800	--
JUN										
03...	31.0	4.67	--	174	--	--	--	<100	1100	--
SEP										
30...	28.0	--	--	--	--	--	--	--	--	--

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
OCT								
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
MAR								
31...	4100	5100	1840	1700	60.0	55.0	85.0	80.0
JUN								
03...	3950	4630	1840	1830	65.0	65.0	110	115
SEP								
30...	--	--	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

The Northkill Creek is among Berks County's highest quality streams, designated as exceptional value in its headwaters and with all tributaries designated cold-water fisheries. Although detailed surveys by the Pa Fish Commission (PaFC) in 1997 and 1998 along the main stem of Northkill Creek indicated water-quality conditions meeting the exceptional value designation in headwaters reaches of Northkill Creek, water-quality degradation and only warm-water fishes were found in lower reaches near Bernville. Suburban development, sewage discharges, and poor farming practices were suggested as principal causes of watershed problems.

In July 2003, the Berks County Conservation District requested USGS assistance under the Consortium for Scientific Assistance to Watersheds for training of citizens, the design of a water-quality study, and the collection of data for a water-quality assessment. On October 15, 2003, water-quality monitoring for the watershed assessment was completed by USGS, and on October 16, 2003, aquatic ecological surveys were conducted. Monitoring at each site included field measurements of flow, water-quality, and chemical sampling. A total of 24 samples for chemical analysis were analyzed for major cations and anions, nutrients, and trace metals. Fish community surveys were completed at five of these sites.

For additional information, contact Charles Cravotta at the USGS Pennsylvania Water Science Center, 215 Limekiln Road, New Cumberland, PA 17070; 717-730-6900, (email: cravotta@usgs.gov).

TABLE 5.--Northkill Creek Basin project station list.

Station number	Location	Latitude	Longitude	Drainage area (mi^2)
0147080755	Northkill Cr US of Unnamed Trib nr Shartlesville	40° 31’ 43”	76° 07’ 36”	2.38
0147080760	Northkill Cr DS of Unnamed Trib nr Shartlesville	40° 30’ 59”	76° 07’ 49”	4.19
0147080769	Northkill Cr ab Mollhead Cr nr Shartlesville, PA	40° 29’ 24”	76° 07’ 21”	5.46
0147080781	Mollhead Cr at Bloody Spring Rd nr Strausstown	40° 30’ 25”	76° 09’ 13”	1.58
0147080786	Mollhead Cr at Northkill Cr nr Shartlesville, PA	40° 29’ 24”	76° 07’ 25”	3.98
0147080787	Northkill Cr bl Mollhead Cr nr Shartlesville, PA	40° 29’ 21”	76° 07’ 25”	9.45
0147080789	Northkill Cr ab Wolf Cr nr Shartlesville, PA	40° 28’ 56”	76° 06’ 43”	9.87
0147080799	Wolf Creek at Northkill Cr near Shartlesville, PA	40° 28’ 57”	76° 06’ 42”	3.15
01470808	Northkill Creek bl Wolf Creek near Shartlesville	40° 28’ 55”	76° 06’ 40”	13.03
01470809	Northkill Creek west of Skull Hill nr Bernville	40° 27’ 23”	76° 06’ 58”	16.2
01470810	Northkill Creek above Bernville, PA	40° 26’ 22”	76° 07’ 12”	18.80
01470812	Unn Trib to Northkill Cr at SR183 at Bernville, PA	40° 26’ 15”	76° 07’ 01”	1.17
0147081710	Birch Cr at Boy Scout Camp nr Strausstown, PA	40° 30’ 58”	76° 11’ 06”	0.96
0147081719	Birch Creek at Anthony's Mill at Strausstown, PA	40° 29’ 20”	76° 10’ 26”	4.19
0147081725	Jackson Cr at Schubert/Mtn Rd at Strausstown, PA	40° 29’ 50”	76° 11’ 54”	1.27
0147081727	Jackson Creek at Strausstown, PA	40° 29’ 20”	76° 11’ 54”	1.72
0147081729	Jackson Cr at Anthony's Mill Dam nr Strausstown	40° 29’ 19”	76° 10’ 28”	2.04
0147081739	L Northkill ab Spring Cr nr New Shaefferstown, PA	40° 28’ 10”	76° 08’ 50”	8.58
0147081749	Spring Cr at L Northkill Cr nr New Shaefferstown	40° 28’ 10”	76° 08’ 47”	2.12
0147081759	L Northkill Cr ab Unn Trib nr New Shaefferstown	40° 27’ 15”	76° 08’ 24”	12.2
0147081769	Unn Trib to L Northkill Cr nr New Shaefferstown	40° 27’ 13”	76° 08’ 26”	5.98
0147081776	Unn Tr L Northkill Cr Oak Ln at New Shaefferstown	40° 27’ 01”	76° 09’ 25”	1.42
01470818	Little Northkill Creek near Bernville, PA	40° 26’ 33”	76° 08’ 23”	21.20
01470825	Northkill Cr at Bernville, PA	40° 25’ 42”	76° 06’ 51”	42.0

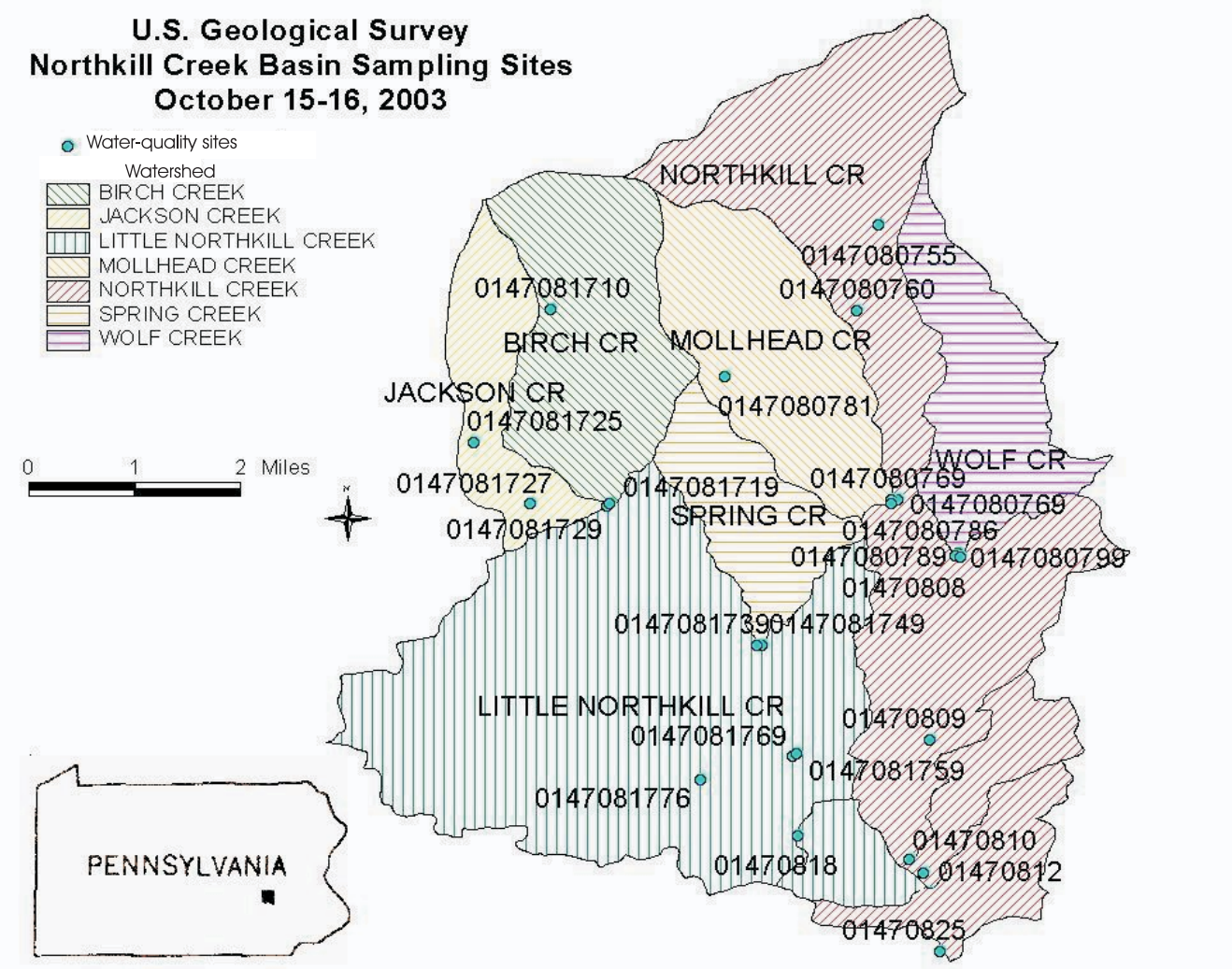


Figure 15.--Locations of sites sampled in the Northkill Creek basin, Berks County, Pennsylvania.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
0147080755 Northkill Cr US of Unnamed Trib nr Shartlesville (LAT 40 31 43N LONG 076 07 36W)										
OCT 2003 16...	1430	1028	89203	3.7	465	.0	11.1	100	6.0	5.9
0147080760 Northkill Cr DS of Unnamed Trib nr Shartlesville (LAT 40 30 59N LONG 076 07 49W)										
OCT 2003 16...	1245	1028	89203	4.7	368	.5	10.8	98	7.3	6.8
0147080769 Northkill Cr ab Mollhead Cr nr Shartlesville, PA (LAT 40 29 24N LONG 076 07 21W)										
OCT 2003 15...	1445	1028	89203	3.4	394	10	10.1	96	7.2	7.0
0147080781 Mollhead Cr at Bloody Spring Rd nr Strausstown, PA (LAT 40 30 25N LONG 076 09 13W)										
OCT 2003 15...	1715	1028	89203	2.3	299	7.5	10.6	103	7.6	7.3
0147080786 Mollhead Cr at Northkill Cr nr Shartlesville, PA (LAT 40 29 24N LONG 076 07 25W)										
OCT 2003 15...	1515	1028	89203	6.7	397	15	10.0	96	7.2	7.2
0147080787 Northkill Cr bl Mollhead Cr nr Shartlesville, PA (LAT 40 29 21N LONG 076 07 25W)										
OCT 2003 15...	1430	1028	89203	10	387	14	10.1	97	7.3	7.2
0147080789 Northkill Cr ab Wolf Cr nr Shartlesville, PA (LAT 40 28 56N LONG 076 06 43W)										
OCT 2003 15...	1330	1028	89203	16	379	12	10.2	97	7.3	7.3
0147080799 Wolf Creek at Northkill Cr near Shartlesville, PA (LAT 40 28 57N LONG 076 06 42W)										
OCT 2003 15...	1315	1028	89203	5.6	398	26	9.9	96	7.3	7.3
01470808 Northkill Creek bl Wolf Creek near Shartlesville (LAT 40 28 55N LONG 076 06 40W)										
OCT 2003 15...	1345	1028	89203	22	364	16	10.4	99	7.2	7.2
01470809 Northkill Creek west of Skull Hill nr Bernville (LAT 40 27 23N LONG 076 06 58W)										
OCT 2003 15...	1200	1028	89203	34	386	22	10.5	100	7.4	7.4
01470810 Northkill Creek above Bernville, PA (LAT 40 26 22N LONG 076 07 12W)										
OCT 2003 15...	1115	1028	89203	50	398	37	10.2	97	7.4	7.3
01470812 Unn Trib to Northkill Cr at SR183 at Bernville, PA (LAT 40 26 15N LONG 076 07 01W)										
OCT 2003 15...	1045	1028	89203	2.4	394	10	10.1	96	7.7	7.9
0147081710 Birch Cr at Boy Scout Camp nr Strausstown, PA (LAT 40 30 58N LONG 076 11 06W)										
OCT 2003 15...	1745	1028	89203	2.0	443	.9	11.0	101	5.5	5.5

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Specif. conduc-tance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)
0147080755 Northkill Cr US of Unnamed Trib nr Shartlesville (LAT 40 31 43N LONG 076 07 36W)									
OCT 2003									
16...	18	10.8	.83	.64	.36	.95	6	1.3	.02
0147080760 Northkill Cr DS of Unnamed Trib nr Shartlesville (LAT 40 30 59N LONG 076 07 49W)									
OCT 2003									
16...	28	11.0	2.25	.88	.49	.94	7	1.4	<.01
0147080769 Northkill Cr ab Mollhead Cr nr Shartlesville, PA (LAT 40 29 24N LONG 076 07 21W)									
OCT 2003									
15...	63	13.0	5.43	1.72	1.07	2.39	15	4.5	.07
0147080781 Mollhead Cr at Bloody Spring Rd nr Strausstown, PA (LAT 40 30 25N LONG 076 09 13W)									
OCT 2003									
15...	82	13.0	8.54	3.03	1.35	2.11	16	3.2	.06
0147080786 Mollhead Cr at Northkill Cr nr Shartlesville, PA (LAT 40 29 24N LONG 076 07 25W)									
OCT 2003									
15...	153	13.9	14.3	4.49	3.07	5.20	32	11.2	.10
0147080787 Northkill Cr bl Mollhead Cr nr Shartlesville, PA (LAT 40 29 21N LONG 076 07 25W)									
OCT 2003									
15...	98	13.4	9.28	2.96	1.88	3.63	19	7.2	.08
0147080789 Northkill Cr ab Wolf Cr nr Shartlesville, PA (LAT 40 28 56N LONG 076 06 43W)									
OCT 2003									
15...	96	13.2	8.89	2.78	2.10	3.52	21	6.6	.06
0147080799 Wolf Creek at Northkill Cr near Shartlesville, PA (LAT 40 28 57N LONG 076 06 42W)									
OCT 2003									
15...	222	13.8	18.5	5.87	3.90	10.7	37	21.8	.05
01470808 Northkill Creek bl Wolf Creek near Shartlesville (LAT 40 28 55N LONG 076 06 40W)									
OCT 2003									
15...	129	13.1	11.1	3.48	2.40	5.20	25	10.5	.08
01470809 Northkill Creek west of Skull Hill nr Bernville (LAT 40 27 23N LONG 076 06 58W)									
OCT 2003									
15...	132	13.2	11.6	3.69	3.25	4.93	24	9.7	.09
01470810 Northkill Creek above Bernville, PA (LAT 40 26 22N LONG 076 07 12W)									
OCT 2003									
15...	128	13.1	12.1	3.76	3.76	4.82	29	10.3	.08
01470812 Unn Trib to Northkill Cr at SR183 at Bernville, PA (LAT 40 26 15N LONG 076 07 01W)									
OCT 2003									
15...	269	13.1	34.3	9.99	2.68	4.63	82	10.3	.08
0147081710 Birch Cr at Boy Scout Camp nr Strausstown, PA (LAT 40 30 58N LONG 076 11 06W)									
OCT 2003									
15...	22	11.6	1.11	.71	.66	.53	2	1.3	.04

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Sulfate water, fltrd, mg/L (00945)	Nitrate water, fltrd, mg/L as N (00618)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Alum-inum, water, fltrd, µg/L (01106)	Bromine water unfltrd mg/L (71871)	Iron, water, fltrd, µg/L (01046)	Mangan-ese, water, fltrd, µg/L (01056)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
0147080755 Northkill Cr US of Unnamed Trib nr Shartlesville (LAT 40 31 43N LONG 076 07 36W)									
OCT 2003									
16...	3.9	.09	<.020	<100	<.03	10	<10	<5	8
0147080760 Northkill Cr DS of Unnamed Trib nr Shartlesville (LAT 40 30 59N LONG 076 07 49W)									
OCT 2003									
16...	4.3	.09	<.020	<100	<.03	30	20	<5	9
0147080769 Northkill Cr ab Mollhead Cr nr Shartlesville, PA (LAT 40 29 24N LONG 076 07 21W)									
OCT 2003									
15...	6.5	.48	<.020	<100	<.03	100	10	<5	12
0147080781 Mollhead Cr at Bloody Spring Rd nr Strausstown, PA (LAT 40 30 25N LONG 076 09 13W)									
OCT 2003									
15...	8.3	1.65	<.020	<100	<.03	170	20	<5	<5
0147080786 Mollhead Cr at Northkill Cr nr Shartlesville, PA (LAT 40 29 24N LONG 076 07 25W)									
OCT 2003									
15...	11.3	2.55	<.020	139	<.03	200	30	<5	25
0147080787 Northkill Cr bl Mollhead Cr nr Shartlesville, PA (LAT 40 29 21N LONG 076 07 25W)									
OCT 2003									
15...	8.6	1.39	<.020	<100	<.03	120	20	<5	<5
0147080789 Northkill Cr ab Wolf Cr nr Shartlesville, PA (LAT 40 28 56N LONG 076 06 43W)									
OCT 2003									
15...	8.7	1.24	<.020	<100	<.03	140	20	<5	<5
0147080799 Wolf Creek at Northkill Cr near Shartlesville, PA (LAT 40 28 57N LONG 076 06 42W)									
OCT 2003									
15...	15.5	4.07	.040	<100	<.03	140	40	<5	<5
01470808 Northkill Creek bl Wolf Creek near Shartlesville (LAT 40 28 55N LONG 076 06 40W)									
OCT 2003									
15...	10.3	2.00	<.020	<100	<.03	140	20	<5	<5
01470809 Northkill Creek west of Skull Hill nr Bernville (LAT 40 27 23N LONG 076 06 58W)									
OCT 2003									
15...	10.7	1.77	.020	122	<.03	170	20	<5	7
01470810 Northkill Creek above Bernville, PA (LAT 40 26 22N LONG 076 07 12W)									
OCT 2003									
15...	10.6	1.67	<.020	147	<.03	200	20	<5	15
01470812 Unn Trib to Northkill Cr at SR183 at Bernville, PA (LAT 40 26 15N LONG 076 07 01W)									
OCT 2003									
15...	17.2	3.65	<.020	<100	<.03	40	30	<5	<5
0147081710 Birch Cr at Boy Scout Camp nr Strausstown, PA (LAT 40 30 58N LONG 076 11 06W)									
OCT 2003									
15...	4.8	.26	<.020	123	<.03	20	80	<5	17

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
0147081719 Birch Creek at Anthony's Mill at Strausstown, PA (LAT 40 29 20N LONG 076 10 26W)										
OCT 2003										
15...	1415	1028	89203	7.9	305	8.0	11.1	107	7.9	7.5
0147081725 Jackson Cr at Schubert/Mtn Rd at Strausstown, PA (LAT 40 29 50N LONG 076 11 54W)										
OCT 2003										
15...	1615	1028	89203	2.5	317	23	10.3	102	7.8	7.3
0147081727 Jackson Creek at Strausstown, PA (LAT 40 29 20N LONG 076 11 17W)										
OCT 2003										
15...	1530	1028	89203	4.0	316	14	9.8	94	7.0	7.2
0147081729 Jackson Cr at Anthony's Mill Dam nr Strausstown (LAT 40 29 19N LONG 076 10 28W)										
OCT 2003										
15...	1445	1028	89203	5.3	300	27	10.6	103	7.8	7.5
0147081739 L Northkill ab Spring Cr nr New Shaefferstown, PA (LAT 40 28 10N LONG 076 08 50W)										
OCT 2003										
15...	1330	1028	89203	18	310	14	11.2	108	7.8	7.6
0147081749 Spring Cr at L Northkill Cr nr New Shaefferstown (LAT 40 28 10N LONG 076 08 47W)										
OCT 2003										
15...	1300	1028	89203	3.0	313	38	10.9	107	7.7	7.5
0147081759 L Northkill Cr ab Unn Trib nr New Shaefferstown (LAT 40 27 15N LONG 076 08 24W)										
OCT 2003										
15...	1200	1028	89203	27	314	18	11.2	108	7.8	7.4
0147081769 Unn Trib to L Northkill Cr nr New Shaefferstown (LAT 40 27 13N LONG 076 08 26W)										
OCT 2003										
15...	1230	1028	89203	10	316	32	10.9	105	7.7	7.3
0147081776 Unn Tr L Northkill Cr Oak Ln at New Shaefferstown (LAT 40 27 01N LONG 076 09 25W)										
OCT 2003										
15...	1115	1028	89203	2.5	318	15	10.4	99	7.8	7.4
01470818 Little Northkill Creek near Bernville, PA (LAT 40 26 33N LONG 076 08 23W)										
OCT 2003										
15...	1000	1028	89203	56	329	32	10.2	96	8.0	7.6
01470825 Northkill Cr at Bernville, PA (LAT 40 25 42N LONG 076 06 51W)										
OCT 2003										
15...	0915	1028	89203	118	414	66	9.7	92	7.3	7.4

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Specif. conduc-tance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)
0147081719 Birch Creek at Anthony's Mill at Strausstown, PA (LAT 40 29 20N LONG 076 10 26W)									
OCT 2003 15...	175	13.2	14.3	4.30	2.47	9.22	33	21.8	.08
0147081725 Jackson Cr at Schubert/Mtn Rd at Strausstown, PA (LAT 40 29 50N LONG 076 11 54W)									
OCT 2003 15...	109	13.0	10.6	2.40	1.25	5.56	24	8.7	.10
0147081727 Jackson Creek at Strausstown, PA (LAT 40 29 20N LONG 076 11 17W)									
OCT 2003 15...	177	13.5	16.7	4.55	2.36	8.18	39	14.9	.09
0147081729 Jackson Cr at Anthony's Mill Dam nr Strausstown (LAT 40 29 19N LONG 076 10 28W)									
OCT 2003 15...	168	14.0	15.7	4.19	3.31	7.67	37	15.7	.08
0147081739 L Northkill ab Spring Cr nr New Shaefferstown, PA (LAT 40 28 10N LONG 076 08 50W)									
OCT 2003 15...	174	13.8	15.2	4.68	3.26	7.80	34	17.2	.08
0147081749 Spring Cr at L Northkill Cr nr New Shaefferstown (LAT 40 28 10N LONG 076 08 47W)									
OCT 2003 15...	200	14.5	19.5	6.48	4.15	4.85	37	26.0	.07
0147081759 L Northkill Cr ab Unn Trib nr New Shaefferstown (LAT 40 27 15N LONG 076 08 24W)									
OCT 2003 15...	173	13.4	15.6	4.83	3.91	6.94	39	16.3	.08
0147081769 Unn Trib to L Northkill Cr nr New Shaefferstown (LAT 40 27 13N LONG 076 08 26W)									
OCT 2003 15...	186	13.4	16.4	6.24	6.60	5.73	35	14.2	.07
0147081776 Unn Tr L Northkill Cr Oak Ln at New Shaefferstown (LAT 40 27 01N LONG 076 09 25W)									
OCT 2003 15...	210	13.1	19.6	8.45	3.96	5.31	36	11.2	.04
01470818 Little Northkill Creek near Bernville, PA (LAT 40 26 33N LONG 076 08 23W)									
OCT 2003 15...	176	12.8	15.7	5.27	5.26	6.32	47	23.1	.07
01470825 Northkill Cr at Bernville, PA (LAT 40 25 42N LONG 076 06 51W)									
OCT 2003 15...	164	13.0	15.6	4.77	4.73	5.68	37	13.1	.06

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

MISCELLANEOUS STATION ANALYSES

Date	Sulfate water, fltrd, mg/L (00945)	Nitrate water, fltrd, mg/L as N (00618)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Alum-inum, water, fltrd, µg/L (01106)	Bromine water unfltrd mg/L (71871)	Iron, water, fltrd, µg/L (01046)	Mangan-ese, water, fltrd, µg/L (01056)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
0147081719 Birch Creek at Anthony's Mill at Strausstown, PA (LAT 40 29 20N LONG 076 10 26W)									
OCT 2003 15...	13.1	1.64	.020	<100	<.03	100	10	<5	<5
0147081725 Jackson Cr at Schubert/Mtn Rd at Strausstown, PA (LAT 40 29 50N LONG 076 11 54W)									
OCT 2003 15...	9.1	.57	.050	<100	<.03	190	10	<5	7
0147081727 Jackson Creek at Strausstown, PA (LAT 40 29 20N LONG 076 11 17W)									
OCT 2003 15...	13.3	2.54	.030	<100	<.03	180	20	<5	5
0147081729 Jackson Cr at Anthony's Mill Dam nr Strausstown (LAT 40 29 19N LONG 076 10 28W)									
OCT 2003 15...	12.2	1.58	.070	109	<.03	250	40	<5	<5
0147081739 L Northkill ab Spring Cr nr New Shaefferstown, PA (LAT 40 28 10N LONG 076 08 50W)									
OCT 2003 15...	13.0	2.46	.020	<100	<.03	140	20	<5	<5
0147081749 Spring Cr at L Northkill Cr nr New Shaefferstown (LAT 40 28 10N LONG 076 08 47W)									
OCT 2003 15...	13.4	5.91	<.020	<100	<.03	160	80	<5	6
0147081759 L Northkill Cr ab Unn Trib nr New Shaefferstown (LAT 40 27 15N LONG 076 08 24W)									
OCT 2003 15...	12.9	2.61	.040	119	<.03	180	20	<5	<5
0147081769 Unn Trib to L Northkill Cr nr New Shaefferstown (LAT 40 27 13N LONG 076 08 26W)									
OCT 2003 15...	14.4	3.71	.030	368	<.03	270	40	<5	11
0147081776 Unn Tr L Northkill Cr Oak Ln at New Shaefferstown (LAT 40 27 01N LONG 076 09 25W)									
OCT 2003 15...	15.8	4.77	<.020	<100	<.03	80	60	<5	<5
01470818 Little Northkill Creek near Bernville, PA (LAT 40 26 33N LONG 076 08 23W)									
OCT 2003 15...	13.2	2.77	.070	114	<.03	180	20	<5	9
01470825 Northkill Cr at Bernville, PA (LAT 40 25 42N LONG 076 06 51W)									
OCT 2003 15...	12.0	1.93	.050	165	<.03	220	30	<5	12

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
SYNOPTIC ASSESSMENT OF WATER QUALITY IN THE NORTHKILL CREEK BASIN, BERKS COUNTY, PENNSYLVANIA

Fish species identified during ecological surveys of Northkill Creek, October 16, 2003

Taxa		Birch Creek		Northkill Creek		
ORDER Family *Genus species*	Common name	0147081710	0147081719	0147080755	0147080760	01470809
CYPRINIFORMES						
Cyprinidae						
Cyprinella analostana	Spotfin shiner	0	0	0	0	5
Exoglossum maxillingua	Cutlips minnow	0	9	0	0	57
Luxilus cornutus	Common shiner	0	0	0	0	22
Notropis hudsonius	Spottail shiner	0	0	0	0	1
Pimephales notatus	Bluntnose minnow	0	0	0	0	8
Rhinichthys atratulus	Blacknose dace	0	164	4	20	44
Rhinichthys cataractae	Longnose dace	0	0	0	0	6
Semotilus atromaculatus	Creek chub	0	15	0	4	5
Catostomidae					0	
Catostomus commersoni	White sucker	0	1	0	1	65
SILURIFORMES						
Ictaluridae						
Noturus insignis	Margined madtom	0	0	0	0	3
ANGUILLIDAE						
Anguillidae						
Anguilla rostrata	American eel	0	0	0	1	0
CYPRINODONTIDAE						
Fundulidae						
Fundulus diaphanus	Banded killifish	0	1	0	0	0
SALMONIFORMES						
Salmonidae						
Salmo trutta	Brown trout	0	0	0	24	1
Salvelinus fontinalis	Brook trout	24	0	28	14	0
PERCIFORMES						
Centrarchidae						
Ambloplites rupestris	Rock bass	0	0	0	0	2
Lepomis cyanellus	Green sunfish	0	0	0	1	0
Micropterus salmoides	Largemouth bass	0	1	0	0	0
Percidae						
Etheostoma olmstedi	Tessellated darter	0	10	0	0	13
Total number of individuals collected:		**24**	**201**	**32**	**65**	**232**
Total number of species identified:		**1**	**7**	**2**	**7**	**13**

SPECIAL NOTES, REMARK CODES, AND SELECTED CONSTITUENT DEFINITIONS

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NOTES--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter(µG/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the µG/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols took place during the 1995 water year.

--Sample handling procedures at all **National Trends Network** stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

--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.

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

MBASCOR = M - 0.0088N - 0.00019C

where:

MBASCOR = corrected MBAS concentration, in mg/L;
M = reported MBAS concentration, in mg/L;
N = dissolved nitrate plus nitrite, as nitrogen, in mg/L; and
C = dissolved chloride concentration, in mg/L.

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

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

PRINTED OUTPUT	REMARK
E,e	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

****

EXPLANATION OF CODES USED TO DEFINE SAMPLE COLLECTION PROCEDURES (partial listing)

(71999) SAMPLE PURPOSE CODES:

10--Routine
15--NAWQA
20--NASQAN
30--Benchmark

(82398) SAMPLE METHOD CODES:

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

(84164) SAMPLER TYPE: (partial list)

110--Sewage sampler
3011--US D-77
3035--DH-76 Trace metal sampler with teflon gasket and nozzle
3039--D-77 Trace metal
3040--D-77 Trace metal modified teflon bag sampler
3045--DH-81 with Teflon cap and nozzle
8010--Other (other than a defined sampler type)

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

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

AC-FT	acre-feet
BOT MAT	bottom material (Unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.)
COLS/100 ML	colonies per 100 milliliters
DIS	dissolved
FET	fixed end-point titration
FLD	field (Measurement determined at field site.)
F/S	feet per second
G/M	gallons per minute
G/SQM; MG/M2	grams or milligrams per square meter
IT	incremental titration
KF AGAR	nutrient medium for growth of fecal streptococcal bacteria
µG/L	micrograms per liter
µS/CM	microsiemens per centimeter
MG/L	milligrams per liter
MG/M2	milligrams per square meter
MM OF HG	millimeters of mercury
NONCARB	noncarbonate
NTU	nephelometric turbidity unit
PCI/L	picocuries per liter
REC	recoverable
TOT	total
T/DAY	tons per day
WH IT	whole water, incremental titration (Alkalinity, bicarbonate, and carbonate as determined by incremental titration of unfiltered water at the field site.)
2 SIGMA	Counting statistic that represents error in the reported radon, uranium, or tritium value caused by variations in sample counting, background radiation, volume of sample, and decay since sample was collected.
0.7µ GF	0.7 micron glass-fiber filter (Water filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size.)

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(00027) AGENCY COLLECTING SAMPLE CODES: (partial listing)

1028 --U.S. Geological Survey

(00028) AGENCY ANALYZING SAMPLE CODES: (partial listing)

1028 --U.S. Geological Survey
80020 --U.S. Geological Survey, National Water-Quality Laboratory, Denver, Colorado
9813 --Pennsylvania Department of Environmental Protection
83613 --USGS Water Science Center, Water-Quality Laboratory, Troy, New York

MEDIUM CODES: (partial listing)

9-- Surface water.
R-- Quality-control sample. Surface water.
Q-- Quality-control sample. Artificial.

GROUND-WATER-LEVEL STATION RECORDS

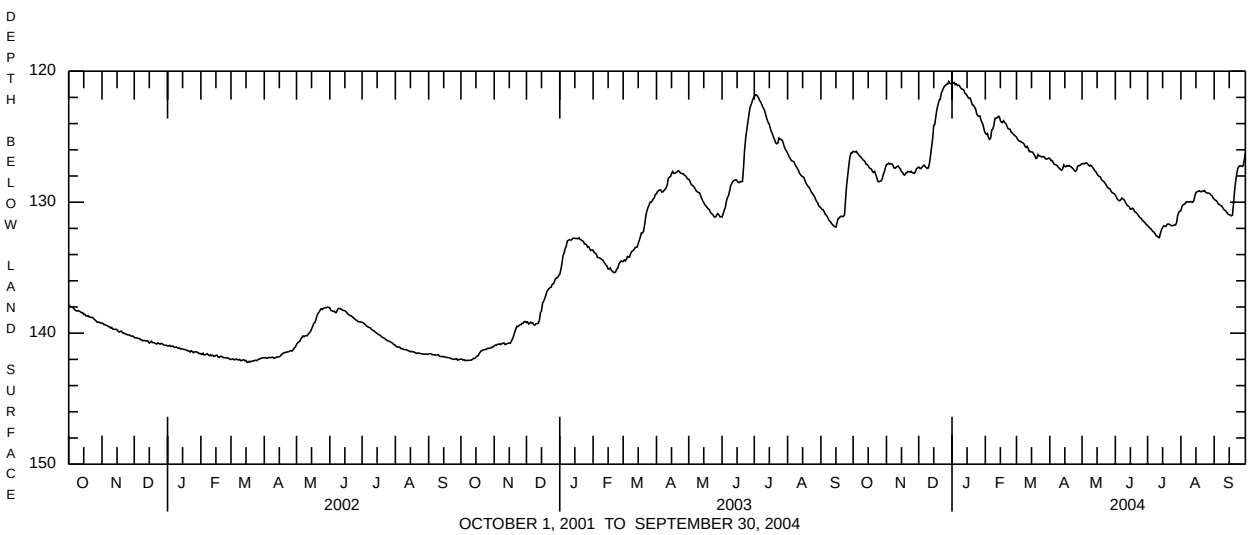
BERKS COUNTY

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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 430 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 1.71 ft above land-surface datum. Prior to Apr. 30, 1981, top of casing, 1.30 ft above land-surface datum.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--January 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 109.44 ft below land-surface datum, Apr. 19, 1994; lowest, 142.23 ft below land-surface datum, Mar. 16, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 120.41 ft below land-surface datum, Dec. 30; lowest, 132.70 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126.12	127.13	127.32	121.03	124.72	125.03	126.66	127.07	129.47	131.77	130.65	129.76
2	126.14	127.10	127.41	120.89	124.82	125.19	126.82	127.05	129.61	131.88	130.34	129.85
3	126.17	127.03	127.44	120.86	124.76	125.29	126.81	127.08	129.79	131.97	130.20	129.88
4	126.12	127.08	127.35	121.03	125.10	125.36	126.95	127.02	129.85	132.02	130.16	130.00
5	126.26	127.05	127.24	120.97	125.20	125.36	127.10	127.00	129.90	132.14	130.10	130.16
6	126.36	127.09	127.17	121.10	125.09	125.45	127.13	127.06	129.82	132.24	129.98	130.18
7	126.47	127.17	127.28	121.07	124.47	125.47	127.16	127.16	129.68	132.29	129.97	130.25
8	126.54	127.38	127.36	121.11	124.42	125.55	127.22	127.24	129.75	132.42	129.98	130.29
9	126.64	127.41	127.42	121.28	124.11	125.75	127.35	127.18	129.80	132.55	129.99	130.43
10	126.76	127.34	127.39	121.35	123.60	125.82	127.42	127.23	129.96	132.60	129.95	130.56
11	126.81	127.27	127.05	121.38	123.59	125.74	127.51	127.36	130.10	132.69	129.98	130.61
12	126.91	127.24	126.43	121.44	123.57	125.92	127.55	127.47	130.25	132.70	130.00	130.69
13	127.10	127.38	125.79	121.68	123.45	126.14	127.45	127.62	130.29	132.36	129.90	130.81
14	127.13	127.49	125.14	121.75	123.46	126.13	127.16	127.69	130.36	132.09	129.52	130.93
15	127.22	127.67	124.13	121.86	123.76	126.17	127.28	127.85	130.53	131.93	129.28	130.95
16	127.36	127.73	124.05	122.01	123.90	126.18	127.29	127.97	130.52	131.80	129.20	131.00
17	127.44	127.89	123.44	122.08	123.91	126.31	127.21	128.03	130.46	131.84	129.17	131.04
18	127.47	127.93	122.88	122.05	123.78	126.44	127.25	128.07	130.55	131.85	129.13	130.99
19	127.67	127.79	122.58	122.34	123.93	126.66	127.20	128.26	130.72	131.72	129.18	130.06
20	127.74	127.75	122.21	122.58	123.99	126.64	127.27	128.35	130.78	131.66	129.20	129.12
21	127.65	127.65	122.16	122.60	124.16	126.37	127.31	128.41	130.85	131.68	129.15	128.40
22	127.88	127.67	121.69	122.75	124.37	126.46	127.40	128.50	130.96	131.73	129.15	127.82
23	128.13	127.70	121.51	122.88	124.41	126.49	127.47	128.62	131.08	131.79	129.11	127.40
24	128.41	127.64	121.30	123.26	124.44	126.52	127.61	128.76	131.18	131.80	129.24	127.28
25	128.45	127.74	121.14	123.40	124.63	126.55	127.64	128.90	131.23	131.77	129.29	127.21
26	128.40	127.78	121.08	123.44	124.71	126.52	127.53	128.95	131.37	131.74	129.30	127.24
27	128.38	127.80	120.99	123.42	124.80	126.56	127.25	128.98	131.44	131.74	129.32	127.27
28	128.25	127.68	120.98	123.75	124.89	126.69	127.21	129.16	131.52	131.55	129.35	127.21
29	127.89	127.44	120.78	123.92	124.95	126.71	127.20	129.27	131.62	131.03	129.46	126.81
30	127.68	127.38	120.92	124.12	---	126.69	127.13	129.31	131.72	130.78	129.52	126.22
31	127.38	---	120.96	124.51	---	126.63	---	129.35	---	130.68	129.69	---
MEAN	127.26	127.48	124.21	122.19	124.31	126.09	127.25	128.00	130.51	131.90	129.63	129.35
MAX	128.45	127.93	127.44	124.51	125.20	126.71	127.64	129.35	131.72	132.70	130.65	131.04
MIN	126.12	127.03	120.78	120.86	123.45	125.03	126.66	127.00	129.47	130.68	129.11	126.22



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

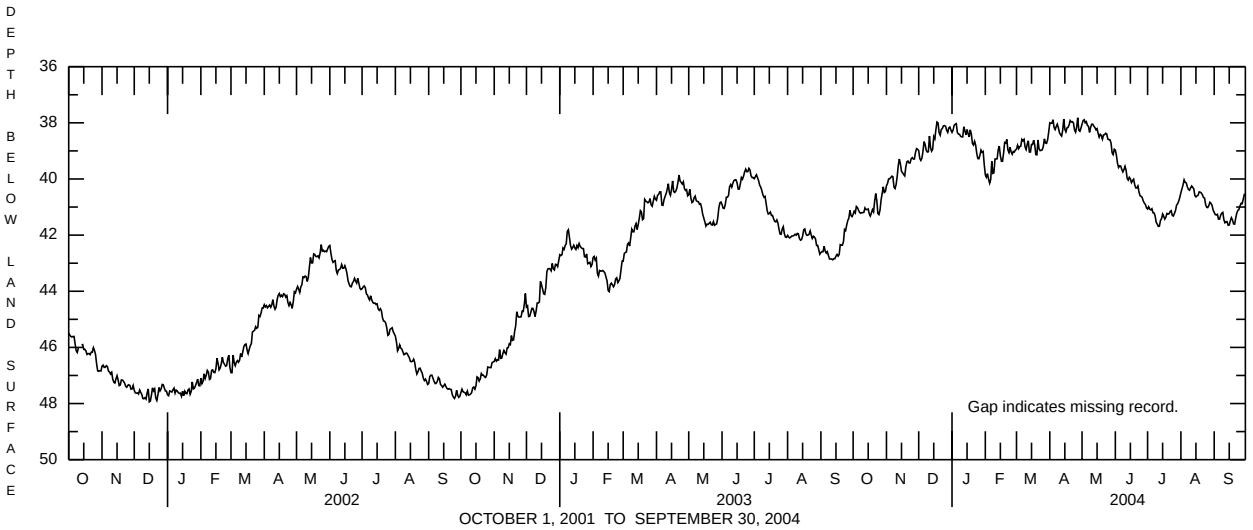
BUCKS COUNTY

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.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 490 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 3.0 ft above land-surface datum. Prior to Mar. 17, 1980, top of casing, 1.05 ft above land-surface datum. Prior to June 1970, land surface datum was approximately 16 feet lower.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--November 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 37.64 ft below land-surface datum, May 2, 2004; lowest, 59.75 ft below land-surface datum, Nov. 26, 1968.
EXTREMES FOR CURRENT YEAR.--Highest water level, 37.64 ft below land-surface datum, May 2; lowest, 41.69 ft below land-surface datum, July 11.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.26	40.24	38.99	38.34	39.85	38.94	38.00	38.05	38.97	41.07	40.49	41.19
2	41.15	40.16	39.27	38.26	39.94	38.80	38.02	37.92	39.16	40.99	40.35	41.27
3	41.21	40.00	39.34	38.09	39.81	38.92	38.01	37.89	39.44	41.08	40.21	41.28
4	40.98	39.99	39.26	38.05	40.00	38.85	37.89	38.00	39.59	41.10	40.03	41.26
5	41.02	39.95	39.01	38.03	40.15	38.83	38.17	37.96	39.53	41.06	40.12	41.43
6	41.11	39.90	38.67	38.35	40.02	38.59	38.24	38.09	39.54	41.20	40.14	41.43
7	41.19	39.92	38.77	38.40	39.37	38.64	38.13	38.12	39.66	41.21	40.28	41.29
8	41.22	40.29	38.98	38.41	39.80	38.59	38.05	38.34	39.75	41.31	40.37	41.22
9	41.20	40.34	39.04	38.48	39.78	38.86	38.18	38.16	39.67	41.54	40.40	41.19
10	41.20	40.20	39.03	38.50	39.29	38.95	38.35	38.05	39.55	41.61	40.32	41.45
11	41.19	39.90	38.47	38.50	39.29	38.76	38.42	38.05	39.69	41.69	40.25	41.56
12	41.03	39.52	38.88	38.14	39.28	38.64	38.47	38.12	39.98	41.68	40.30	41.52
13	41.09	39.29	39.01	38.28	38.96	39.04	38.27	38.17	40.04	41.48	40.35	41.52
14	41.09	39.47	38.94	38.42	38.83	39.04	37.87	38.25	39.94	41.41	40.59	41.65
15	41.07	39.73	38.49	38.24	39.17	38.77	38.23	38.21	40.00	41.25	40.64	41.64
16	41.24	39.78	38.57	38.39	39.37	38.77	38.32	38.38	40.13	41.33	40.60	41.49
17	41.32	39.84	38.25	38.50	39.37	38.62	38.18	38.51	40.06	41.43	40.58	41.38
18	41.21	39.89	37.97	38.25	39.08	38.79	38.16	38.41	40.01	41.36	40.46	41.46
19	41.09	39.58	38.00	38.40	38.70	39.13	38.07	38.45	40.20	41.23	40.47	41.60
20	41.17	39.39	38.35	38.73	38.72	39.14	37.92	38.58	40.32	41.25	40.50	41.61
21	40.80	39.36	38.44	38.79	38.59	38.61	37.97	38.43	40.32	41.24	40.56	41.40
22	40.52	39.43	38.24	38.66	38.96	38.93	37.96	38.42	40.25	41.16	40.66	41.22
23	40.76	39.43	38.20	38.79	39.06	38.99	38.00	38.37	40.46	41.13	40.68	41.12
24	41.23	39.28	38.11	39.08	38.87	38.98	38.25	38.40	40.60	41.30	40.91	41.09
25	41.27	39.24	38.10	39.27	39.03	38.96	38.33	38.58	40.62	41.32	41.01	40.96
26	41.11	39.29	38.12	39.28	39.12	38.83	38.15	38.60	40.66	41.23	41.02	40.87
27	40.75	39.29	38.26	39.15	39.02	38.57	37.82	38.60	40.79	41.12	40.95	40.88
28	40.52	39.06	38.34	38.97	39.04	38.72	38.26	38.72	40.86	40.93	40.83	40.73
29	40.28	38.92	38.18	39.05	38.97	38.73	38.30	39.07	40.91	40.88	40.87	40.55
30	40.48	38.94	38.15	39.02	---	38.60	38.19	39.13	41.03	40.79	40.94	40.55
31	40.45	---	38.26	39.49	---	38.32	---	38.94	---	40.65	41.11	---
MEAN	41.01	39.65	38.57	38.59	39.29	38.80	38.14	38.35	40.06	41.23	40.55	41.26
MAX	41.32	40.34	39.34	39.49	40.15	39.14	38.47	39.13	41.03	41.69	41.11	41.65
MIN	40.28	38.92	37.97	38.03	38.59	38.32	37.82	37.89	38.97	40.65	40.03	40.55



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

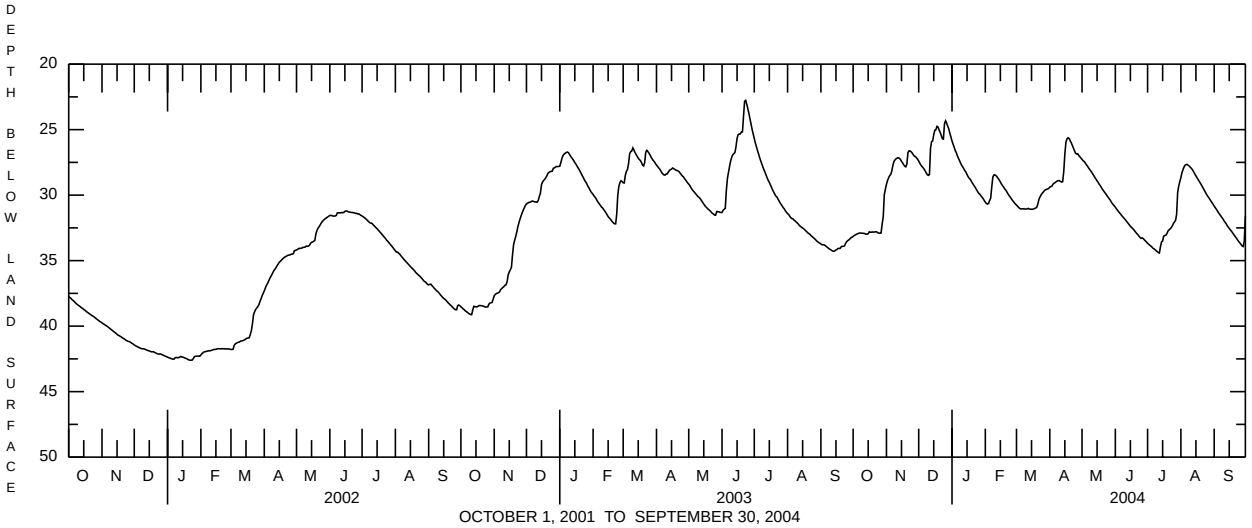
BUCKS COUNTY

401157075032001. Local number, BK 1020

LOCATION.--Lat 40°11'57", long 75°03'20", 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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 370 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of metal shelf, 1.93 ft above land-surface datum.
REMARKS.--Operated by Bucks County Planning Commission September 1975 to March 1988. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 22.64 ft below land-surface datum, June 23, 2003; lowest, 42.60 ft below land-surface datum, Jan. 22, 23, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 24.30 ft below land-surface datum, Dec. 26; lowest, 34.42 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.15	29.17	27.40	25.87	30.54	30.76	29.38	27.27	30.92	33.68	28.66	30.84
2	33.08	28.89	27.56	26.11	30.64	30.85	29.35	27.38	31.04	33.74	28.29	30.96
3	33.04	28.68	27.70	26.34	30.68	30.94	29.32	27.43	31.15	33.82	28.04	31.08
4	32.99	28.51	27.81	26.59	30.63	31.01	29.16	27.55	31.26	33.89	27.84	31.20
5	32.95	28.42	27.90	26.76	30.42	31.05	29.09	27.67	31.36	33.96	27.71	31.34
6	32.92	28.15	28.01	27.00	30.23	31.05	29.04	27.78	31.46	34.05	27.66	31.46
7	32.89	27.73	28.15	27.19	29.37	31.04	28.98	27.91	31.57	34.10	27.67	31.57
8	32.90	27.43	28.30	27.37	28.62	31.05	28.92	28.03	31.66	34.17	27.73	31.69
9	32.90	27.31	28.44	27.55	28.46	31.06	28.89	28.14	31.76	34.25	27.80	31.80
10	32.91	27.22	28.49	27.72	28.46	31.06	28.90	28.25	31.85	34.31	27.89	31.94
11	32.92	27.17	28.43	27.85	28.52	31.05	28.96	28.39	31.95	34.39	27.98	32.06
12	32.94	27.15	26.44	27.99	28.62	31.01	29.00	28.52	32.06	34.42	28.09	32.17
13	32.98	27.18	25.92	28.14	28.73	31.06	28.97	28.66	32.16	33.93	28.24	32.32
14	32.98	27.28	25.86	28.25	28.85	31.07	28.18	28.78	32.27	33.57	28.39	32.43
15	32.95	27.42	25.39	28.43	29.00	31.08	26.88	28.92	32.37	33.50	28.53	32.54
16	32.80	27.53	25.05	28.59	29.14	31.08	25.98	29.02	32.46	33.13	28.67	32.65
17	32.83	27.68	25.01	28.72	29.28	31.05	25.70	29.17	32.54	33.08	28.81	32.75
18	32.83	27.79	24.75	28.79	29.38	31.02	25.62	29.28	32.63	33.06	28.94	32.86
19	32.81	27.84	24.80	28.94	29.52	30.98	25.68	29.42	32.73	32.94	29.07	32.98
20	32.83	27.64	25.02	29.08	29.61	30.91	25.85	29.55	32.84	32.74	29.21	33.10
21	32.81	26.75	25.22	29.21	29.74	30.65	26.01	29.67	32.94	32.65	29.36	33.21
22	32.79	26.62	25.44	29.33	29.89	30.29	26.21	29.78	33.02	32.57	29.51	33.32
23	32.81	26.63	25.69	29.46	30.02	30.12	26.41	29.89	33.13	32.49	29.66	33.45
24	32.88	26.69	25.72	29.61	30.13	29.97	26.62	30.01	33.23	32.35	29.81	33.56
25	32.90	26.79	24.55	29.75	30.25	29.85	26.80	30.13	33.30	32.17	29.96	33.66
26	32.90	26.92	24.33	29.87	30.37	29.76	26.86	30.24	33.27	32.05	30.09	33.77
27	32.89	27.03	24.51	29.94	30.48	29.66	26.84	30.35	33.32	31.94	30.20	33.88
28	32.20	27.06	24.73	30.06	30.58	29.59	26.98	30.49	33.41	31.48	30.33	33.92
29	31.65	27.16	24.95	30.16	30.68	29.56	27.07	30.62	33.50	29.80	30.46	33.51
30	29.97	27.26	25.27	30.27	---	29.53	27.17	30.72	33.58	29.30	30.58	31.61
31	29.55	---	25.56	30.41	---	29.49	---	30.82	---	28.96	30.70	---
MEAN	32.64	27.50	26.21	28.43	29.68	30.60	27.63	29.03	32.36	32.92	28.90	32.45
MAX	33.15	29.17	28.49	30.41	30.68	31.08	29.38	30.82	33.58	34.42	30.70	33.92
MIN	29.55	26.62	24.33	25.87	28.46	29.49	25.62	27.27	30.92	28.96	27.66	30.84



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

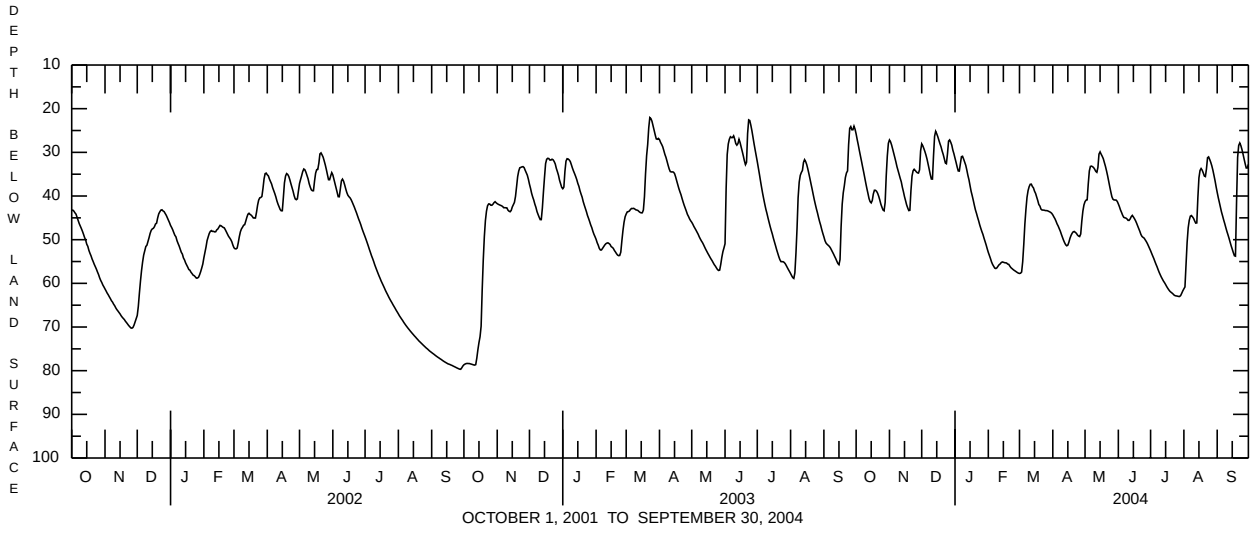
CARBON COUNTY

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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is l,305 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--September 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 18.44 ft below land-surface datum, Apr. 17, 1983; lowest, 90.58 ft below land-surface datum, Jan. 31, 1981.
EXTREMES FOR CURRENT YEAR.--Highest water level, 24.71 ft below land-surface datum, Oct. 1; lowest, 63.01 ft below land-surface datum, July 28.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.79	27.16	28.05	31.34	52.92	57.73	44.32	41.28	41.81	52.53	61.25	39.16
2	27.11	27.57	28.48	32.30	53.61	57.68	44.78	40.94	42.44	53.14	60.82	40.37
3	28.30	28.31	29.12	33.34	54.31	57.40	45.20	40.87	43.18	53.73	55.63	41.47
4	29.59	29.27	29.82	34.26	55.10	55.06	45.77	37.20	43.77	54.32	50.63	42.57
5	30.84	30.23	30.65	34.29	55.67	51.06	46.40	34.26	44.40	54.98	47.29	43.65
6	32.05	31.20	31.59	32.61	56.09	46.47	46.87	33.22	44.87	55.61	45.56	44.55
7	33.30	32.19	32.73	30.99	56.51	43.10	47.46	33.15	44.99	56.20	44.61	45.47
8	34.53	33.30	33.91	30.90	56.60	40.29	48.05	33.28	45.05	56.86	44.47	46.30
9	35.80	34.16	35.11	31.52	56.45	38.75	48.78	33.50	45.23	57.48	44.76	47.23
10	37.08	35.04	36.11	32.23	56.08	37.86	49.45	33.87	45.57	58.03	45.13	48.09
11	38.28	35.95	36.12	32.96	55.74	37.32	50.13	34.36	45.58	58.57	45.70	48.86
12	39.43	36.75	30.79	34.05	55.56	37.28	50.69	34.57	45.25	59.03	46.20	49.69
13	40.59	37.98	26.33	35.27	55.25	37.82	51.17	33.45	44.73	59.48	46.16	50.56
14	41.29	39.03	25.19	36.30	55.10	38.13	51.40	30.40	44.44	59.86	40.38	51.41
15	41.57	40.15	25.75	37.64	55.16	38.90	51.25	29.89	44.80	60.28	35.84	52.17
16	41.03	41.07	26.43	38.93	55.26	39.41	50.56	30.42	45.19	60.73	34.15	52.97
17	39.53	42.03	27.23	39.93	55.30	40.22	49.68	30.89	45.66	61.13	33.71	53.68
18	38.68	42.74	28.03	40.99	55.34	41.03	49.01	31.46	46.22	61.50	34.07	53.77
19	38.69	43.33	28.73	42.12	55.58	41.95	48.52	32.34	46.85	61.82	34.69	41.35
20	38.92	43.27	29.67	43.16	55.65	42.29	48.20	33.20	47.47	62.03	35.41	31.15
21	39.37	38.71	30.47	43.98	56.04	42.99	48.12	34.24	48.09	62.23	35.54	28.42
22	40.07	35.43	31.43	44.87	56.39	43.21	48.33	35.36	48.79	62.45	33.82	27.86
23	40.91	34.22	32.42	45.68	56.60	43.22	48.55	36.59	49.25	62.71	31.23	28.45
24	41.86	33.87	32.59	46.62	56.82	43.24	48.95	37.85	49.47	62.84	31.04	29.31
25	42.56	34.15	30.32	47.40	57.01	43.33	49.18	39.06	49.64	62.88	31.61	30.35
26	43.20	34.46	27.42	48.14	57.17	43.34	49.28	40.16	50.03	62.93	32.28	31.50
27	43.38	34.68	27.15	48.79	57.35	43.37	48.70	40.74	50.43	63.00	33.10	32.59
28	41.49	34.74	27.67	49.66	57.52	43.49	45.74	40.90	50.88	63.01	34.10	33.58
29	35.33	34.01	28.35	50.43	57.66	43.61	43.46	40.91	51.42	62.79	35.28	33.58
30	30.83	29.66	29.49	51.21	---	43.75	42.04	40.94	51.98	62.27	36.52	32.76
31	27.92	---	30.32	52.11	---	43.96	---	41.25	---	61.71	37.90	---
MEAN	36.75	35.16	29.92	39.81	55.86	43.78	48.00	35.82	46.58	59.55	40.61	41.10
MAX	43.38	43.33	36.12	52.11	57.66	57.73	51.40	41.28	51.98	63.01	61.25	53.77
MIN	25.79	27.16	25.19	30.90	52.92	37.28	42.04	29.89	41.81	52.53	31.04	27.86



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

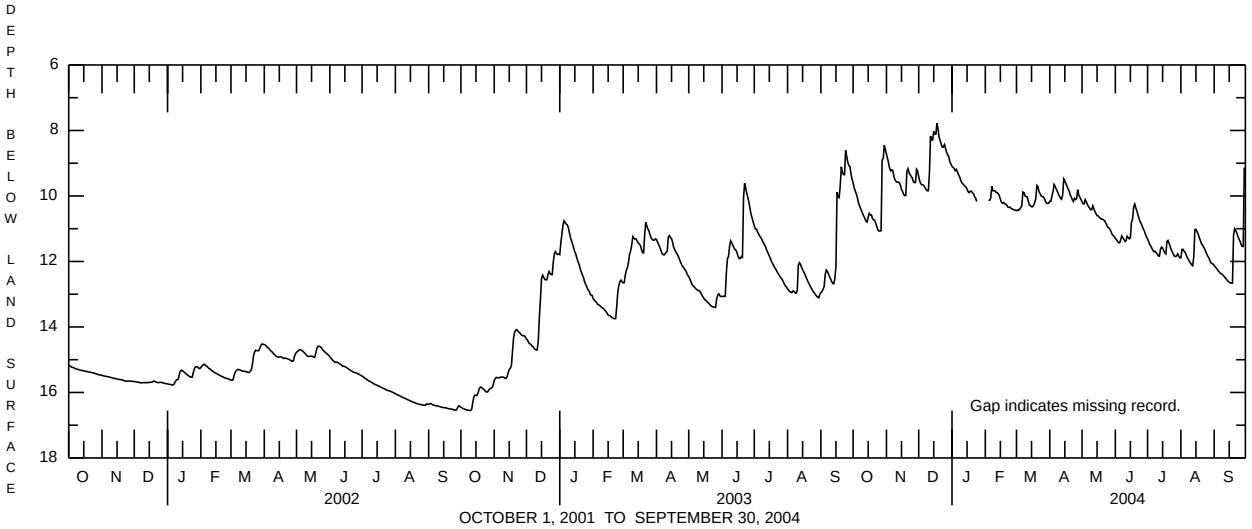
CHESTER COUNTY

395450075485401. Local number, CH 10.

LOCATION.--Lat 39°54'50", long 75°48'54", Hydrologic Unit 02040205, near intersection of SR 82 and 841, at Doe Run.
Owner: Privately owned.
AQUIFER.--Cockeysville Marble of Paleozoic age.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 34 ft, casing information not available.
INSTRUMENTATION.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--August 1951 to April 1965, instantaneous water levels obtained several times per month. February 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 7.58 ft below land-surface datum, Dec. 17, 18, 2003; lowest, 16.55 ft below land-surface datum, Oct. 9, 10, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 7.58 ft below land-surface datum, Dec. 17, 18; lowest, 12.66 ft below land-surface datum, Sept. 17, 18.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.60	8.73	9.41	9.10	---	10.45	10.16	10.18	11.30	11.32	11.89	12.12
2	9.76	8.85	9.55	9.13	---	10.43	10.16	10.24	11.33	11.39	11.63	12.17
3	9.85	9.00	9.63	9.16	---	10.44	10.00	10.24	11.39	11.48	11.63	12.20
4	9.94	9.17	9.66	9.23	10.14	10.40	9.87	10.11	11.43	11.53	11.69	12.25
5	10.06	9.23	9.66	9.19	10.13	10.36	9.65	10.18	11.43	11.60	11.72	12.30
6	10.21	9.20	9.69	9.26	10.07	10.28	9.71	10.26	11.33	11.66	11.80	12.33
7	10.31	9.23	9.76	9.35	9.70	9.88	9.79	10.32	11.22	11.70	11.89	12.37
8	10.39	9.42	9.81	9.41	9.84	9.90	9.86	10.37	11.28	11.69	11.94	12.38
9	10.47	9.51	9.84	9.51	9.84	10.00	9.94	10.42	11.33	11.73	12.00	12.41
10	10.55	9.56	9.84	9.59	9.84	10.02	10.01	10.42	11.39	11.77	12.05	12.45
11	10.62	9.58	9.28	9.63	9.89	10.03	10.07	10.30	11.36	11.83	12.10	12.49
12	10.69	9.58	8.17	9.66	9.90	10.16	10.10	10.39	11.23	11.84	12.13	12.53
13	10.78	9.59	8.29	9.70	9.93	10.28	9.96	10.48	11.27	11.63	11.85	12.57
14	10.80	9.68	8.29	9.73	9.99	10.29	9.48	10.54	11.31	11.56	11.03	12.61
15	10.64	9.80	8.03	9.79	10.10	10.33	9.54	10.60	11.28	11.59	11.02	12.63
16	10.53	9.86	8.11	9.87	10.19	10.33	9.62	10.61	10.81	11.67	11.09	12.65
17	10.58	9.95	8.11	9.90	10.22	10.28	9.70	10.65	10.71	11.74	11.16	12.66
18	10.58	9.99	7.78	9.86	10.20	10.20	9.79	10.68	10.35	11.77	11.26	12.66
19	10.69	9.98	7.96	9.85	10.24	10.07	9.84	10.71	10.25	11.39	11.35	11.19
20	10.73	9.26	8.21	9.90	10.25	9.68	9.97	10.71	10.36	11.36	11.44	11.00
21	10.74	9.17	8.31	9.93	10.28	9.72	10.03	10.73	10.46	11.45	11.50	11.05
22	10.83	9.29	8.43	10.02	10.34	9.87	10.12	10.76	10.57	11.54	11.55	11.13
23	10.93	9.35	8.51	10.06	10.35	9.93	10.17	10.82	10.68	11.64	11.61	11.23
24	11.03	9.40	8.51	10.17	10.34	10.00	10.07	10.89	10.78	11.71	11.69	11.31
25	11.07	9.45	8.43	---	10.38	10.02	10.11	10.96	10.84	11.78	11.77	11.38
26	11.07	9.56	8.55	---	10.40	10.03	10.08	10.97	10.92	11.84	11.84	11.48
27	11.06	9.59	8.67	---	10.41	10.08	9.81	11.02	11.01	11.85	11.89	11.54
28	8.90	9.59	8.75	---	10.43	10.17	9.97	11.09	11.07	11.83	11.97	11.54
29	8.85	9.19	8.80	---	10.43	10.22	10.04	11.17	11.17	11.77	12.04	9.14
30	8.45	9.24	8.96	---	---	10.23	10.11	11.21	11.25	11.84	12.07	9.20
31	8.58	---	9.02	---	---	10.22	---	11.24	---	11.89	12.08	---
MEAN	10.30	9.43	8.84	9.62	10.15	10.14	9.92	10.62	11.04	11.66	11.70	11.83
MAX	11.07	9.99	9.84	10.17	10.43	10.45	10.17	11.24	11.43	11.89	12.13	12.66
MIN	8.45	8.73	7.78	9.10	9.70	9.68	9.48	10.11	10.25	11.32	11.02	9.14



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

CHESTER COUNTY

400650075514001. Local number, CH 2.

LOCATION.--Lat 40°06'55", long 75°51'20", Hydrologic Unit 02040205, at Morgantown Road, near Strubel Lake, Honeybrook Township. Owner: Privately owned.
AQUIFER.--Felsic and intermediate gneiss, granulite facies.
WELL CHARACTERISTICS.--Dug unused observation well, diameter 36 in., depth 15 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of hole in concrete porch, 0.5 ft above land-surface datum.
PERIOD OF RECORD.--September 1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.50 ft below land-surface datum, Mar. 11, 1952; lowest, 14.47 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 5.80 ft below land-surface datum, Dec. 18; lowest, 9.37 ft below land-surface datum, July 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	8.79	DEC 18	5.80	FEB 18	7.84	APR 20	8.19	JUN 21	9.00	AUG 19	9.22
NOV 20	7.24	JAN 20	7.91	MAR 19	8.23	MAY 20	8.55	JUL 20	9.37	SEP 20	8.72

395717075392301. Local number, CH 12.

LOCATION.--Lat 39°57'17", long 75°39'23", Hydrologic Unit 02040205, at Deborah's Rock Farm at State Highway 162, at Copesville. Owner: Privately owned.
AQUIFER.--Felsic and intermediate gneiss, amphibolite facies.
WELL CHARACTERISTICS.--Dug unused observation well, diameter 29 in., depth 38.5 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 248 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of wooden cover, 2.0 ft above land surface datum.
REMARKS.--Well is dry at 38.50 ft. In past, well was at least 39.2 ft deep, but has since filled with silt to 38.5 ft. Measuring point changed Dec. 26, 1990.
PERIOD OF RECORD.--July 1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.98 ft below land-surface datum, Apr. 20, 1993; lowest, 39.13 ft below land-surface datum, Oct. 18, 1951.
EXTREMES FOR CURRENT YEAR.--Highest water level, 30.28 ft below land-surface datum, Dec. 19; lowest, 35.53 ft below land-surface datum, Sept. 21

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	32.04	DEC 19	30.28	FEB 19	32.19	APR 21	33.58	JUN 22	34.86	AUG 20	34.99
NOV 20	31.18	JAN 21	31.48	MAR 19	33.54	MAY 21	33.31	JUL 21	35.50	SEP 21	35.53

394846075444901. Local number, CH 38.

LOCATION.--Lat 39°48'46", long 75°44'49", Hydrologic Unit 02040205, at New Garden Road and State Highway 41 at New Garden. Owner: Privately owned.
AQUIFER.--Wissahickon Formation.
WELL CHARACTERISTICS.--Dug observation well, diameter 46 in., depth 18.5 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 440 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of concrete cover, 0.5 ft above land surface datum.
PERIOD OF RECORD.--September 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.98 ft below land-surface datum, Dec. 18, 2003; lowest, 16.52 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 1.98 ft below land-surface datum, Dec. 18; lowest, 6.83 ft below land-surface datum, Mar. 18.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	5.03	DEC 18	1.98	FEB 18	4.15	APR 20	5.43	JUN 21	3.67	AUG 19	4.55
NOV 19	4.89	JAN 20	3.38	MAR 18	6.83	MAY 20	5.68	JUL 20	5.05	SEP 20	5.08

CHESTER COUNTY

400400075314401. Local number, CH 89.

LOCATION.--Lat 40°04'00", long 75°31'44", Hydrologic Unit 02040203, at quarry on Yellow Springs Road, near Devault.
Owner: U.S. Geological Survey/Trammell Crow
AQUIFER.--Elbrook limestone.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 265 ft, cased to 112 ft.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 365 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.62 ft above land-surface datum.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 122.66 ft below land-surface datum, Feb. 18, 2004; lowest, 183.77 ft below land-surface datum, Feb. 21, 1989.
EXTREMES FOR CURRENT YEAR.--Highest water level, 122.66 ft below land-surface datum, Feb. 18; lowest, 132.83 ft below land-surface datum, Oct. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	132.83	DEC 18	123.23	FEB 18	122.66	APR 20	123.86	JUN 21	127.20	AUG 19	128.11
NOV 19	127.19	JAN 21	123.83	MAR 18	124.34	MAY 20	125.45	JUL 20	126.34	SEP 20	128.16

400453075255601. Local number, CH 210.

LOCATION.--Lat 40°04'53", long 75°25'56", Hydrologic Unit 02040203, at Red Coat Lane, near Valley Forge Park.
Owner: Privately owned.
AQUIFER.--Elbrook limestone.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 12 in., depth 600 ft, cased to 26 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.00 ft below land-surface datum, Feb. 26, 1979; lowest, 28.20 ft below land-surface datum, Sept. 19, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 16.12 ft below land-surface datum, Dec 18; lowest, 21.75 ft below land-surface datum, June 21.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	21.22	DEC 18	16.12	FEB 18	19.44	APR 20	18.63	JUN 21	21.75	AUG 19	20.10
NOV 19	18.65	JAN 20	19.39	MAR 18	21.03	MAY 20	19.74	JUL 20	21.33	SEP 20	19.16

394457075581601. Local number, CH 254.

LOCATION.--Lat 39°44'57", long 75°58'16", Hydrologic Unit 02060002, at Mt. Pleasant Road, near Oxford.
Owner: Privately owned.
AQUIFER.--Wissahickon Formation.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 6 in., depth 250 ft, cased to 102 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 517 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land-surface datum.
PERIOD OF RECORD.--January 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.16 ft below land-surface datum, April 21, 1997; lowest, 31.16 ft below land-surface datum, Oct. 21, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 17.25 ft below land-surface datum, Aug. 19; lowest, 21.61 ft below land-surface datum, Oct. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	21.61	DEC 18	19.74	FEB 18	18.69	APR 20	18.47	JUN 21	17.63	AUG 19	17.25
NOV 19	20.53	JAN 20	18.76	MAR 18	19.07	MAY 20	18.00	JUL 20	17.65	SEP 20	18.05

CHESTER COUNTY

395701075561601. Local number, CH 1201.

LOCATION.--Lat 39°57'01", long 75°56'46", Hydrologic Unit 02050306, at State Highway 372, near Atglen.
Owner: A Duie Pyle Inc.
AQUIFER.--Conestoga limestone.
WELL CHARACTERISTICS.--Drilled withdrawal commercial well, diameter 6 in., depth 83 ft, cased to 33 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 502 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.
PERIOD OF RECORD.--October 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.80 ft below land-surface datum, Dec. 19, 1996; lowest, 8.49 ft below land-surface datum, Sept. 18, 1985.
EXTREMES FOR CURRENT YEAR.--Highest water level, 3.15 ft below land-surface datum, Dec. 18; lowest, 5.20 ft below land-surface datum, July 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	4.54	DEC 18	3.15	FEB 18	4.17	APR 20	4.65	JUN 21	4.65	AUG 19	4.74
NOV 19	3.95	JAN 20	4.17	MAR 18	4.72	MAY 20	4.89	JUL 20	5.20	SEP 20	5.03

400412075404301. Local number, CH 1229.

LOCATION.--Lat 40°04'12", long 75°40'43", Hydrologic Unit 02040205, State Highway 100 and Pennsylvania Turnpike, near Eagle.
Owner: Privately owned.
AQUIFER.--Graphitic felsic gneiss, amphibolite facies.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 165 ft, cased to 31 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.
PERIOD OF RECORD.--April 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.15 ft below land-surface datum, April 21, 1952; lowest, 44.09 ft below land-surface datum, Aug. 20, 1985.
EXTREMES FOR CURRENT YEAR.--Highest water level, 29.29 ft below land-surface datum, Dec. 19; lowest, 36.34 ft below land-surface datum, Sept. 21.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	33.46	DEC 19	29.29	FEB 19	33.85	APR 21	33.57	JUN 22	35.52	AUG 20	35.71
NOV 20	31.40	JAN 21	32.47	MAR 19	35.06	MAY 21	34.29	JUL 21	36.00	SEP 21	36.34

400645075411501. Local number, CH 1247.

LOCATION.--Lat 40°06'45", long 75°41'15", Hydrologic Unit 020402053, at State Highway 401 and 100, at Ludwigs Corner.
Owner: Privately owned.
AQUIFER.--Felsic and intermediate gneiss, granulite facies.
WELL CHARACTERISTICS.--Dug unused observation well, diameter 4 ft., depth 75 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 610 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Well is dry at 34.70 ft.
PERIOD OF RECORD.--December 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.61 ft below land-surface datum, April 21, 1983; lowest, 36.14 ft below land-surface datum, Jan. 22, 1996.
EXTREMES FOR CURRENT YEAR.--Highest water level, 26.90 ft below land-surface datum, Dec. 19; lowest, 28.61 ft below land-surface datum, Sept. 21.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	28.22	DEC 19	26.90	FEB 19	28.11	APR 21	27.58	JUN 22	27.27	AUG 20	28.26
NOV 20	27.75	JAN 21	27.63	MAR 19	28.50	MAY 21	27.75	JUL 21	28.46	SEP 21	28.61

CHESTER COUNTY

395540075332601. Local number, CH 1387.

LOCATION.--Lat 39°55'40", long 75°33'26", Hydrologic Unit 02040202, at State Highway 926 and Northgate Road, near Westtown.
Owner: Privately owned.
AQUIFER.--Felsic and intermediate gneiss, amphibolite facies.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 5 in., depth 159 ft, cased to 41 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 329 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--September 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.28 ft below land-surface datum, Dec. 19, 1996; lowest, 39.45 ft below land-surface datum, Oct. 21, 1977.
EXTREMES FOR CURRENT YEAR.--Highest water level, 28.78 ft below land-surface datum, Dec. 18; lowest, 31.71 ft below land-surface datum, Sept. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	31.37	DEC 18	28.78	FEB 18	30.45	APR 20	30.88	JUN 21	31.63	AUG 19	30.06
NOV 19	30.26	JAN 20	29.98	MAR 18	31.41	MAY 20	30.90	JUL 20	31.67	SEP 20	31.71

400956075391501. Local number, CH 1571.

LOCATION.--Lat 40°09'56", long 75°39'15", Hydrologic Unit 02040203, at Pughtown Road and Bertolet School Road, near Pughtown, East Vincent Township.
Owner: Privately owned.
AQUIFER.--Stockton Formation.
WELL CHARACTERISTICS.--Dug unused observation well, diameter unknown, depth 16 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 282 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.
PERIOD OF RECORD.--June 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.55 ft below land-surface datum, Dec. 19, 2003, June 20, 2003; lowest, 11.74 ft below land-surface datum, Dec. 23, 1998.
EXTREMES FOR CURRENT YEAR.--Highest water level, 4.55 ft below land-surface datum, Dec. 19; lowest, 6.62 ft below land-surface datum, June 22.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	5.77	DEC 19	4.55	FEB 19	5.97	APR 21	5.10	JUN 22	6.62	AUG 20	5.71
NOV 20	4.63	JAN 21	6.30	MAR 19	5.12	MAY 21	5.28	JUL 21	6.04	SEP 21	5.35

394757075432101. Local number, CH 1921.

LOCATION.--Lat 39°47'57", long 75°43'21", Hydrologic Unit 02040205, at Ewart Road, at Kaolin.
Owner: Privately owned.
AQUIFER.--Wissahickon Formation.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 65 ft, cased to 24 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 405 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.
PERIOD OF RECORD.--September 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.87 ft below land-surface datum, Feb. 18, 2004; lowest, 60.96 ft below land-surface datum, Jan. 21, 1986.
EXTREMES FOR CURRENT YEAR.--Highest water level, 34.87 ft below land-surface datum, Feb. 18; lowest, 38.16 ft below land-surface datum, Oct. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	38.16	DEC 18	35.59	FEB 18	34.87	APR 20	35.54	JUN 21	35.37	AUG 19	35.02
NOV 19	37.05	JAN 20	34.90	MAR 18	35.68	MAY 20	35.51	JUL 20	35.48	SEP 20	35.67

CHESTER COUNTY

400242075484301. Local number, CH 2273.

LOCATION.--Lat 40°02'42", long 75°48'43", Hydrologic Unit 02040205, at Culbertson Run Road and State Highway 82, West Brandywine Township. Owner: U. S. Geological Survey.
AQUIFER.--Felsic gneiss, amphibolite facies.
WELL CHARACTERISTICS.--Drilled unused artesian observation well, diameter 6 in., depth 298 ft, cased to 45 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 590 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder platform, 4.55 ft above land-surface datum.
PERIOD OF RECORD.-October 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.49 ft above land-surface datum, Dec. 19, 1996; lowest, 4.91 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 1.53 ft above land-surface datum, Dec. 18; lowest, .20 ft above land-surface datum, Sept. 20.

DEPTH ABOVE (-) OR BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	-1.30	DEC 18	-1.53	FEB 18	-1.28	APR 20	-1.03	JUN 21	-.75	AUG 19	-.54
NOV 20	-1.45	JAN 20	-1.33	MAR 19	-.85	MAY 20	-1.10	JUL 20	-.87	SEP 20	-.20

400325075332501. Local number, CH 2313.

LOCATION.--Lat 40°03'25", long 75°33'25", Hydrologic Unit 02040203, at Moores Road and Sidley Road, East Whiteland Township. Owner: Philadelphia Suburban Water Co.
AQUIFER.--Elbrook limestone.
WELL CHARACTERISTICS.--Drilled unused artesian observation well, diameter 8 to 20 in., depth 507 ft, cased to 22 ft with 20 in. diameter casing.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of inner casing, 2.4 ft above land-surface datum.
PERIOD OF RECORD.--April 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.50 ft above land-surface datum, April 21, 1983; lowest, 21.65 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 1.41 ft below land-surface datum, Dec. 18; lowest, 7.35 ft below land-surface datum, July 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	6.22	DEC 18	1.41	FEB 18	3.44	APR 20	4.15	JUN 21	6.54	AUG 19	7.28
NOV 19	3.73	JAN 20	2.62	MAR 18	4.90	MAY 20	4.76	JUL 20	7.35	SEP 20	7.21

400847075414701. Local number, CH 2328.

LOCATION.--Lat 40°08'47", long 75°41'47", Hydrologic Unit 02040203, at Prizer Road, near Coventryville. Owner: U.S. Geological Survey.
AQUIFER.--Graphitic felsic gneiss, granulite facies.
WELL CHARACTERISTICS.--Drilled unused artesian observation well, diameter 6 in., depth 323 ft, cased to 98 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 452 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.5 ft above land-surface datum.
PERIOD OF RECORD.--May 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, .30 ft above land-surface datum, Dec. 18, 1996; lowest, 7.38 ft below land-surface datum, Sept. 19, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, .22 ft above land-surface datum, Dec. 19; lowest, 2.04 ft below land-surface datum, June 22.

DEPTH ABOVE (-) OR BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	.53	DEC 19	-.22	FEB 19	1.38	APR 21	1.63	JUN 22	2.04	AUG 20	.89
NOV 20	.02	JAN 21	.83	MAR 19	1.86	MAY 21	1.60	JUL 21	1.52	SEP 21	.51

CHESTER COUNTY

400133075450001. Local number, CH 2456.

LOCATION.--Lat 40°01'33", long 75°45'00", Hydrologic Unit 02040205, at State Highway 322, at Guthriesville.
Owner: East Brandywine Baptist Church.
AQUIFER.--Felsic gneiss, amphibolite facies.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 225 ft, cased to 33 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.9 ft above land-surface datum.
PERIOD OF RECORD.--February 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.00 ft below land-surface datum, Jan. 22, 1996; lowest, 22.00 ft below land-surface datum, Jan. 21, 1986.
EXTREMES FOR CURRENT YEAR.--Highest water level, 18.20 ft below land-surface datum, Dec. 18; lowest, 19.39 ft below land-surface datum, Mar. 19.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	18.90	DEC 18	18.20	FEB 18	19.27	APR 20	18.78	JUN 21	19.10	AUG 19	18.85
NOV 20	18.62	JAN 20	19.12	MAR 19	19.39	MAY 20	18.93	JUL 20	18.95	SEP 20	18.79

400039075335201. Local number, CH 2457.

LOCATION.--Lat 40°00'39", long 75°33'52", Hydrologic Unit 02040202, at Upton Circle and Green Hill Road, at Hersheys Mill.
Owner: Philadelphia Suburban Water Co.
AQUIFER.--Wissahickon Formation.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 285 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.
PERIOD OF RECORD.--February 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.35 ft below land-surface datum, Dec. 18, 1996; lowest, 26.08 ft below land-surface datum, Oct. 20, 1986.
EXTREMES FOR CURRENT YEAR.--Highest water level, 13.17 ft below land-surface datum, Dec. 18; lowest, 19.29 ft below land-surface datum, July 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	17.72	DEC 18	13.17	FEB 18	17.37	APR 20	16.84	JUN 21	18.99	AUG 19	17.77
NOV 19	14.74	JAN 20	15.56	MAR 18	18.86	MAY 20	16.80	JUL 20	19.29	SEP 20	18.31

400456075320301. Local number, CH 2561.

LOCATION.--Lat 40°04'27", long 75°32'03", Hydrologic Unit 02040203, at Yellow Springs Road and State Highway 29, at Devault.
Owner: Privately owned.
AQUIFER.--Elbrook limestone.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 240 ft, cased to 229 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 338 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.90 ft above land-surface datum.
PERIOD OF RECORD.--January 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 89.59 ft below land-surface datum, Dec. 18, 2003; lowest, 178.32 ft below land-surface datum, Sept. 21, 1992.
EXTREMES FOR CURRENT YEAR.--Highest water level, 89.59 ft below land-surface datum, Dec. 18; lowest, 105.73 ft below land-surface datum, Oct. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	105.73	DEC 18	89.59	FEB 18	93.89	APR 20	96.05	JUN 21	98.34	AUG 19	96.42
NOV 19	99.19	JAN 20	94.52	MAR 18	97.77	MAY 20	97.18	JUL 20	96.24	SEP 20	96.38

CHESTER COUNTY

395225075422001. Local number, CH 2584.

LOCATION.--Lat 39°52'25", long 75°42'20", Hydrologic Unit 02040205, at Walnut Road near intersection of Rt. 926 near Willowdale. Owner: Privately owned.
AQUIFER.--Cockeysville marble.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 365 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.90 ft above land-surface datum.
PERIOD OF RECORD.--April 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.16 ft below land-surface datum, Dec. 18, 2003; lowest, 24.66 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 15.16 ft below land-surface datum, Dec. 18; lowest, 19.62 ft below land-surface datum, July 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	18.28	DEC 18	15.16	FEB 18	19.40	APR 20	17.36	JUN 21	19.27	AUG 19	17.52
NOV 19	17.58	JAN 20	18.66	MAR 18	19.47	MAY 20	18.55	JUL 20	19.62	SEP 20	18.48

394624075444001. Local number, CH 2663.

LOCATION.--Lat 39°46'24", long 75°44'40", Hydrologic Unit 02040205, at Broad Run Road and Newark Road, New Garden Township. Owner: Privately owned.
AQUIFER.--Cockeysville marble.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 150 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 220 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.20 ft above land-surface datum. Prior to May 21, 2001 measuring point was 1.30 ft above land-surface datum.
PERIOD OF RECORD.--January 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.65 ft below land-surface datum, Sept. 23, 2003; lowest, 11.67 ft below land-surface datum, July 18, 1985.
EXTREMES FOR CURRENT YEAR.--Highest water level, 8.43 ft below land-surface datum, Dec. 18; lowest, 9.90 ft below land-surface datum, Mar. 18.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.56	DEC 18	8.43	FEB 18	9.88	APR 20	9.55	JUN 21	8.99	AUG 23	9.35
NOV 19	9.40	JAN 20	9.67	MAR 18	9.90	MAY 20	9.78	JUL 20	9.12	SEP 20	9.39

400358075311301. Local number, CH 3289.

LOCATION.--Lat 40°03'58", long 75°31'13", Hydrologic Unit 02040203, at Church Road, near Cedar Hollow. Owner: Trammell Crow.
AQUIFER.--Elbrook limestone.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 8 in., depth 202 ft, cased to 40 ft.
INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel. Monthly measurements for Feb. to Sept. made with electric tape.
DATUM.--Elevation of land-surface datum is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.44 ft below land-surface datum, Dec. 18, 1996; lowest, 33.18 ft below land-surface datum, Sept. 19, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 10.55 ft below land-surface datum, Dec. 18; lowest, 21.58 ft below land-surface datum, June 21.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	21.25	DEC 18	10.55	FEB 18	17.92	APR 20	16.53	JUN 21	21.58	AUG 19	20.71
NOV 19	17.43	JAN 20	19.48	MAR 18	19.64	MAY 20	20.07	JUL 20	20.97	SEP 20	12.77

CHESTER COUNTY

395141075525401. Local number, CH 5422.

LOCATION.--Lat 39°51'41", long 75°52'54", Hydrologic Unit 02060002, on Rt. 796 near intersection of Colton Drive at Daleville. Owner: Privately owned.
AQUIFER.--Wissahickon schist.
WELL CHARACTERISTICS.--Drilled unused irrigation well, diameter 6 in., depth 49.4 ft.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 619 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.4 ft above land-surface datum.
PERIOD OF RECORD.--July 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.20 ft below land-surface datum, Dec. 18, 2003; lowest, 26.38 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 13.20 ft below land-surface datum, Dec. 18; lowest, 17.65 ft below land-surface datum, Mar. 18.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	16.70	DEC 18	13.20	FEB 18	17.12	APR 20	16.00	JUN 21	13.91	AUG 19	17.21
NOV 19	15.58	JAN 20	16.28	MAR 18	17.65	MAY 20	15.83	JUL 20	16.64	SEP 20	17.34

401405075400301. Local number, CH 6513.

LOCATION.--Lat 40°14'05", long 75°40'03", Hydrologic Unit 02040203, at Laurelwood Road near Rt. 724 at Pottstown Landing. Owner: Privately owned.
AQUIFER.--Brunswick Formation.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 210 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.40 ft above land-surface datum.
PERIOD OF RECORD.--January 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.38 ft below land-surface datum, Jan. 18, 2002; lowest, 19.39 ft below land-surface datum, Feb. 15, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 12.52 ft below land-surface datum, Dec. 19; lowest, 15.73 ft below land-surface datum, June 22.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	13.88	DEC 19	12.52	FEB 19	14.82	APR 21	14.16	JUN 22	15.73	AUG 20	13.56
NOV 20	13.17	JAN 21	14.55	MAR 19	15.03	MAY 21	14.93	JUL 21	14.11	SEP 21	13.67

395201075363001. Local number, CH 6516.

LOCATION.--Lat 39°52'01", long 75°36'30", Hydrologic Unit 02040205, at Hillendale Road near Virginia Place near Chaddsford Junction. Owner: Privately owned.
AQUIFER.--Felsic Gneiss, Hornblende-bearing.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 100 ft.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 295 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.20 ft above land-surface datum.
PERIOD OF RECORD.--November 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, .25 ft above land-surface datum, Dec. 18, 2003; lowest, 7.75 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, .25 ft above land-surface datum, Dec. 18; lowest, .04 ft below land-surface datum, Jan. 20.

DEPTH ABOVE (-) OR BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	-.16	DEC 18	-.25	FEB 18	-.03	APR 20	.02	JUN 21	-.06	AUG 19	-.12
NOV 19	-.20	JAN 20	.04	MAR 18	.03	MAY 20	-.11	JUL 20	-.07	SEP 20	-.08

CHESTER COUNTY

400247075532401. Local number, CH 6517.

LOCATION.--Lat 40°02'47", long 75°53'24", Hydrologic Unit 02040205, at Telegraph Road near Sandy Hill Road west of Martins Corner. Owner: Privately owned.
AQUIFER.--Chickies Quartzite.
WELL CHARACTERISTICS.--Drilled unused irrigation well, diameter 6 in.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 940 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.20 ft above land-surface datum.
PERIOD OF RECORD.--November 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.54 ft below land-surface datum, June 21, 2004; lowest, 75.83 ft below land-surface datum, Oct. 21, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 54.54 ft below land-surface datum, June 21; lowest, 63.13 ft below land-surface datum, Oct. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	63.13	DEC 19	59.62	FEB 18	57.54	APR 20	55.88	JUN 21	54.54	AUG 19	55.73
NOV 20	61.59	JAN 20	58.58	MAR 19	57.10	MAY 20	54.83	JUL 20	55.12	SEP 21	56.93

394903075581901. Local number, CH 6518.

LOCATION.--Lat 39°49'03", long 75°58'19", Hydrologic Unit 02050306, at Wyncote Golf Club on Rt. 10 near Hayesville. Owner: Wyncote Golf Club.
AQUIFER.--Peters Creek Schist.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 37 ft.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 545 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--November 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.30 ft below land-surface datum, Dec. 18, 2003; lowest, 27.25 ft below land-surface datum, Sept. 18, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 17.30 ft below land-surface datum, Dec. 18; lowest, 21.57 ft below land-surface datum, Sept. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	19.59	DEC 18	17.30	FEB 18	20.43	APR 20	19.75	JUN 21	19.63	AUG 19	20.34
NOV 19	18.56	JAN 20	18.90	MAR 18	21.02	MAY 20	19.52	JUL 20	19.78	SEP 20	21.57

395634075442601. Local number, CH 6519.

LOCATION.--Lat 39°56'34", long 75°44'26", Hydrologic Unit 02040205, at Youngs Road near Stargazer Road east of Laurel. Owner: Privately owned.
AQUIFER.--Peters Creek Schist.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 5 in., depth 400 ft.
INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land-surface datum is 475 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.10 ft above land-surface datum.
PERIOD OF RECORD.--January 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 41.55 ft below land-surface datum, Sept. 23, 2003; lowest, 72.47 ft below land-surface datum, Aug. 20, 2004.
EXTREMES FOR CURRENT YEAR.--Highest water level, 42.25 ft below land-surface datum, Dec. 19; lowest, 72.47 ft below land-surface datum, Aug. 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
INSTANTANEOUS VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	44.19	DEC 19	42.25	FEB 19	47.80	APR 21	45.41	JUN 22	71.40	AUG 20	72.47
NOV 20	46.05	JAN 21	47.42	MAR 19	48.96	MAY 21	44.81	JUL 21	72.12	SEP 21	72.42

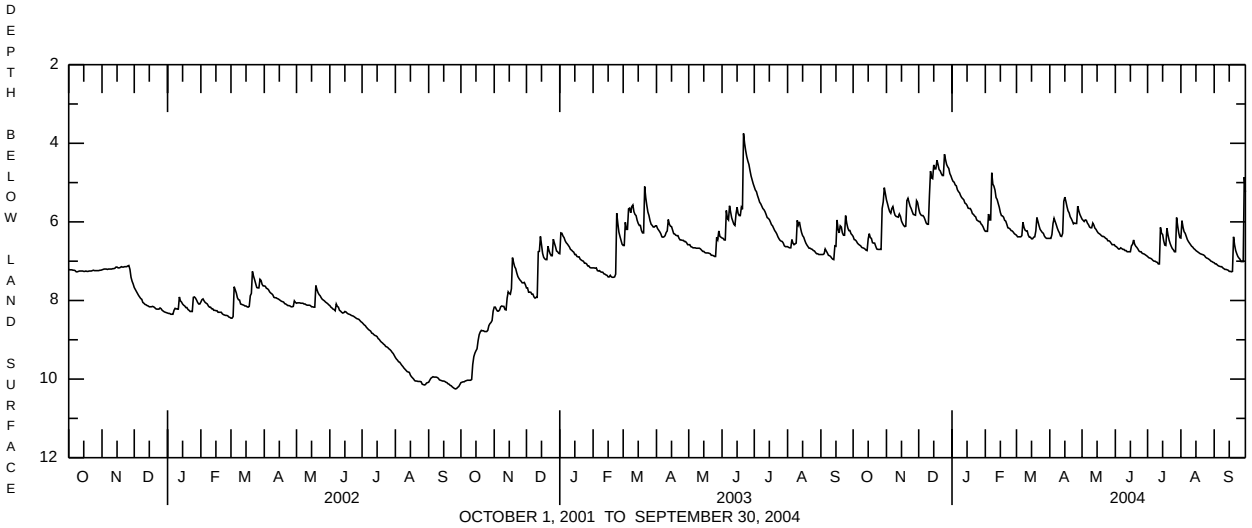
DELAWARE COUNTY

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 Precambian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 300 ft, casing information not available.
INSTRUMENTATION.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--April 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 1.50 ft below land-surface datum, Dec. 15, 1996; lowest, 10.25 ft below land-surface datum, Sept. 26, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 3.72 ft below land-surface datum, Sept. 29; lowest, 7.27 ft below land-surface datum, Sept. 17.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.37	5.44	5.66	4.91	6.24	6.34	6.42	5.93	6.62	6.88	6.41	7.04
2	6.45	5.54	5.77	4.97	6.24	6.38	6.42	5.96	6.63	6.91	5.97	7.07
3	6.46	5.65	5.82	4.99	6.24	6.38	6.32	5.99	6.66	6.92	6.14	7.07
4	6.49	5.74	5.84	5.06	5.80	6.38	6.04	5.95	6.69	6.93	6.25	7.10
5	6.54	5.78	5.84	5.08	5.95	6.38	5.91	5.96	6.69	6.95	6.29	7.12
6	6.57	5.66	5.88	5.18	5.95	6.35	5.99	6.03	6.66	6.98	6.37	7.13
7	6.59	5.61	5.95	5.23	4.75	6.01	6.07	6.07	6.68	7.00	6.45	7.14
8	6.61	5.74	6.03	5.26	5.04	6.14	6.16	6.13	6.70	7.00	6.50	7.14
9	6.65	5.83	6.06	5.33	5.09	6.21	6.23	6.15	6.70	7.02	6.54	7.17
10	6.66	5.86	6.06	5.38	5.19	6.23	6.28	6.15	6.73	7.03	6.58	7.19
11	6.67	5.87	5.32	5.41	5.38	6.23	6.36	6.03	6.73	7.07	6.62	7.21
12	6.69	5.88	4.71	5.44	5.43	6.34	6.37	6.08	6.76	7.07	6.64	7.21
13	6.72	5.80	4.88	5.52	5.53	6.39	6.29	6.16	6.76	6.14	6.68	7.22
14	6.73	5.86	4.90	5.54	5.63	6.39	5.48	6.19	6.76	6.29	6.70	7.23
15	6.43	5.98	4.55	5.58	5.76	6.43	5.37	6.24	6.76	6.32	6.73	7.26
16	6.30	6.04	4.65	5.65	5.84	6.43	5.48	6.28	6.61	6.48	6.75	7.26
17	6.40	6.09	4.65	5.66	5.85	6.39	5.61	6.30	6.57	6.59	6.77	7.27
18	6.42	6.12	4.43	5.66	5.88	6.38	5.72	6.32	6.46	6.60	6.79	7.26
19	6.53	6.11	4.54	5.71	5.96	6.23	5.77	6.35	6.57	6.16	6.81	6.38
20	6.54	5.46	4.67	5.79	5.98	5.89	5.87	6.37	6.62	6.33	6.82	6.59
21	6.54	5.40	4.70	5.81	6.06	5.99	5.92	6.37	6.65	6.46	6.83	6.73
22	6.62	5.50	4.77	5.85	6.15	6.10	5.98	6.39	6.69	6.55	6.84	6.81
23	6.69	5.60	4.82	5.87	6.16	6.19	6.05	6.42	6.74	6.62	6.86	6.88
24	6.70	5.66	4.82	5.95	6.18	6.23	6.03	6.43	6.76	6.68	6.90	6.92
25	6.70	5.74	4.28	5.97	6.22	6.27	6.04	6.48	6.76	6.71	6.92	6.95
26	6.70	5.81	4.42	5.99	6.23	6.29	6.04	6.48	6.80	6.76	6.93	7.01
27	6.70	5.82	4.54	5.99	6.26	6.36	5.60	6.50	6.81	6.76	6.95	7.01
28	5.66	5.83	4.60	6.05	6.30	6.40	5.72	6.54	6.82	5.89	6.97	7.01
29	5.49	5.46	4.64	6.08	6.32	6.42	5.81	6.58	6.84	6.10	7.00	4.86
30	5.13	5.51	4.77	6.13	---	6.42	5.87	6.58	6.86	6.28	7.01	5.24
31	5.28	---	4.83	6.20	---	6.42	---	6.58	---	6.40	7.03	---
MEAN	6.42	5.75	5.08	5.59	5.85	6.29	5.97	6.26	6.70	6.64	6.68	6.92
MAX	6.73	6.12	6.06	6.20	6.32	6.43	6.42	6.58	6.86	7.07	7.03	7.27
MIN	5.13	5.40	4.28	4.91	4.75	5.89	5.37	5.93	6.46	5.89	5.97	4.86



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

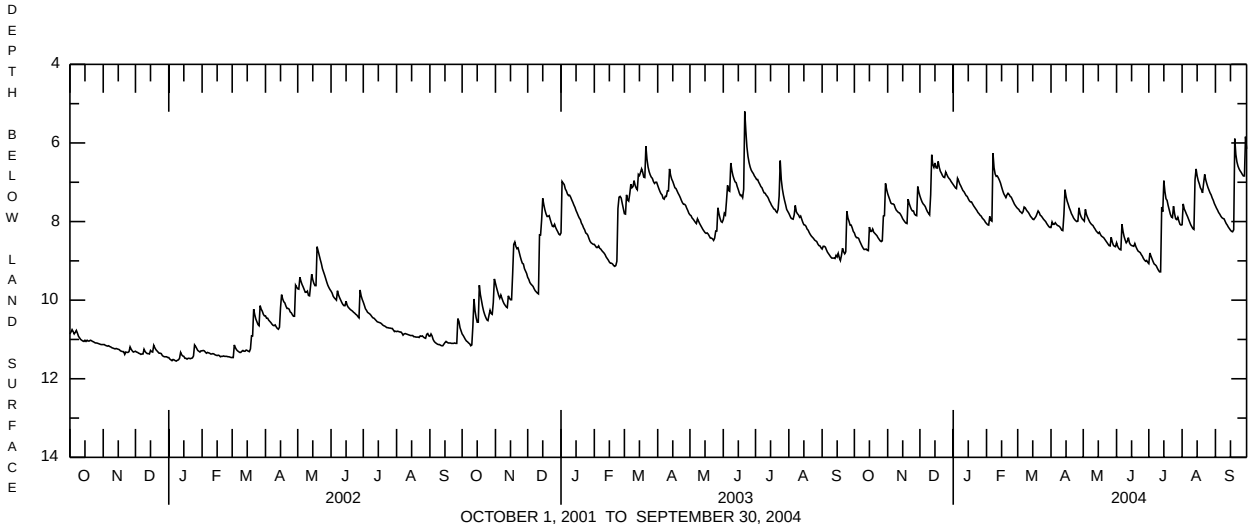
LEBANON COUNTY

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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 444 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--July 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 2.00 ft below land-surface datum, Sept. 18, 2004; lowest, 11.55 ft below land-surface datum, Jan. 8, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 2.00 ft below land-surface datum, Sept. 18; lowest, 9.28 ft below land-surface datum, July 11, 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.29	7.29	7.35	7.06	8.05	7.67	8.15	7.96	8.54	9.07	8.08	7.60
2	8.37	7.37	7.43	7.10	8.08	7.69	8.01	7.99	8.63	8.80	7.55	7.66
3	8.41	7.45	7.50	7.14	8.09	7.74	8.07	7.69	8.68	8.88	7.68	7.71
4	8.41	7.53	7.55	7.16	7.87	7.76	8.07	7.82	8.71	8.95	7.74	7.77
5	8.43	7.55	7.58	6.90	7.97	7.79	8.03	7.89	8.72	9.02	7.81	7.81
6	8.50	7.55	7.62	6.96	7.99	7.75	8.07	7.95	8.07	9.08	7.87	7.86
7	8.56	7.57	7.69	7.04	6.26	7.63	8.10	8.01	8.25	9.10	7.94	7.90
8	8.62	7.65	7.75	7.09	6.63	7.65	8.11	8.05	8.38	9.13	8.01	7.92
9	8.67	7.71	7.79	7.15	6.79	7.70	8.13	8.08	8.47	9.19	8.08	7.93
10	8.71	7.74	7.83	7.21	6.85	7.74	8.17	8.10	8.54	9.24	8.13	7.99
11	8.71	7.77	7.32	7.24	6.84	7.77	8.22	8.15	8.50	9.28	8.18	8.05
12	8.70	7.78	6.30	7.29	6.89	7.82	8.23	8.19	8.41	9.28	8.20	8.09
13	8.73	7.82	6.55	7.34	6.95	7.87	7.82	8.24	8.54	7.63	6.94	8.14
14	8.74	7.87	6.62	7.36	7.02	7.90	7.19	8.27	8.59	7.75	6.66	8.18
15	8.14	7.93	6.51	7.42	7.12	7.94	7.36	8.30	8.61	6.96	6.84	8.22
16	8.25	7.97	6.63	7.47	7.21	7.95	7.48	8.27	8.62	7.24	6.96	8.25
17	8.25	8.01	6.64	7.50	7.29	7.91	7.56	8.33	8.63	7.42	7.04	8.26
18	8.19	8.04	6.47	7.50	7.34	7.87	7.65	8.37	8.56	7.46	7.14	8.21
19	8.27	8.05	6.62	7.55	7.39	7.80	7.72	8.39	8.64	7.59	7.19	5.89
20	8.30	7.43	6.72	7.60	7.32	7.73	7.80	8.41	8.70	7.70	7.27	6.29
21	8.33	7.54	6.77	7.64	7.28	7.77	7.85	8.45	8.75	7.81	7.03	6.48
22	8.36	7.62	6.83	7.68	7.31	7.84	7.91	8.49	8.77	7.88	6.80	6.59
23	8.41	7.69	6.87	7.72	7.36	7.86	7.95	8.53	8.79	7.90	6.94	6.66
24	8.45	7.73	6.88	7.77	7.38	7.90	7.98	8.57	8.84	7.61	7.04	6.71
25	8.49	7.73	6.74	7.80	7.44	7.94	8.00	8.61	8.88	7.80	7.13	6.75
26	8.51	7.81	6.80	7.84	7.50	7.97	7.99	8.62	8.94	7.93	7.20	6.80
27	8.49	7.84	6.86	7.86	7.56	8.00	7.65	8.40	8.98	7.95	7.27	6.84
28	7.86	7.85	6.90	7.91	7.60	8.05	7.80	8.52	9.01	7.89	7.32	6.84
29	7.85	7.11	6.93	7.94	7.64	8.09	7.88	8.60	8.99	7.99	7.40	5.84
30	7.03	7.25	6.98	7.97	---	8.13	7.93	8.63	9.04	8.07	7.46	6.15
31	7.18	---	7.02	8.02	---	8.15	---	8.64	---	8.09	7.54	---
MEAN	8.33	7.67	7.03	7.46	7.35	7.85	7.90	8.27	8.66	8.25	7.43	7.38
MAX	8.74	8.05	7.83	8.02	8.09	8.15	8.23	8.64	9.04	9.28	8.20	8.26
MIN	7.03	7.11	6.30	6.90	6.26	7.63	7.19	7.69	8.07	6.96	6.66	5.84



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

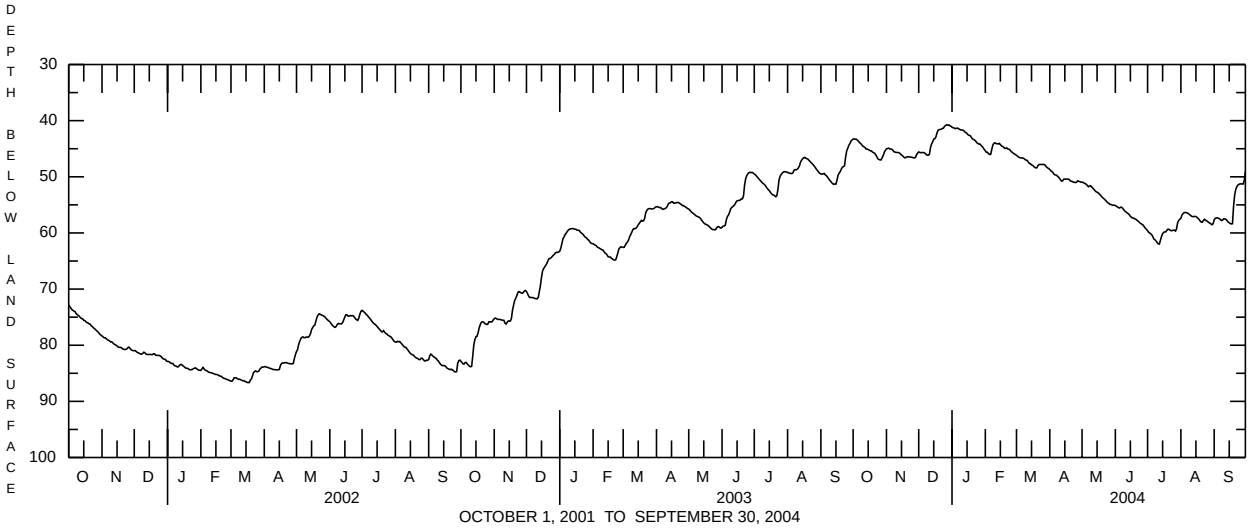
LEHIGH COUNTY

403429075392401. Local number, LE 644.

LOCATION.--Lat 40°34'29", long 75°39'24", Hydrologic Unit 02040106, at Haafsville.
Owner: Privately owned.
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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, and water-quality records for 1973-75 are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--January 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 33.72 ft below land-surface datum, Apr. 3, 1994; lowest, 93.42 ft below land-surface datum, Feb. 6, 1971.
EXTREMES FOR CURRENT YEAR.--Highest water level, 40.61 ft below land-surface datum, Dec. 30; lowest, 61.99 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.27	45.04	45.57	41.17	45.37	46.16	48.70	50.95	55.13	59.59	57.39	57.66
2	43.25	44.95	45.66	41.25	45.62	46.35	48.93	50.98	55.25	59.88	56.81	57.38
3	43.31	44.89	45.70	41.31	45.64	46.48	49.06	51.14	55.36	60.03	56.56	57.35
4	43.31	45.03	45.69	41.42	45.88	46.59	49.27	51.22	55.50	60.16	56.40	57.29
5	43.47	45.05	45.67	41.36	46.02	46.61	49.57	51.34	55.56	60.35	56.35	57.40
6	43.69	45.11	45.70	41.32	45.99	46.66	49.66	51.56	55.41	60.72	56.37	57.48
7	43.92	45.27	45.83	41.43	45.10	46.65	49.69	51.77	55.44	61.11	56.44	57.68
8	44.07	45.54	46.04	41.53	44.36	46.75	49.85	51.65	55.66	61.24	56.55	57.80
9	44.30	45.60	46.16	41.64	44.03	46.94	50.05	51.58	55.89	61.47	56.72	57.66
10	44.54	45.65	46.16	41.67	43.95	47.03	50.25	51.81	56.15	61.73	56.87	57.46
11	44.65	45.67	45.97	41.69	44.08	47.08	50.55	52.01	56.26	61.94	57.03	57.50
12	44.79	45.68	44.79	41.79	44.11	47.38	50.78	52.23	56.43	61.99	57.10	57.60
13	45.05	45.74	44.15	42.02	44.15	47.63	50.71	52.45	56.57	61.28	57.09	57.81
14	45.05	45.93	43.79	42.14	44.05	47.66	50.41	52.64	56.75	60.62	57.04	58.06
15	45.14	46.11	43.28	42.30	44.24	47.89	50.41	52.75	57.04	60.14	57.09	58.18
16	45.25	46.24	43.21	42.52	44.50	47.95	50.41	52.84	57.21	59.89	57.23	58.33
17	45.37	46.48	42.92	42.62	44.58	48.15	50.41	53.08	57.34	59.82	57.40	58.40
18	45.39	46.62	42.20	42.68	44.72	48.33	50.42	53.25	57.38	59.80	57.61	58.35
19	45.59	46.57	41.73	42.96	44.94	48.41	50.46	53.46	57.45	59.52	57.89	55.26
20	45.71	46.46	41.59	43.24	44.93	48.40	50.70	53.67	57.57	59.33	58.07	53.30
21	45.79	46.41	41.57	43.34	44.86	47.99	50.80	53.85	57.70	59.36	58.08	52.30
22	46.08	46.46	41.52	43.47	45.05	47.81	50.83	54.01	57.88	59.50	57.73	51.78
23	46.40	46.47	41.39	43.62	45.09	47.81	50.95	54.21	58.02	59.60	57.56	51.48
24	46.80	46.49	41.35	43.91	45.22	47.78	50.98	54.45	58.25	59.58	57.75	51.35
25	46.92	46.54	41.02	44.04	45.50	47.81	51.02	54.63	58.36	59.49	57.84	51.25
26	46.99	46.61	40.85	44.18	45.62	47.79	50.95	54.74	58.48	59.52	57.99	51.26
27	46.99	46.62	40.76	44.16	45.80	47.84	50.72	54.91	58.63	59.66	58.15	51.29
28	46.62	46.55	40.79	44.39	45.93	47.99	50.81	54.92	58.93	59.22	58.25	51.28
29	46.18	46.07	40.75	44.60	46.04	48.26	50.86	55.03	59.17	58.16	58.41	50.59
30	45.64	45.79	40.92	44.83	---	48.42	50.96	55.06	59.38	57.76	58.54	49.11
31	45.29	---	40.99	45.13	---	48.54	---	55.05	---	57.55	58.35	---
MEAN	45.12	45.92	43.35	42.70	45.01	47.52	50.31	53.01	57.01	60.00	57.38	55.32
MAX	46.99	46.62	46.16	45.13	46.04	48.54	51.02	55.06	59.38	61.99	58.54	58.40
MIN	43.25	44.89	40.75	41.17	43.95	46.16	48.70	50.95	55.13	57.55	56.35	49.11



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

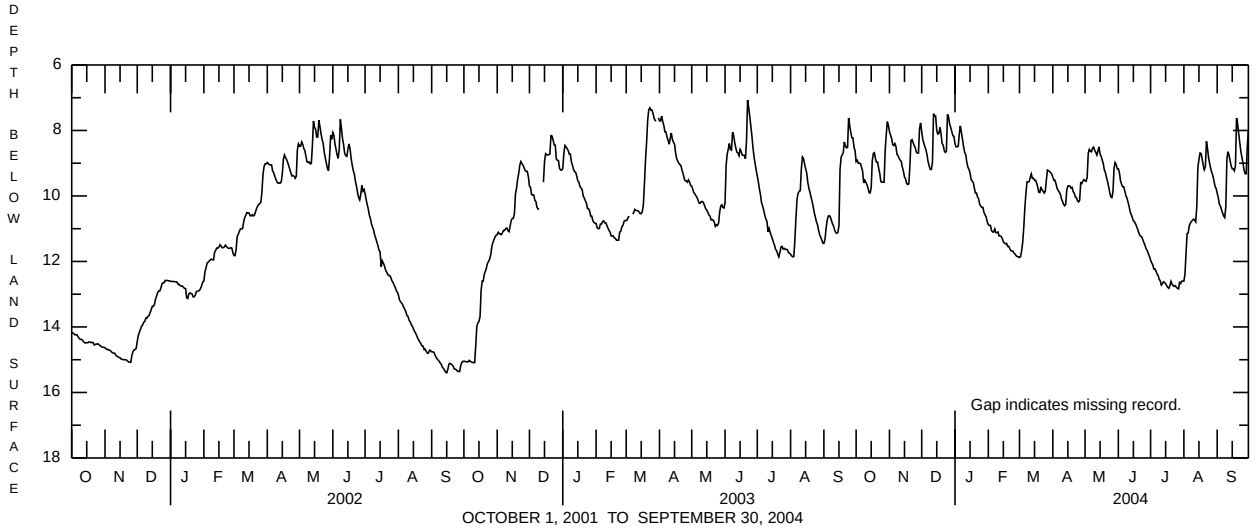
MONROE COUNTY

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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 1,990 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 3.0 ft above land-surface datum. Prior to Mar. 28, 1980, top of plywood shelf, 2.6 ft above land-surface datum.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 6.62 ft below land-surface datum, Apr. 13,14, 1994; lowest, 16.87 ft below land-surface datum, Oct. 24, 25, 1980.
EXTREMES FOR CURRENT YEAR.--Highest water level, 7.34 ft below land-surface datum, Dec. 25; lowest, 12.84 ft below land-surface datum, July 27.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.95	8.04	8.04	8.41	10.88	11.88	9.42	9.54	9.17	11.96	12.60	9.92
2	8.91	8.14	8.27	8.50	10.90	11.85	9.52	9.55	9.29	12.04	12.39	10.05
3	9.00	8.24	8.39	8.50	10.90	11.68	9.52	9.43	9.53	12.10	11.74	10.25
4	9.00	8.43	8.50	8.48	11.06	11.42	9.63	8.69	9.64	12.23	11.15	10.31
5	9.01	8.46	8.59	8.10	11.10	10.96	9.77	8.58	9.72	12.23	11.13	10.42
6	9.12	8.40	8.75	7.86	11.10	10.36	9.83	8.64	9.72	12.29	10.91	10.52
7	9.24	8.48	8.96	8.07	11.01	9.92	9.88	8.65	9.85	12.38	10.83	10.61
8	9.60	8.73	9.09	8.28	11.12	9.57	9.94	8.54	9.99	12.43	10.78	10.66
9	9.52	8.77	9.19	8.50	11.12	9.57	10.08	8.51	10.06	12.54	10.74	10.33
10	9.58	8.85	9.19	8.67	11.10	9.56	10.16	8.61	10.19	12.59	10.71	8.89
11	9.65	8.91	8.97	8.74	11.22	9.44	10.25	8.67	10.32	12.72	10.73	8.65
12	9.75	8.95	7.49	8.97	11.22	9.33	10.30	8.75	10.48	12.68	10.79	8.75
13	9.90	9.12	7.56	9.12	11.24	9.46	10.26	8.63	10.57	12.62	10.33	8.93
14	9.91	9.25	7.56	9.19	11.30	9.46	9.82	8.50	10.66	12.64	9.13	9.08
15	9.75	9.42	8.00	9.30	11.40	9.52	9.70	8.72	10.76	12.68	8.89	9.17
16	8.93	9.48	8.11	9.49	11.44	9.52	9.69	8.79	10.79	12.74	8.69	9.17
17	8.70	9.62	8.09	9.55	11.46	9.61	9.70	8.90	10.85	12.79	8.70	9.23
18	8.68	9.65	7.91	9.59	11.45	9.73	9.76	9.02	10.93	12.82	8.87	9.07
19	8.87	9.63	8.10	9.76	11.54	9.89	9.74	9.21	11.02	12.74	9.06	7.62
20	8.97	9.10	8.40	9.91	11.54	9.89	9.87	9.29	11.12	12.61	9.20	7.80
21	8.97	8.31	8.45	9.91	11.61	9.72	9.92	9.44	11.20	12.69	9.10	8.09
22	9.16	8.28	8.62	10.03	11.67	9.82	10.03	9.56	11.23	12.74	8.33	8.37
23	9.31	8.37	8.67	10.09	11.68	9.85	10.05	9.72	11.26	12.76	8.56	8.64
24	9.56	8.46	8.64	10.26	11.69	9.91	10.15	9.89	11.36	12.74	8.84	8.82
25	9.58	8.52	7.51	10.31	11.75	9.86	10.18	10.03	11.44	12.79	9.01	8.99
26	9.58	8.66	7.59	10.35	11.78	9.52	10.13	10.05	11.53	12.82	9.17	9.21
27	9.58	8.69	7.80	10.35	11.83	9.21	9.60	9.88	11.62	12.84	9.29	9.32
28	8.63	8.69	7.91	10.51	11.85	9.23	9.62	9.15	11.68	12.64	9.39	9.32
29	8.13	7.94	8.03	10.58	11.86	9.25	9.54	8.98	11.77	12.67	9.54	8.50
30	7.73	7.77	8.16	10.64	---	9.29	9.50	9.04	11.85	12.60	9.71	8.00
31	7.84	---	8.18	10.79	---	9.33	---	9.17	---	12.60	9.77	---
MEAN	9.13	8.71	8.28	9.38	11.37	9.92	9.85	9.10	10.65	12.57	9.94	9.22
MAX	9.91	9.65	9.19	10.79	11.86	11.88	10.30	10.05	11.85	12.84	12.60	10.66
MIN	7.73	7.77	7.49	7.86	10.88	9.21	9.42	8.50	9.17	11.96	8.33	7.62



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

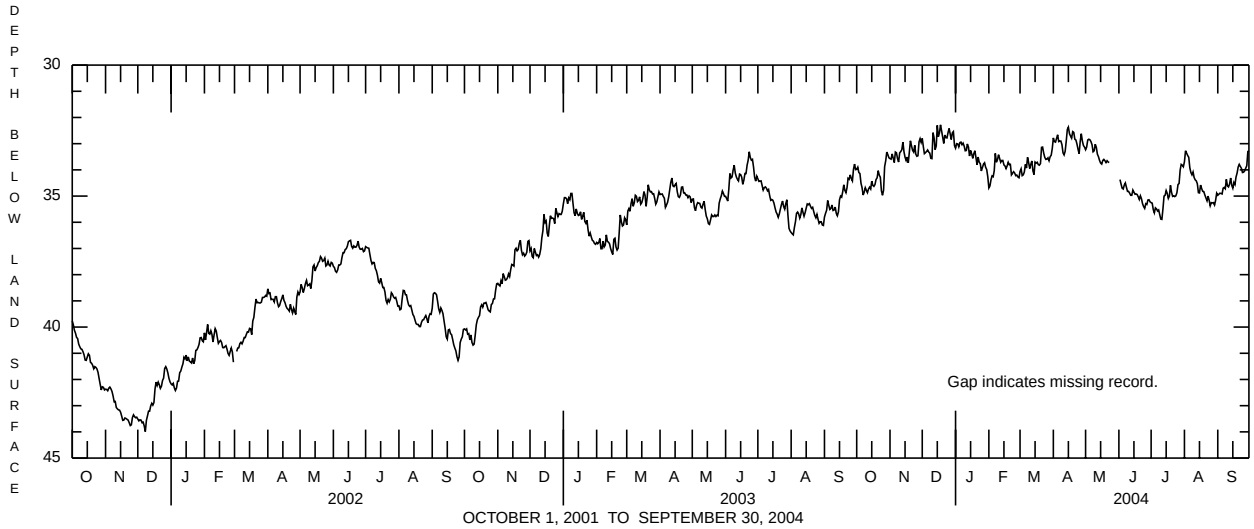
MONTGOMERY COUNTY

401415075175101. Local number, MG 68.
(North Penn Area 7 Project)

LOCATION.--Lat 40°14'15", long 75°17'49", Horizontal datum NAD27, Hydrologic Unit 02040203, on Towamencin Street southwest from Whites Road, Upper Gwynedd Township.
Owner: North Penn Water Authority.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled unused public supply well, diameter 14 in., depth 500 ft, cased to 9 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 321.7 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top of plywood shelf, about 0.5 ft above land-surface datum.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--August 1996 to January 2000; December 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above.
Highest water level, 32.18 ft below land-surface datum, Dec. 15, 2003; lowest, 54.76 ft below land-surface datum, Dec. 27, 1998.
EXTREMES FOR CURRENT YEAR.--Highest water level, 32.18 ft below land-surface datum, Dec. 15; lowest, 35.94 ft below land-surface datum, July 11.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.98	33.57	32.80	33.17	34.69	34.06	32.78	33.23	---	35.25	33.69	34.97
2	33.90	33.59	33.11	33.00	34.61	33.96	32.92	33.13	34.37	35.27	33.27	34.93
3	34.10	33.39	33.38	33.01	34.37	34.22	32.94	32.86	34.54	35.52	33.36	34.89
4	34.14	33.56	33.34	33.12	34.23	34.19	32.80	32.83	34.70	35.64	33.45	34.90
5	34.51	33.72	33.30	32.96	34.26	34.08	32.66	32.85	34.73	35.45	33.52	34.92
6	34.68	33.32	33.24	32.94	34.03	33.79	32.92	32.92	34.58	35.49	33.92	34.70
7	34.96	33.35	33.32	33.04	33.37	33.93	32.90	33.04	34.50	35.57	34.10	34.67
8	34.85	33.57	33.36	32.98	33.71	33.52	32.90	33.31	34.66	35.53	34.19	34.72
9	34.68	33.70	33.56	33.09	33.61	33.72	33.04	33.27	34.82	35.71	34.08	34.36
10	34.78	33.35	33.57	33.27	33.42	33.95	33.35	33.02	34.82	35.88	34.29	34.61
11	34.87	33.30	32.58	33.26	33.56	33.79	33.43	33.14	34.89	35.89	34.38	34.65
12	34.73	33.23	32.77	33.01	33.71	33.66	33.29	33.40	34.97	35.49	34.42	34.54
13	34.66	32.94	33.23	33.13	33.64	34.04	32.90	33.50	34.97	35.00	34.53	34.31
14	34.73	33.31	33.09	33.47	33.64	34.18	32.46	33.64	34.77	34.97	34.87	34.59
15	34.43	33.52	32.30	33.26	33.81	33.70	32.37	33.74	34.85	34.79	34.88	34.70
16	34.59	33.64	32.73	33.39	33.85	33.74	32.62	33.78	34.93	34.90	34.58	34.48
17	34.63	33.51	32.59	33.56	33.95	33.71	32.71	33.64	34.92	35.09	34.71	34.56
18	34.56	33.73	32.28	33.38	33.85	33.80	32.79	33.60	34.94	35.00	34.82	34.27
19	34.37	33.32	32.51	33.27	33.71	33.82	32.54	33.65	35.03	34.59	34.83	34.12
20	34.30	32.89	32.75	33.54	33.80	33.76	32.57	33.72	35.13	34.86	34.96	33.89
21	34.03	33.08	32.99	33.81	33.79	33.14	32.83	33.65	34.99	35.01	35.07	33.79
22	34.20	33.25	32.67	33.51	34.19	33.13	32.86	33.70	35.10	34.99	35.18	33.87
23	34.28	33.32	32.77	33.71	34.13	33.36	33.02	33.72	35.29	35.02	35.00	33.94
24	34.80	33.06	32.78	33.76	34.07	33.52	33.22	---	35.40	34.99	35.16	34.10
25	34.97	33.40	32.58	34.04	34.12	33.60	33.38	---	35.47	34.87	35.37	34.09
26	34.78	33.48	32.42	33.91	34.22	33.59	32.91	---	35.29	34.56	35.25	34.04
27	33.88	33.46	32.63	33.78	34.20	33.54	32.62	---	35.32	34.52	35.26	33.94
28	33.65	32.93	32.84	33.73	34.27	33.65	32.90	---	35.15	34.01	35.25	33.84
29	33.32	32.81	32.59	33.90	34.30	33.50	33.07	---	35.14	33.79	35.34	33.30
30	33.42	32.95	32.54	33.99	---	33.44	33.13	---	35.22	33.82	35.16	33.27
31	33.54	---	33.07	34.27	---	33.18	---	---	---	33.88	34.89	---
MEAN	34.37	33.34	32.89	33.43	33.97	33.72	32.89	33.36	34.95	35.01	34.57	34.33
MAX	34.97	33.73	33.57	34.27	34.69	34.22	33.43	33.78	35.47	35.89	35.37	34.97
MIN	33.32	32.81	32.28	32.94	33.37	33.13	32.37	32.83	34.37	33.79	33.27	33.27



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

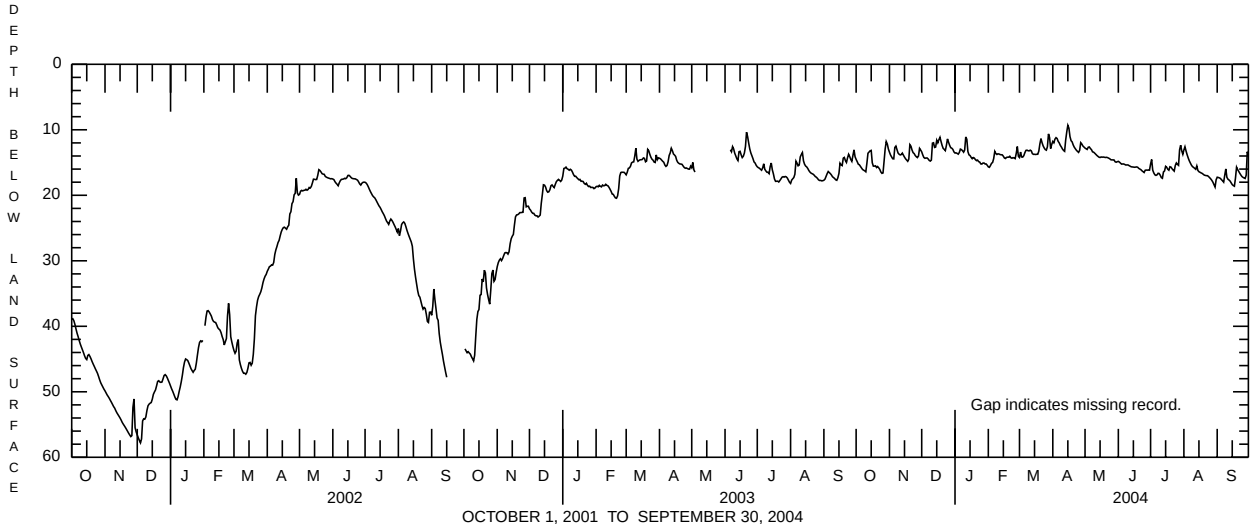
MONTGOMERY COUNTY

401338075162801. Local number, MG 72.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13’38”, long 75°16’27”, Horizontal datum NAD27, Hydrologic Unit 02040203, on Hancock Street near Wissahickon Creek, Upper Gwynedd Township.
Owner: North Penn Water Authority.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled unused public supply well, diameter 10 in., depth 298 ft, cased to 41.5 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 355.1 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top of concrete pad, 0.85 ft above well-house floor and 1.47 ft above land-surface datum.
REMARKS.--Records good except for period July 3 to Sept. 30, which is fair to poor because of applied corrections for drift in transducer ranging from 0.24-1.41 ft per month. In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office. Water levels may be affected by nearby pumping.
PERIOD OF RECORD.--December 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above.
Highest water level, 8.68 ft below land-surface datum, Apr. 15, 2004; lowest, 58.03 ft below land-surface datum, Dec. 4, 2001.
EXTREMES FOR CURRENT YEAR.--Highest water level, 8.68 ft below land-surface datum, Apr. 15; lowest, 18.88 ft below land-surface datum, Aug. 30.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.52	13.42	13.37	13.55	15.66	14.23	11.78	12.79	14.82	15.22	13.08	17.24
2	14.87	13.85	13.84	13.53	15.73	13.40	11.99	12.90	14.93	14.54	12.59	17.28
3	15.25	14.14	14.22	13.60	15.46	14.15	11.43	13.00	15.09	16.16	13.24	17.34
4	15.34	14.42	14.35	13.72	15.12	14.17	11.20	12.66	15.24	16.59	13.80	17.43
5	15.59	14.44	14.31	13.47	14.99	13.96	11.33	12.62	15.22	16.87	14.29	17.62
6	15.83	12.70	14.30	12.95	14.40	13.50	11.76	12.86	15.22	16.96	14.72	17.79
7	16.06	12.49	14.45	13.03	13.30	13.15	12.00	13.03	15.30	16.88	15.07	17.99
8	16.17	13.03	14.68	13.20	13.63	13.11	12.38	13.37	15.38	16.64	15.39	16.96
9	16.27	13.54	14.78	13.42	13.77	13.20	12.63	13.42	15.36	16.67	15.62	15.97
10	16.41	13.73	14.63	13.09	13.67	13.22	12.93	13.57	15.37	16.94	15.74	17.25
11	15.13	13.84	12.04	11.09	13.70	13.11	13.15	13.74	15.47	17.30	15.88	17.54
12	13.58	13.78	11.98	11.45	13.79	13.22	13.28	13.91	15.56	17.40	16.03	17.67
13	13.40	13.56	12.69	13.32	13.81	13.64	11.56	14.05	15.65	16.44	15.52	17.83
14	13.21	13.88	12.63	13.82	13.83	13.75	10.31	14.18	15.67	16.28	16.20	18.10
15	13.15	14.17	11.59	13.93	14.04	13.74	9.32	14.23	15.69	15.58	16.40	18.37
16	15.03	14.43	11.98	14.20	14.31	13.77	9.74	14.15	15.72	15.72	16.49	18.52
17	15.55	14.62	11.53	14.41	14.38	13.74	11.03	14.18	15.70	16.03	16.58	18.61
18	15.55	14.81	11.15	14.24	14.21	13.73	11.66	14.16	15.67	16.17	16.66	17.38
19	15.50	14.48	11.79	14.32	14.18	13.25	11.85	14.19	15.72	15.64	16.79	15.71
20	15.76	12.27	12.39	14.56	14.18	12.15	12.31	14.23	15.89	15.70	16.92	16.07
21	15.61	12.51	12.85	14.71	14.04	11.35	12.66	14.20	15.99	15.95	16.97	16.34
22	15.81	13.09	12.99	14.63	14.27	11.97	12.90	14.25	16.09	16.15	17.00	16.63
23	16.05	13.49	13.18	14.86	14.34	12.45	13.13	14.33	16.26	16.31	17.01	16.90
24	16.44	13.63	12.39	14.93	14.25	12.77	13.30	14.42	16.39	15.44	17.15	17.13
25	16.65	13.93	11.39	15.21	14.31	13.02	13.45	14.57	16.52	15.06	17.32	17.26
26	16.59	14.11	11.90	15.23	14.40	13.11	13.13	14.60	16.18	15.27	17.50	17.36
27	14.80	14.24	12.37	15.08	13.59	12.59	11.97	14.59	16.15	15.42	17.72	17.43
28	12.95	14.00	12.73	15.07	12.56	10.62	12.17	14.61	16.16	13.05	18.00	16.92
29	11.80	12.84	12.81	15.22	14.04	11.18	12.47	14.88	16.15	12.35	18.37	13.35
30	12.17	13.08	12.99	15.22	---	12.87	12.63	14.95	16.16	13.21	18.74	13.90
31	12.93	---	13.37	15.42	---	12.24	---	14.87	---	13.74	17.63	---
MEAN	14.97	13.68	12.96	14.02	14.21	13.04	12.05	13.92	15.69	15.73	16.14	17.06
MAX	16.65	14.81	14.78	15.42	15.73	14.23	13.45	14.95	16.52	17.40	18.74	18.61
MIN	11.80	12.27	11.15	11.09	12.56	10.62	9.32	12.62	14.82	12.35	12.59	13.35



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

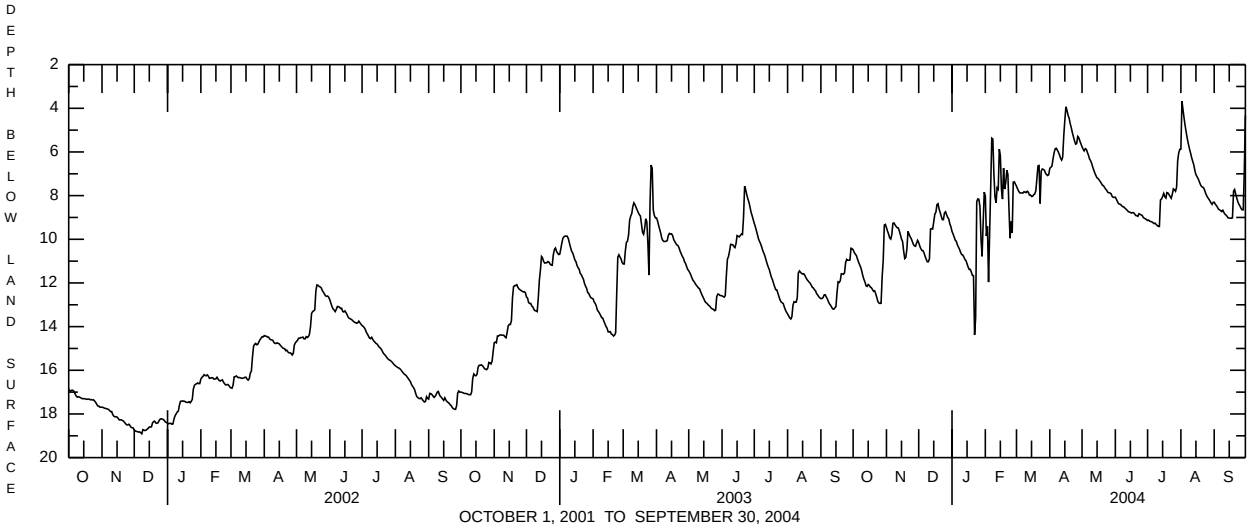
MONTGOMERY COUNTY

400808075210401. Local number, MG 225.

LOCATION.--Lat 40°08'08", long 75°21'04", Hydrologic Unit 02040203, at Willow and Locust Streets, Norristown.
Owner: Norristown State Hospital.
AQUIFER.--Sandstone of Stockton Formation of Late Triassic age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 486 ft (previously reported as 300 ft), cased to 78 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 60-minute recording interval.
DATUM.--Elevation of land-surface datum is 165 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 2.35 ft above land-surface datum. Prior to Mar. 17, 1981, top of casing 0.8 ft above land-surface datum.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office. Water level may be affected by pumping of nearby well.
PERIOD OF RECORD.--September 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 3.38 ft below land-surface datum, Aug. 2, 2004; lowest, 60.25 ft below land-surface datum, Nov. 5, 6, 1963.
EXTREMES FOR CURRENT YEAR.--Highest water level, 3.38 ft below land-surface datum, Aug. 2; lowest, 14.38 ft below land-surface datum, (affected by nearby pumping), Jan. 22.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.48	9.47	10.15	9.64	8.01	7.57	6.75	5.76	8.07	9.14	5.87	8.30
2	10.60	9.63	10.31	9.76	9.85	7.69	6.70	5.87	8.17	9.12	3.67	8.39
3	10.68	9.76	10.43	9.89	9.41	7.79	6.65	5.95	8.28	9.17	4.08	8.45
4	10.74	9.94	10.51	10.04	11.96	7.87	6.32	5.85	8.37	9.19	4.46	8.53
5	10.90	9.99	10.52	10.09	9.77	7.88	6.04	5.88	8.39	9.20	4.81	8.62
6	11.04	9.78	10.63	10.25	7.59	7.88	5.86	6.02	8.41	9.24	5.12	8.65
7	11.16	9.27	10.78	10.36	5.37	7.88	5.83	6.15	8.47	9.28	5.40	8.69
8	11.28	9.25	10.92	10.46	5.41	7.82	5.91	6.32	8.51	9.26	5.64	8.73
9	11.45	9.34	11.03	10.60	7.02	7.84	6.01	6.40	8.52	9.32	5.86	8.67
10	11.67	9.41	11.03	10.70	8.07	7.86	6.13	6.53	8.58	9.37	6.05	8.77
11	11.83	9.47	10.89	10.72	8.33	7.80	6.28	6.70	8.62	9.41	6.26	8.85
12	11.96	9.48	9.53	10.81	7.64	7.84	6.37	6.84	8.67	9.41	6.43	8.89
13	12.13	9.62	9.51	10.92	7.71	7.97	6.24	6.98	8.73	8.20	6.59	8.95
14	12.16	9.80	9.53	10.98	5.87	7.97	5.25	7.09	8.75	8.15	6.85	9.02
15	12.07	9.99	9.20	11.12	6.17	8.04	4.54	7.19	8.77	8.04	7.04	9.03
16	12.11	10.10	8.85	11.27	7.72	8.03	3.93	7.22	8.80	7.90	7.13	9.03
17	12.19	10.53	8.76	11.38	8.16	7.96	4.09	7.29	8.78	8.05	7.22	9.04
18	12.22	10.88	8.41	11.38	6.74	7.92	4.32	7.36	8.78	8.11	7.34	9.02
19	12.30	10.83	8.37	11.50	7.70	7.78	4.45	7.44	8.84	7.86	7.47	7.79
20	12.38	10.46	8.62	11.65	7.41	7.23	4.70	7.52	8.91	7.88	7.57	7.72
21	12.36	9.64	8.78	11.67	6.84	6.64	4.89	7.55	8.92	7.96	7.61	7.93
22	12.50	9.76	8.95	14.38	7.02	6.62	5.12	7.63	8.95	8.04	7.63	8.11
23	12.66	9.88	9.10	13.60	8.61	8.36	5.30	7.70	8.83	8.12	7.74	8.28
24	12.85	9.96	9.10	8.28	9.95	6.88	5.49	7.76	8.86	7.94	7.89	8.40
25	12.92	10.09	8.79	8.15	9.19	6.78	5.64	7.85	8.88	7.69	8.00	8.48
26	12.94	10.23	8.74	8.17	9.71	6.80	5.62	7.87	8.91	7.73	8.09	8.59
27	12.93	10.30	8.88	8.51	7.38	6.84	5.29	7.88	9.00	7.80	8.16	8.65
28	11.73	10.32	9.00	10.01	7.37	6.97	5.35	7.91	9.04	7.61	8.24	8.65
29	10.95	10.18	9.07	10.78	7.47	7.04	5.50	8.03	9.06	6.41	8.33	6.88
30	9.35	10.05	9.30	9.23	---	7.08	5.63	8.08	9.10	6.04	8.40	4.32
31	9.32	---	9.43	7.84	---	7.04	---	8.08	---	5.88	8.31	---
MEAN	11.67	9.91	9.58	10.46	7.91	7.54	5.54	7.05	8.70	8.27	6.75	8.38
MAX	12.94	10.88	11.03	14.38	11.96	8.36	6.75	8.08	9.10	9.41	8.40	9.04
MIN	9.32	9.25	8.37	7.84	5.37	6.62	3.93	5.76	8.07	5.88	3.67	4.32



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

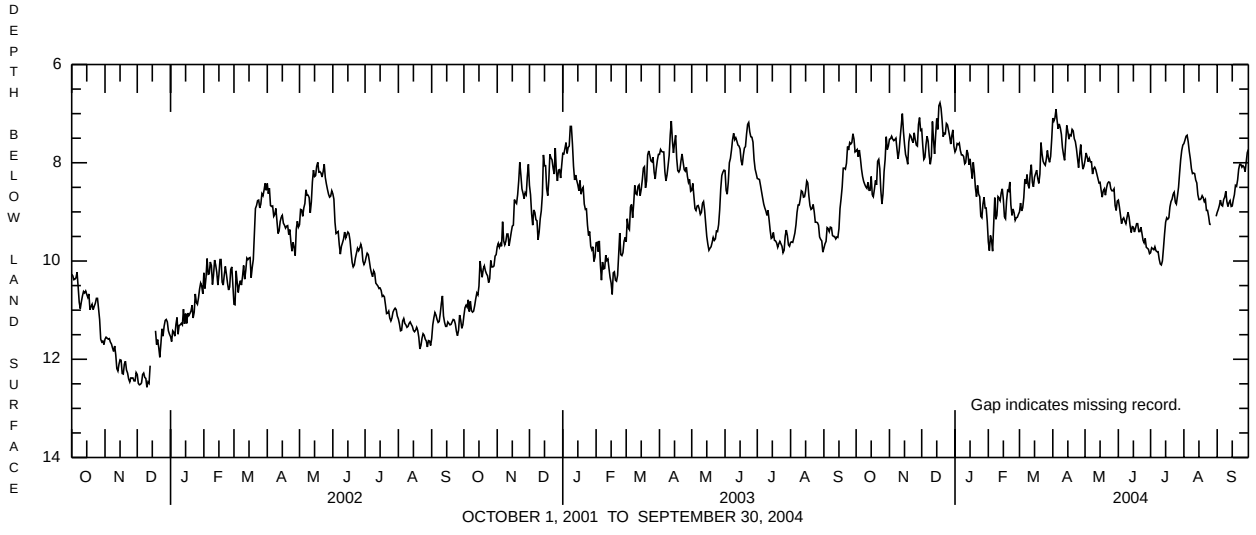
MONTGOMERY COUNTY

401733075171401. Local number, MG 917.

LOCATION.--Lat 40°17'33", long 75°17'14", Hydrologic Unit 02040201, at North Penn Water Authority at Lansdale.
Owner: North Penn Water Authority.
AQUIFER.--Shale of Brunswick Formation of Late Triassic Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in, depth 500 ft, cased to 40 ft, open hole.
INSTRUMENTATION.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 3.39 ft above land-surface datum.
REMARKS.--In addition to the daily mean water level table shown below, daily maximum and minimum water levels, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--August 1997 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above.
Highest water level, 6.67 ft below land-surface datum, Dec. 18, 2003; lowest, 12.66 ft below land-surface datum, Aug. 16, 1999.
EXTREMES FOR CURRENT YEAR.--Highest water level, 6.67 ft below land-surface datum, Dec. 18; lowest, 10.15 ft below land-surface datum, July 11.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.76	7.52	7.32	7.78	9.61	9.00	7.09	7.95	8.76	9.83	7.61	9.01
2	7.73	7.51	7.65	7.73	9.79	8.82	7.15	7.80	8.90	9.73	7.54	8.95
3	7.88	7.46	7.93	7.61	9.48	8.98	7.09	7.88	9.07	9.75	7.46	8.87
4	7.74	7.52	7.89	7.63	9.58	8.92	6.91	7.98	9.24	9.77	7.44	8.76
5	7.92	7.55	7.63	7.60	9.80	8.71	7.14	7.91	9.15	9.71	7.57	8.86
6	8.13	7.53	7.46	7.75	9.24	8.34	7.31	7.98	9.12	9.79	7.77	8.88
7	8.28	7.50	7.56	7.84	8.71	8.43	7.21	7.98	9.19	9.81	7.92	8.75
8	8.38	7.72	7.86	7.84	9.15	8.24	7.29	8.23	9.24	9.81	8.12	8.70
9	8.44	7.92	8.03	7.87	9.07	8.45	7.42	8.12	9.12	9.96	8.22	8.58
10	8.49	7.76	7.88	8.02	8.69	8.52	7.69	8.09	9.01	10.06	8.21	8.79
11	8.52	7.48	7.16	7.99	8.72	8.22	7.84	8.14	9.11	10.08	8.22	8.89
12	8.40	7.24	7.54	7.74	8.77	8.04	7.95	8.23	9.29	10.00	8.35	8.81
13	8.56	7.00	7.82	7.81	8.61	8.40	7.58	8.32	9.42	9.74	8.41	8.77
14	8.56	7.36	7.43	8.04	8.53	8.49	7.24	8.41	9.30	9.45	8.65	8.89
15	8.28	7.62	7.10	7.92	8.75	8.29	7.36	8.40	9.31	9.21	8.75	8.88
16	8.65	7.83	7.32	8.12	9.10	8.22	7.52	8.56	9.41	9.12	8.75	8.75
17	8.69	7.91	6.84	8.32	9.14	8.15	7.43	8.70	9.33	9.15	8.73	8.65
18	8.54	8.03	6.78	7.99	8.77	8.32	7.45	8.57	9.24	9.12	8.67	8.46
19	8.36	7.58	6.89	8.20	8.56	8.42	7.32	8.53	9.24	8.90	8.71	8.48
20	8.45	7.43	7.14	8.51	8.58	8.23	7.35	8.66	9.40	8.79	8.79	8.35
21	7.97	7.46	7.47	8.69	8.39	7.59	7.51	8.51	9.40	8.74	8.75	8.13
22	7.93	7.54	7.40	8.46	8.86	7.82	7.57	8.42	9.31	8.64	8.97	8.03
23	8.12	7.59	7.41	8.64	9.07	7.97	7.71	8.39	9.44	8.60	8.97	8.03
24	8.57	7.39	7.20	8.69	8.94	8.02	7.91	8.40	9.58	8.80	9.09	8.09
25	8.84	7.53	7.23	9.09	9.02	8.05	8.10	8.53	9.63	8.84	9.25	8.06
26	8.63	7.64	7.34	9.12	9.17	7.92	7.84	8.57	9.54	8.68	9.26	8.09
27	8.18	7.66	7.46	8.84	9.12	7.75	7.63	8.57	9.72	8.50	---	8.18
28	7.93	7.22	7.62	8.70	9.11	7.91	7.93	8.53	9.74	8.21	---	7.98
29	7.47	7.08	7.45	8.92	9.05	7.99	8.13	8.87	9.76	7.94	---	7.79
30	7.73	7.34	7.33	8.92	---	7.87	8.07	8.97	9.85	7.75	---	7.73
31	7.66	---	7.67	9.20	---	7.51	---	8.78	---	7.64	9.09	---
MEAN	8.22	7.53	7.45	8.24	9.01	8.24	7.52	8.35	9.33	9.17	8.42	8.51
MAX	8.84	8.03	8.03	9.20	9.80	9.00	8.13	8.97	9.85	10.08	9.26	9.01
MIN	7.47	7.00	6.78	7.60	8.39	7.51	6.91	7.80	8.76	7.64	7.44	7.73



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

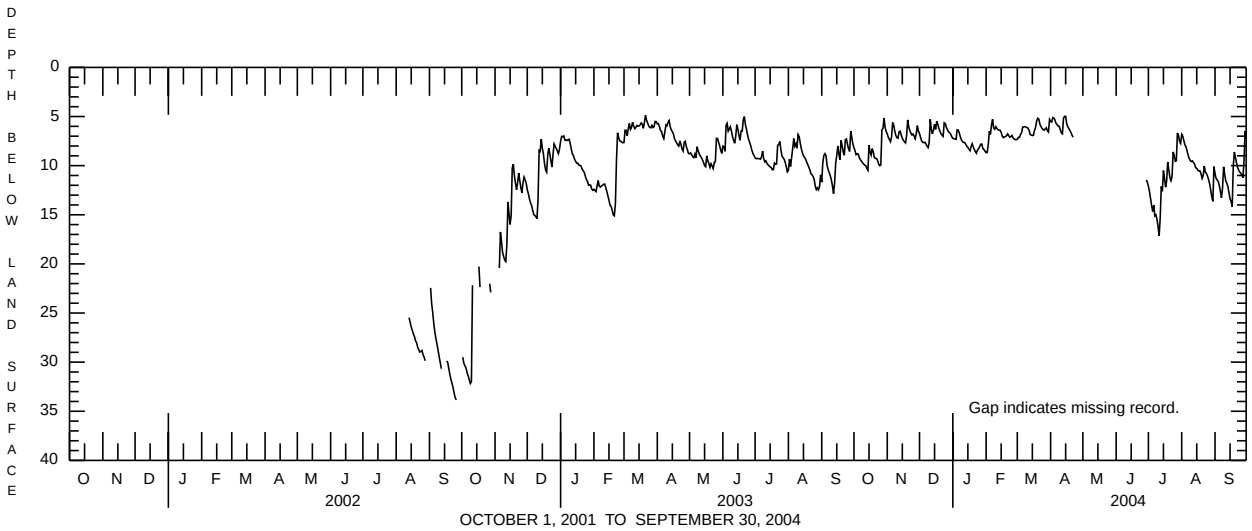
MONTGOMERY COUNTY

401314075171401. Local number, MG 1145.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13'12", long 75°17'12", Holizontal datum NAD27, Hydrologic Unit 02040203, on Church Road southwest from Wissahickon Avenue, Upper Gwynedd Township.
Owner: Teleflex Corporation.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled monitor well, diameter 6 in., depth 83 ft, cased to 19 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 330.62 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top of plywood shelf on top of well casing, 1.35 ft above land-surface datum.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--August 13, 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above.
Highest water level, 4.19 ft below land-surface datum, Apr. 14, 2004; lowest, 34.13 ft below land-surface datum, Sept. 26, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 4.19 ft below land-surface datum, Apr. 14; lowest, 17.81 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.18	6.79	6.73	7.22	8.68	7.31	5.50	---	---	12.09	6.82	10.81
2	8.48	7.12	7.14	7.26	8.66	7.12	5.56	---	---	12.62	7.01	11.30
3	8.88	7.34	7.49	7.29	7.83	7.13	5.11	---	---	13.36	7.46	11.46
4	8.79	7.56	7.63	7.32	6.49	6.82	5.16	---	---	14.06	7.89	11.61
5	8.82	7.06	7.65	6.35	6.82	6.66	5.34	---	---	14.66	8.07	12.04
6	9.20	5.61	7.62	6.37	5.83	6.08	5.68	---	---	14.02	8.52	12.62
7	9.40	5.89	7.79	6.67	5.28	6.06	5.82	---	---	15.11	8.94	13.27
8	9.55	6.50	8.02	7.07	6.17	6.03	5.97	---	---	15.01	9.28	12.29
9	9.70	6.93	8.16	7.38	6.29	6.06	6.00	---	---	15.46	9.49	10.12
10	9.83	7.16	7.64	7.56	6.03	6.13	6.34	---	---	16.20	9.58	10.89
11	9.95	7.21	5.28	7.64	6.21	6.18	6.67	---	---	17.15	9.52	11.55
12	10.01	6.55	6.33	7.64	6.34	6.42	6.76	---	---	15.29	9.70	11.79
13	10.29	6.49	6.76	7.82	6.38	6.83	5.16	---	---	12.12	9.86	12.14
14	10.47	6.88	6.35	8.04	6.39	6.89	4.98	---	---	12.61	10.22	12.76
15	7.91	7.21	5.78	8.12	6.62	6.94	4.99	---	---	10.50	10.27	13.38
16	8.63	7.43	6.31	8.34	7.00	6.91	5.75	---	---	11.29	10.47	13.67
17	8.92	7.56	5.49	8.48	7.15	6.42	6.04	---	---	12.19	10.53	14.18
18	8.27	7.69	5.79	8.06	7.09	6.10	6.23	---	---	11.55	10.53	10.02
19	8.61	6.92	6.19	7.77	7.03	5.47	6.43	---	---	9.62	10.83	8.62
20	9.18	5.34	6.49	8.08	6.95	5.17	6.64	---	---	10.42	11.29	9.14
21	9.26	6.08	6.76	8.36	6.77	5.26	6.93	---	---	11.21	11.01	9.73
22	9.28	6.42	6.90	8.57	6.94	5.76	7.10	---	---	11.53	10.04	10.18
23	9.48	6.70	7.02	8.74	7.11	6.03	---	---	---	11.12	10.66	10.45
24	9.84	6.88	5.63	8.41	7.05	6.20	---	---	---	8.60	10.80	10.66
25	10.01	6.78	5.72	8.26	6.93	6.33	---	---	---	8.93	11.06	10.77
26	9.94	6.99	6.10	8.06	7.16	6.39	---	---	---	9.56	11.41	10.95
27	6.34	7.26	6.35	7.81	7.27	6.26	---	---	---	9.50	11.87	11.23
28	6.20	6.75	6.56	7.81	7.35	6.15	---	---	---	6.68	12.47	9.50
29	5.19	5.93	6.65	8.28	7.35	6.43	---	---	11.45	6.91	13.18	6.46
30	6.13	6.48	6.79	8.36	---	6.57	---	---	11.68	7.53	13.63	7.27
31	6.53	---	7.05	8.53	---	5.30	---	---	---	7.74	10.10	---
MEAN	8.75	6.78	6.72	7.80	6.87	6.30	5.92	---	11.56	11.76	10.08	11.03
MAX	10.47	7.69	8.16	8.74	8.68	7.31	7.10	---	11.68	17.15	13.63	14.18
MIN	5.19	5.34	5.28	6.35	5.28	5.17	4.98	---	11.45	6.68	6.82	6.46



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

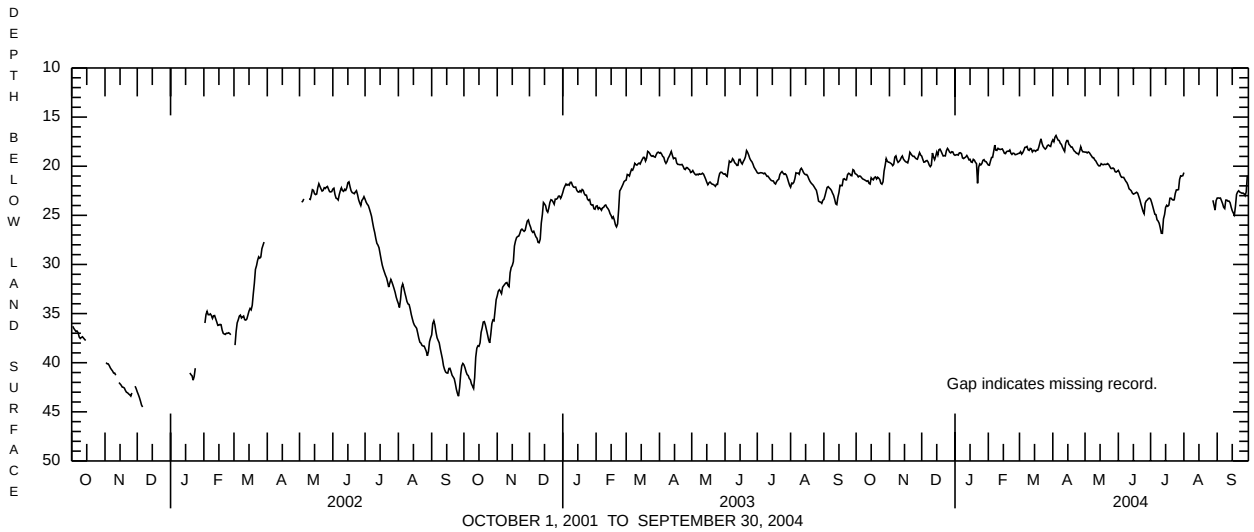
MONTGOMERY COUNTY

401318075171101. Local number, MG 1146.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13'19", long 75°17'11", Horizontal datum NAD27, Hydrologic Unit 02040203, on Church Road southwest from Wissahickon Avenue, Upper Gwynedd Township.
Owner: Teleflex Corporation.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled monitor well, diameter 6 in., depth 84 ft, cased to 19.5 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 343.8 ft above North American Vertical Datum of 198, from survey. Measuring point: Top of plywood shelf on top of well casing, about 1.74 ft above land-surface datum. Horizontal datum is NAD27.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office. Water levels affected by drilling and development of nearby wells in Jan. and July 2004.
PERIOD OF RECORD.--December 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above. Highest water level, 17.15 ft below land-surface datum, Apr. 15, 2004; lowest, 44.95 ft below land-surface datum, Dec. 7, 2001.
EXTREMES FOR CURRENT YEAR.--Highest water level, 17.15 ft below land-surface datum, Apr. 15; lowest, 30.36 ft below land-surface datum, Jan. 22.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.81	19.61	18.97	18.89	19.88	18.68	17.32	18.57	20.42	23.36	20.65	23.24
2	20.90	19.69	19.30	18.85	19.90	18.52	17.51	18.56	20.64	23.69	---	23.23
3	21.09	19.76	19.59	18.81	19.49	18.77	17.05	18.65	20.95	24.08	---	23.25
4	21.00	19.94	19.57	18.87	19.11	18.63	16.88	18.55	21.13	24.50	---	23.24
5	21.02	19.80	19.45	18.65	19.10	18.39	17.13	18.62	21.13	24.89	---	23.51
6	21.16	19.07	19.42	18.63	18.50	18.09	17.35	18.79	21.14	24.93	---	23.81
7	21.29	18.95	19.58	18.72	17.85	18.06	17.39	18.95	21.35	25.45	---	24.18
8	21.34	19.38	19.88	19.16	18.37	17.99	17.67	19.13	21.54	25.58	---	24.31
9	21.40	19.61	20.04	19.22	18.39	18.33	17.78	19.13	21.68	25.81	---	23.45
10	21.47	19.51	19.89	19.14	18.18	18.39	18.06	19.35	21.94	26.26	---	23.45
11	21.54	19.36	18.66	19.06	18.25	18.19	18.29	19.46	22.30	26.82	---	23.56
12	21.48	19.12	19.06	18.91	18.30	18.24	18.49	19.67	22.39	26.83	---	23.55
13	21.75	18.96	19.33	19.10	18.27	18.54	17.66	19.86	22.50	25.37	---	23.72
14	21.82	19.27	18.99	19.35	18.24	18.39	17.39	19.97	22.73	24.93	---	24.17
15	21.18	19.42	18.56	19.30	18.44	18.39	17.39	19.96	22.84	24.18	---	24.53
16	21.32	19.54	18.87	19.57	18.69	18.49	17.77	19.74	22.79	23.97	---	24.77
17	21.39	19.59	18.33	19.61	18.72	18.36	17.89	19.82	22.72	24.08	---	24.96
18	21.15	19.66	18.26	19.30	18.51	18.36	18.05	19.85	22.65	23.97	---	24.07
19	21.09	19.24	18.46	19.38	18.47	18.04	18.05	19.80	22.75	23.26	---	22.87
20	21.30	18.58	18.72	19.60	18.48	17.61	18.27	19.82	23.07	23.25	---	22.62
21	21.12	18.74	18.96	19.74	18.35	17.21	18.46	19.81	23.41	23.38	---	22.50
22	21.22	18.90	18.93	21.74	18.67	17.68	18.54	19.73	23.84	23.45	---	22.63
23	21.36	19.00	18.95	20.11	18.80	17.99	18.68	19.82	24.21	23.42	---	22.69
24	21.74	18.99	18.43	19.76	18.67	18.14	18.70	20.01	24.61	22.76	---	22.75
25	21.83	19.15	18.19	19.87	18.70	18.26	18.80	20.22	24.84	22.41	---	22.73
26	21.59	19.25	18.35	19.73	18.83	18.15	18.48	20.24	23.76	22.42	---	22.81
27	20.50	19.29	18.57	19.40	18.80	17.90	18.02	20.18	23.52	22.38	---	23.00
28	19.92	18.96	18.65	19.33	18.76	17.84	18.37	20.26	23.43	21.34	23.47	22.62
29	19.23	18.62	18.52	19.52	18.70	17.94	18.54	20.55	23.29	20.98	23.95	21.03
30	19.49	18.86	18.55	19.54	---	17.99	18.54	20.60	23.25	21.00	24.47	21.01
31	19.59	---	18.81	19.72	---	17.55	---	20.51	---	20.97	23.50	---
MEAN	21.07	19.26	18.96	19.37	18.67	18.16	17.95	19.62	22.56	23.86	23.21	23.28
MAX	21.83	19.94	20.04	21.74	19.90	18.77	18.80	20.60	24.84	26.83	24.47	24.96
MIN	19.23	18.58	18.19	18.63	17.85	17.21	16.88	18.55	20.42	20.97	20.65	21.01



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

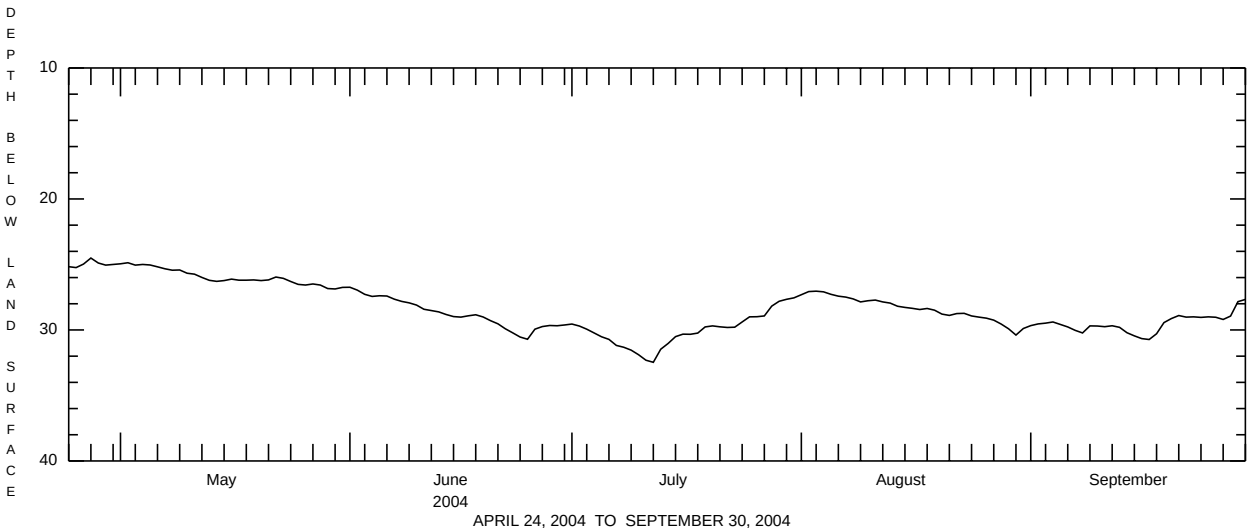
MONTGOMERY COUNTY

401322075171201. Local number, MG 1147.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13'22", long 75°17'12", Horizontal datum NAD27, Hydrologic Unit 02040203, on Church Road, southwest from Wissahickon Avenue, Upper Gwynedd Township.
Owner: Teleflex Corporation.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled monitor well, diameter 6 in., depth 83.5 ft, cased to 18 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 351.2 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top 8 in. outer steel well casing, 1.75 ft above land-surface datum.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--April 2004 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above. Highest water level, 24.37 ft below land-surface datum, Apr. 27, 2004; lowest, 32.81 ft below land-surface datum, July 12, 2004.
EXTREMES FOR CURRENT YEAR.--Highest water level, 24.37 ft below land-surface datum, Apr. 27; lowest, 32.81 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	24.95	26.74	29.55	27.31	29.67
2	---	---	---	---	---	---	---	24.87	26.96	29.70	27.07	29.54
3	---	---	---	---	---	---	---	25.05	27.28	29.94	27.04	29.48
4	---	---	---	---	---	---	---	25.00	27.44	30.23	27.09	29.39
5	---	---	---	---	---	---	---	25.04	27.39	30.52	27.28	29.58
6	---	---	---	---	---	---	---	25.18	27.41	30.72	27.42	29.77
7	---	---	---	---	---	---	---	25.33	27.65	31.18	27.49	30.03
8	---	---	---	---	---	---	---	25.44	27.82	31.32	27.63	30.23
9	---	---	---	---	---	---	---	25.42	27.93	31.54	27.86	29.69
10	---	---	---	---	---	---	---	25.67	28.10	31.89	27.77	29.70
11	---	---	---	---	---	---	---	25.74	28.42	32.31	27.72	29.75
12	---	---	---	---	---	---	---	25.99	28.52	32.47	27.86	29.68
13	---	---	---	---	---	---	---	26.21	28.62	31.47	27.95	29.80
14	---	---	---	---	---	---	---	26.29	28.82	31.03	28.19	30.21
15	---	---	---	---	---	---	---	26.23	28.98	30.51	28.28	30.45
16	---	---	---	---	---	---	---	26.12	29.02	30.32	28.35	30.66
17	---	---	---	---	---	---	---	26.20	28.92	30.33	28.44	30.73
18	---	---	---	---	---	---	---	26.20	28.84	30.24	28.36	30.29
19	---	---	---	---	---	---	---	26.18	29.01	29.77	28.49	29.44
20	---	---	---	---	---	---	---	26.23	29.29	29.69	28.79	29.13
21	---	---	---	---	---	---	---	26.18	29.53	29.76	28.89	28.90
22	---	---	---	---	---	---	---	25.96	29.91	29.81	28.75	29.02
23	---	---	---	---	---	---	---	26.06	30.22	29.79	28.73	29.00
24	---	---	---	---	---	---	25.17	26.30	30.54	29.39	28.93	29.04
25	---	---	---	---	---	---	25.24	26.52	30.71	29.00	29.02	29.00
26	---	---	---	---	---	---	24.97	26.57	29.94	28.99	29.10	29.03
27	---	---	---	---	---	---	24.51	26.49	29.74	28.93	29.25	29.20
28	---	---	---	---	---	---	24.89	26.57	29.66	28.18	29.55	28.94
29	---	---	---	---	---	---	25.05	26.84	29.68	27.81	29.91	27.84
30	---	---	---	---	---	---	25.00	26.87	29.62	27.66	30.39	27.67
31	---	---	---	---	---	---	---	26.75	---	27.55	29.89	---
MEAN	---	---	---	---	---	---	24.98	25.95	28.76	30.05	28.35	29.50
MAX	---	---	---	---	---	---	25.24	26.87	30.71	32.47	30.39	30.73
MIN	---	---	---	---	---	---	24.51	24.87	26.74	27.55	27.04	27.67



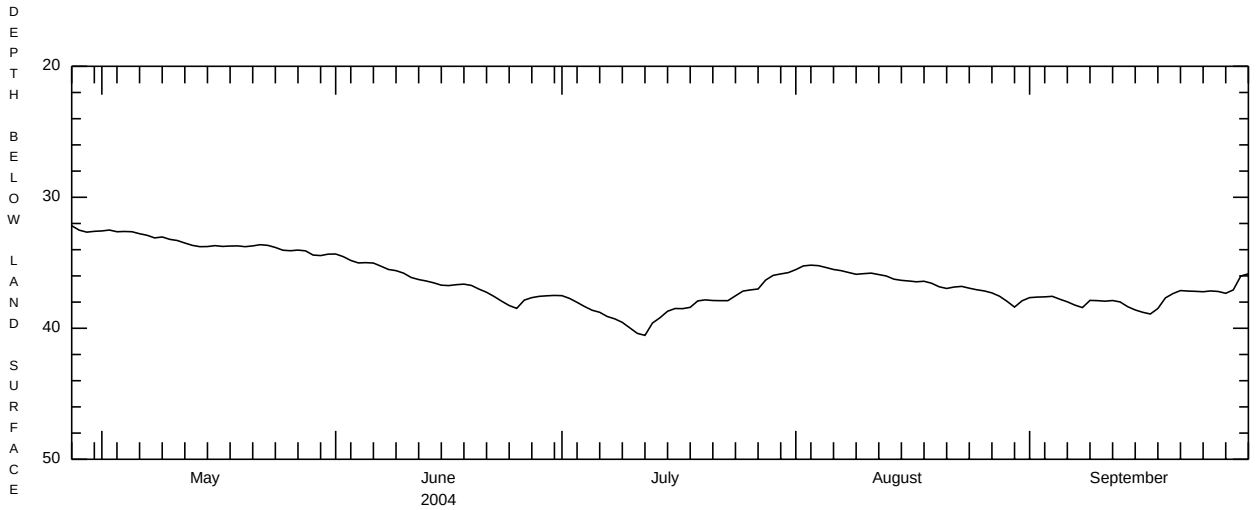
MONTGOMERY COUNTY

401324075171601. Local number, MG 1148.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13'24", long 75°17'16", Horizontal datum NAD27, Hydrologic Unit 02040203, on Church Road, southwest from Wissahickon Avenue, Upper Gwynedd Township.
Owner: Teleflex Corporation.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled monitor well, diameter 6 in., depth 84 ft, cased to 19 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 360.7 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top of 8 in. outer steel well casing, about 1.6 ft above land-surface datum.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--April 2004 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above. Highest water level, 32.10 ft below land-surface datum, Apr. 27, 2004; lowest, 40.79 ft below land-surface datum, July 12, 2004.
EXTREMES FOR CURRENT YEAR.--Highest water level, 32.10 ft below land-surface datum, Apr. 27; lowest, 40.79 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	32.57	34.33	37.51	35.52	37.66
2	---	---	---	---	---	---	---	32.50	34.53	37.72	35.24	37.62
3	---	---	---	---	---	---	---	32.63	34.82	38.02	35.18	37.60
4	---	---	---	---	---	---	---	32.61	35.01	38.34	35.22	37.56
5	---	---	---	---	---	---	---	32.63	34.99	38.62	35.36	37.78
6	---	---	---	---	---	---	---	32.78	35.02	38.78	35.51	37.98
7	---	---	---	---	---	---	---	32.90	35.26	39.10	35.60	38.23
8	---	---	---	---	---	---	---	33.10	35.51	39.28	35.74	38.42
9	---	---	---	---	---	---	---	33.03	35.60	39.55	35.88	37.87
10	---	---	---	---	---	---	---	33.21	35.79	39.97	35.83	37.89
11	---	---	---	---	---	---	---	33.30	36.12	40.39	35.79	37.93
12	---	---	---	---	---	---	---	33.49	36.28	40.54	35.90	37.88
13	---	---	---	---	---	---	---	33.67	36.39	39.60	36.01	37.99
14	---	---	---	---	---	---	---	33.77	36.53	39.19	36.25	38.35
15	---	---	---	---	---	---	---	33.76	36.71	38.70	36.34	38.60
16	---	---	---	---	---	---	---	33.69	36.74	38.49	36.39	38.78
17	---	---	---	---	---	---	---	33.75	36.67	38.50	36.45	38.91
18	---	---	---	---	---	---	---	33.72	36.63	38.40	36.41	38.49
19	---	---	---	---	---	---	---	33.71	36.73	37.91	36.56	37.68
20	---	---	---	---	---	---	---	33.77	37.01	37.83	36.83	37.35
21	---	---	---	---	---	---	---	33.71	37.25	37.88	36.96	37.12
22	---	---	---	---	---	---	---	33.62	37.57	37.89	36.85	37.16
23	---	---	---	---	---	---	---	33.67	37.93	37.89	36.80	37.18
24	---	---	---	---	---	---	---	33.83	38.26	37.52	36.94	37.21
25	---	---	---	---	---	---	---	34.04	38.48	37.16	37.06	37.15
26	---	---	---	---	---	---	---	34.08	37.85	37.07	37.15	37.19
27	---	---	---	---	---	---	32.17	34.03	37.66	37.00	37.30	37.33
28	---	---	---	---	---	---	32.51	34.09	37.56	36.32	37.55	37.07
29	---	---	---	---	---	---	32.66	34.41	37.52	35.96	37.94	36.01
30	---	---	---	---	---	---	32.60	34.45	37.49	35.85	38.38	35.84
31	---	---	---	---	---	---	---	34.34	---	35.75	37.90	---
MEAN	---	---	---	---	---	---	32.48	33.51	36.47	38.15	36.41	37.66
MAX	---	---	---	---	---	---	32.66	34.45	38.48	40.54	38.38	38.91
MIN	---	---	---	---	---	---	32.17	32.50	34.33	35.75	35.18	35.84



APRIL 27, 2004 TO SEPTEMBER 30, 2004

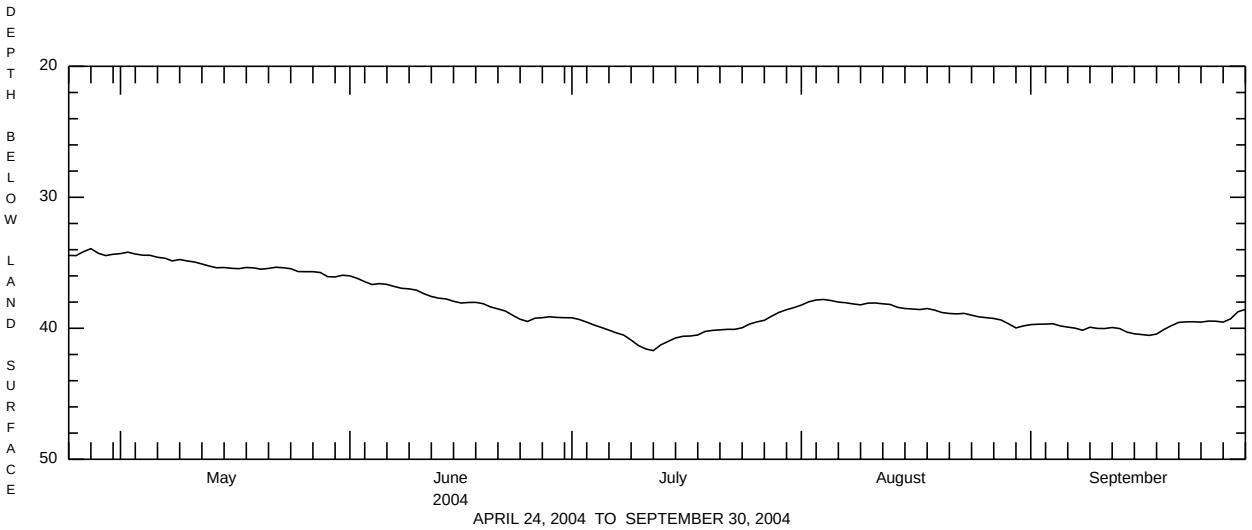
MONTGOMERY COUNTY

401321075171701. Local number, MG 1149.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13'21", long 75°17'17", Horizontal datum NAD27, Hydrologic Unit 02040203, on Church Road, southwest from Wissahickon Avenue, Upper Gwynedd Township.
Owner: Teleflex Corporation.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled monitor well, diameter 6 in., depth 84 ft, cased to 18.5 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 358.0 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top of 8 in. outer steel well casing, 1.55 ft above land-surface datum.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--April 2004 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above. Highest water level, 33.82 ft below land-surface datum, Apr. 27, 2004; lowest, 41.83 ft below land-surface datum, July 12, 2004.
EXTREMES FOR CURRENT YEAR.--Highest water level, 33.82 ft below land-surface datum, Apr. 27; lowest, 41.83 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	34.30	36.00	39.20	38.23	39.72
2	---	---	---	---	---	---	---	34.19	36.19	39.33	37.98	39.69
3	---	---	---	---	---	---	---	34.33	36.44	39.53	37.84	39.68
4	---	---	---	---	---	---	---	34.42	36.66	39.75	37.80	39.65
5	---	---	---	---	---	---	---	34.43	36.59	39.94	37.88	39.82
6	---	---	---	---	---	---	---	34.58	36.65	40.14	38.00	39.91
7	---	---	---	---	---	---	---	34.65	36.81	40.35	38.05	39.99
8	---	---	---	---	---	---	---	34.86	36.95	40.52	38.14	40.15
9	---	---	---	---	---	---	---	34.75	36.99	40.90	38.21	39.92
10	---	---	---	---	---	---	---	34.86	37.09	41.32	38.08	40.01
11	---	---	---	---	---	---	---	34.94	37.36	41.58	38.07	40.02
12	---	---	---	---	---	---	---	35.09	37.57	41.70	38.13	39.94
13	---	---	---	---	---	---	---	35.25	37.70	41.27	38.18	40.02
14	---	---	---	---	---	---	---	35.38	37.76	41.00	38.40	40.29
15	---	---	---	---	---	---	---	35.36	37.94	40.74	38.49	40.42
16	---	---	---	---	---	---	---	35.42	38.07	40.61	38.53	40.48
17	---	---	---	---	---	---	---	35.45	38.03	40.59	38.57	40.54
18	---	---	---	---	---	---	---	35.36	38.02	40.51	38.49	40.44
19	---	---	---	---	---	---	---	35.39	38.12	40.24	38.61	40.09
20	---	---	---	---	---	---	---	35.49	38.37	40.16	38.80	39.80
21	---	---	---	---	---	---	---	35.43	38.52	40.12	38.87	39.55
22	---	---	---	---	---	---	---	35.34	38.68	40.08	38.90	39.51
23	---	---	---	---	---	---	---	35.38	39.01	40.08	38.86	39.50
24	---	---	---	---	---	---	34.44	35.45	39.31	39.96	39.00	39.53
25	---	---	---	---	---	---	34.45	35.67	39.48	39.68	39.13	39.45
26	---	---	---	---	---	---	34.15	35.68	39.23	39.51	39.19	39.46
27	---	---	---	---	---	---	33.92	35.68	39.19	39.39	39.25	39.53
28	---	---	---	---	---	---	34.27	35.74	39.12	39.07	39.37	39.28
29	---	---	---	---	---	---	34.45	36.06	39.17	38.78	39.66	38.74
30	---	---	---	---	---	---	34.35	36.08	39.19	38.58	39.97	38.56
31	---	---	---	---	---	---	---	35.95	---	38.42	39.82	---
MEAN	---	---	---	---	---	---	34.29	35.19	37.87	40.10	38.60	39.79
MAX	---	---	---	---	---	---	34.45	36.08	39.48	41.70	39.97	40.54
MIN	---	---	---	---	---	---	33.92	34.19	36.00	38.42	37.80	38.56



APRIL 24, 2004 TO SEPTEMBER 30, 2004

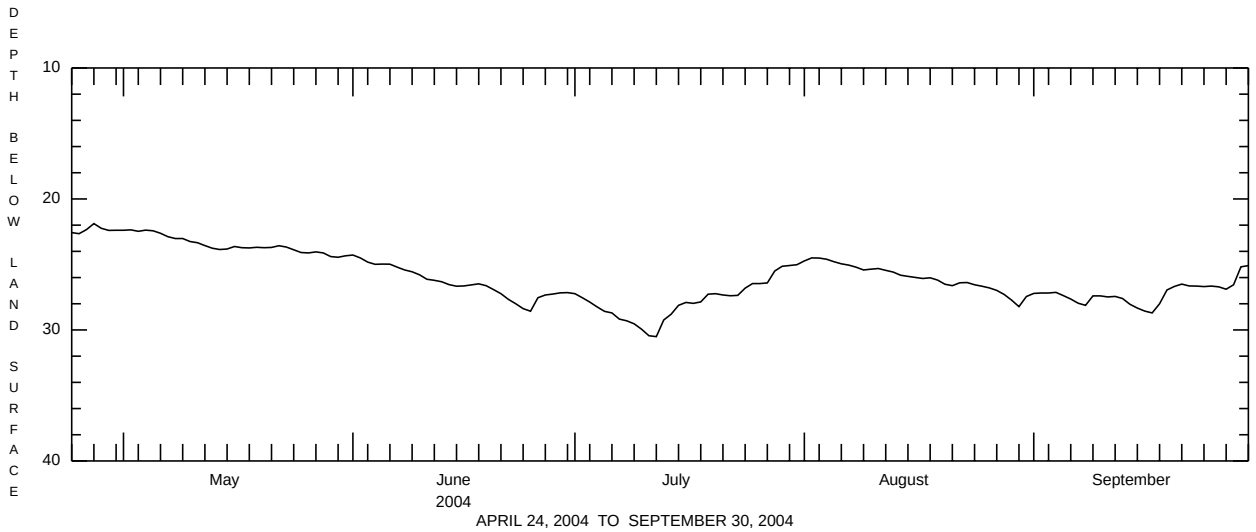
MONTGOMERY COUNTY

401323075171201. Local number, MG 1842.
(North Penn Area 7 Project)

LOCATION.--Lat 40°13'23", long 75°17'12", Horizontal datum NAD27, Hydrologic Unit 02040203, on Church Road, southwest from Wissahickon Avenue, Upper Gwynedd Township.
Owner: Teleflex Corporation.
AQUIFER.--Shale of Brunswick Group of Triassic Age.
WELL CHARACTERISTICS.--Drilled monitor well, diameter 6 in., depth 86 ft, cased to 18 ft, open hole.
INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.
DATUM.--Elevation of land-surface datum is 348.0 ft above North American Vertical Datum of 1988, from survey. Measuring point: Top of 8 in. outer steel well casing, 2.3 ft above land-surface datum. Horizontal datum is NAD27.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--April 2004 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above. Highest water level, 21.76 ft below land-surface datum, Apr. 27, 2004; lowest, 30.96 ft below land-surface datum, July 12, 2004.
EXTREMES FOR CURRENT YEAR.--Highest water level, 21.76 ft below land-surface datum, Apr. 27; lowest, 30.96 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	22.39	24.28	27.23	24.73	27.21
2	---	---	---	---	---	---	---	22.36	24.50	27.54	24.50	27.18
3	---	---	---	---	---	---	---	22.47	24.82	27.87	24.51	27.18
4	---	---	---	---	---	---	---	22.38	24.99	28.24	24.60	27.13
5	---	---	---	---	---	---	---	22.43	24.97	28.58	24.79	27.38
6	---	---	---	---	---	---	---	22.62	24.98	28.70	24.95	27.64
7	---	---	---	---	---	---	---	22.88	25.21	29.17	25.05	27.96
8	---	---	---	---	---	---	---	23.02	25.42	29.30	25.21	28.12
9	---	---	---	---	---	---	---	23.02	25.56	29.53	25.42	27.40
10	---	---	---	---	---	---	---	23.25	25.79	29.94	25.36	27.40
11	---	---	---	---	---	---	---	23.34	26.13	30.44	25.31	27.48
12	---	---	---	---	---	---	---	23.56	26.21	30.51	25.45	27.44
13	---	---	---	---	---	---	---	23.76	26.32	29.24	25.58	27.60
14	---	---	---	---	---	---	---	23.86	26.54	28.80	25.82	28.04
15	---	---	---	---	---	---	---	23.82	26.66	28.12	25.91	28.33
16	---	---	---	---	---	---	---	23.63	26.64	27.90	25.99	28.56
17	---	---	---	---	---	---	---	23.72	26.56	27.97	26.07	28.70
18	---	---	---	---	---	---	---	23.74	26.48	27.86	26.02	28.00
19	---	---	---	---	---	---	---	23.69	26.62	27.27	26.19	26.95
20	---	---	---	---	---	---	---	23.72	26.92	27.23	26.51	26.68
21	---	---	---	---	---	---	---	23.70	27.23	27.33	26.62	26.50
22	---	---	---	---	---	---	---	23.57	27.66	27.39	26.40	26.64
23	---	---	---	---	---	---	---	23.67	28.00	27.36	26.38	26.65
24	---	---	---	---	---	---	22.57	23.88	28.37	26.81	26.55	26.69
25	---	---	---	---	---	---	22.65	24.09	28.57	26.46	26.66	26.65
26	---	---	---	---	---	---	22.34	24.12	27.54	26.46	26.79	26.71
27	---	---	---	---	---	---	21.88	24.04	27.33	26.41	26.98	26.89
28	---	---	---	---	---	---	22.24	24.12	27.26	25.50	27.29	26.55
29	---	---	---	---	---	---	22.40	24.40	27.17	25.14	27.72	25.18
30	---	---	---	---	---	---	22.39	24.45	27.15	25.08	28.22	25.09
31	---	---	---	---	---	---	---	24.34	---	25.02	27.45	---
MEAN	---	---	---	---	---	---	22.35	23.49	26.40	27.75	25.97	27.20
MAX	---	---	---	---	---	---	22.65	24.45	28.57	30.51	28.22	28.70
MIN	---	---	---	---	---	---	21.88	22.36	24.28	25.02	24.50	25.09



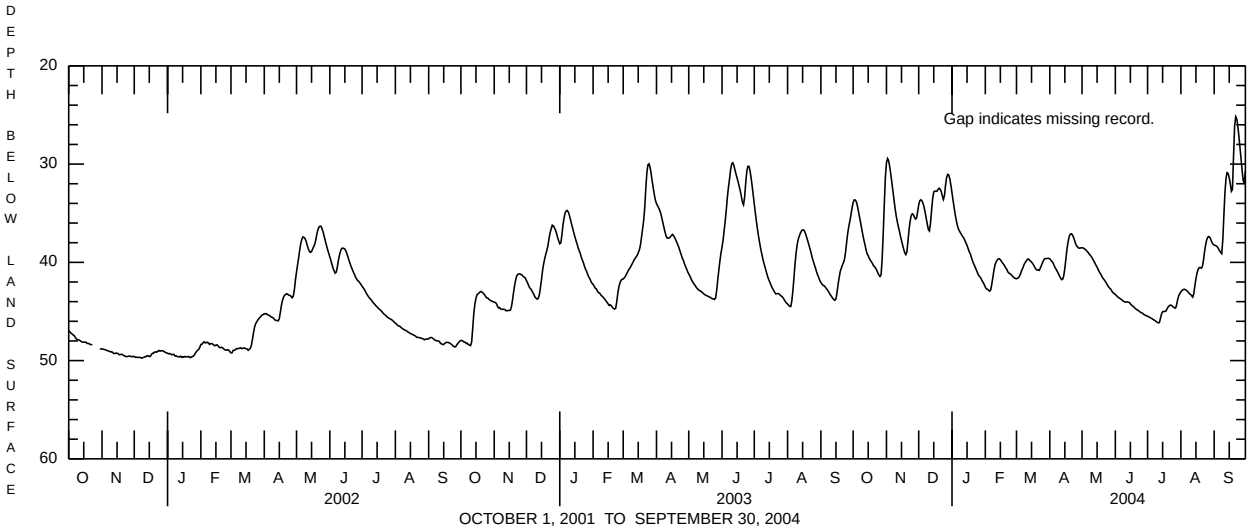
NORTHAMPTON COUNTY

404745075184001. Local number, NP 820.

LOCATION.--Lat 40°47'45", long 75°18'40", Hydrologic Unit 02040105, at 0.75 mi east of Bushkill Center on SR 1010, at Jacobsburg State Park. Owner: Jacobsburg State Park.
AQUIFER.--Martinsburg Shale.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 218 ft, cased to 50 ft.
INSTRUMENTATION.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 578 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of metal shelf, 3.25 ft above land-surface datum.
REMARKS.--In addition to the daily mean water level table shown below, daily maximum and minimum water levels, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--May 3, 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above.
Highest water level, 25.07 ft below land-surface datum, Sept. 21, 2004; lowest, 49.79 ft below land-surface datum, Dec. 8, 2001.
EXTREMES FOR CURRENT YEAR.--Highest water level, 25.07 ft below land-surface datum, Sept. 21; lowest, 46.22 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.91	29.85	34.15	32.93	42.52	41.67	39.64	38.52	43.27	45.49	43.00	38.24
2	33.64	29.44	33.73	33.70	42.70	41.62	39.78	38.53	43.38	45.54	42.87	38.28
3	33.66	29.65	33.63	34.44	42.74	41.56	39.91	38.60	43.49	45.60	42.78	38.34
4	33.84	30.25	33.73	35.16	42.84	41.36	40.05	38.69	43.59	45.67	42.74	38.43
5	34.28	31.01	33.99	35.74	42.93	41.09	40.32	38.78	43.65	45.72	42.77	38.62
6	34.83	31.85	34.38	36.25	42.81	40.77	40.55	38.92	43.73	45.81	42.84	38.81
7	35.42	32.71	34.91	36.61	42.24	40.56	40.72	39.04	43.82	45.87	42.93	39.00
8	36.01	33.61	35.53	36.83	41.55	40.24	40.93	39.21	43.91	45.93	43.05	39.12
9	36.61	34.48	36.12	37.01	40.83	40.04	41.15	39.32	43.98	46.03	43.19	37.72
10	37.18	35.21	36.65	37.21	40.27	39.88	41.38	39.48	44.04	46.10	43.27	35.21
11	37.73	35.82	36.80	37.38	39.96	39.72	41.59	39.67	44.03	46.16	43.40	32.90
12	38.20	36.34	36.01	37.54	39.78	39.65	41.76	39.87	44.03	46.13	43.54	31.43
13	38.72	36.79	34.71	37.76	39.66	39.77	41.72	40.07	44.06	45.70	43.19	30.87
14	39.13	37.32	33.52	38.04	39.63	39.87	41.35	40.30	44.09	45.25	42.39	30.96
15	39.31	37.79	32.83	38.27	39.73	39.97	40.61	40.49	44.21	45.02	41.67	31.40
16	39.60	38.23	32.75	38.59	39.90	40.11	39.63	40.72	44.35	45.00	41.09	32.02
17	39.78	38.64	32.77	38.92	40.07	40.28	38.66	40.96	44.44	45.00	40.72	32.76
18	39.94	39.02	32.76	39.13	40.19	40.50	37.93	41.13	44.52	44.97	40.54	32.56
19	40.12	39.21	32.57	39.48	40.37	40.68	37.40	41.32	44.63	44.77	40.52	29.13
20	40.36	38.95	32.45	39.82	40.58	40.78	37.14	41.54	44.74	44.57	40.59	26.15
21	40.43	37.86	32.56	40.12	40.71	40.78	37.09	41.69	44.82	44.43	40.43	25.17
22	40.62	36.71	32.80	40.34	40.97	40.82	37.19	41.83	44.87	44.36	39.80	25.39
23	40.81	35.84	33.22	40.62	41.11	40.64	37.43	42.00	44.96	44.36	38.94	26.16
24	41.08	35.26	33.59	40.85	41.15	40.37	37.74	42.18	45.05	44.46	38.22	27.19
25	41.30	35.06	33.19	41.15	41.25	40.09	38.10	42.39	45.12	44.55	37.72	28.31
26	41.44	35.14	32.13	41.36	41.38	39.85	38.32	42.53	45.15	44.62	37.44	29.49
27	41.28	35.39	31.35	41.48	41.48	39.66	38.44	42.66	45.26	44.66	37.37	30.69
28	39.65	35.59	31.05	41.64	41.58	39.62	38.55	42.77	45.34	44.34	37.47	31.70
29	37.05	35.49	31.12	41.87	41.64	39.61	38.56	42.98	45.38	43.78	37.71	31.88
30	34.05	34.87	31.51	42.04	---	39.60	38.52	43.11	45.44	43.40	38.00	30.72
31	31.34	---	32.18	42.27	---	39.60	---	43.18	---	43.17	38.15	---
MEAN	37.78	35.11	33.51	38.53	41.12	40.35	39.41	40.73	44.38	45.05	40.91	32.62
MAX	41.44	39.21	36.80	42.27	42.93	41.67	41.76	43.18	45.44	46.16	43.54	39.12
MIN	31.34	29.44	31.05	32.93	39.63	39.60	37.09	38.52	43.27	43.17	37.37	25.17



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

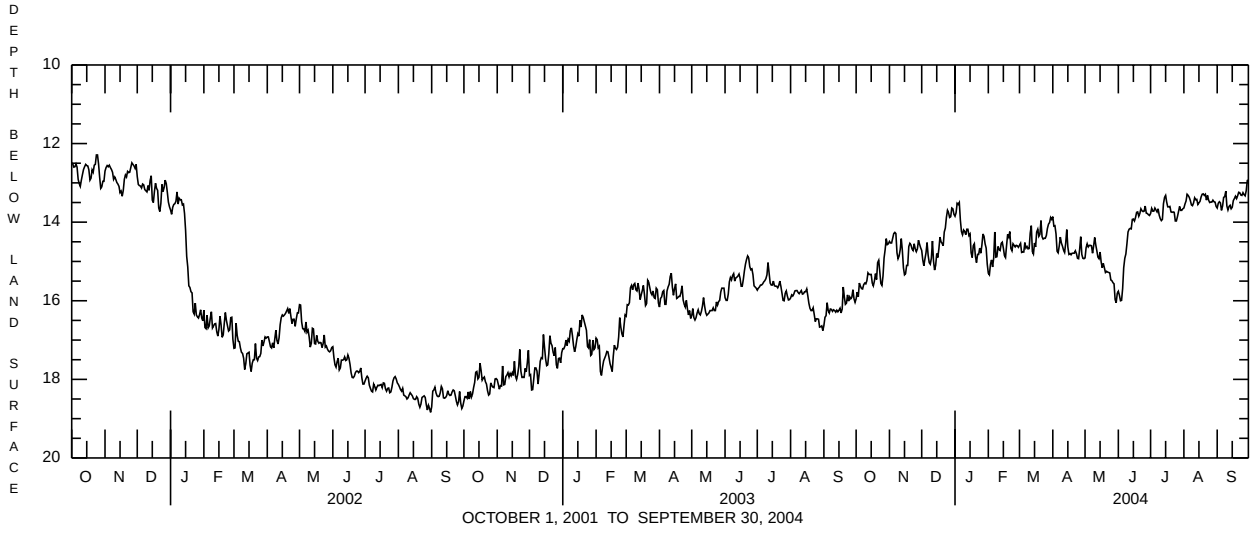
PHILADELPHIA COUNTY

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 101 ft, cased to 93 ft, screened from 93-101 ft.
INSTRUMENTATION.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 8.6 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.3 ft above land-surface datum. Prior to May 27, 1998, top of casing, 1.8 ft above land-surface datum.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office. Mean daily fluctuation caused by tidal loading, 0.20 ft.
PERIOD OF RECORD.--January 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 10.65 ft below land-surface datum, Dec. 17, 18, 1996; lowest, 39.60 ft below land-surface datum, July 20, 1955.
EXTREMES FOR CURRENT YEAR.--Highest water level, 12.65 ft below land-surface datum, Sept. 29; lowest, 16.05 ft below land-surface datum, May 30.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.95	14.49	14.72	13.85	15.30	14.59	13.86	14.91	15.76	13.78	13.64	13.64
2	15.78	14.53	14.96	13.76	15.34	14.54	14.10	14.65	15.86	13.65	13.54	13.52
3	15.90	14.53	15.11	13.52	15.07	14.77	14.09	14.55	16.00	13.72	13.46	13.48
4	15.55	14.41	14.94	13.55	14.96	14.76	14.30	14.63	15.99	13.72	13.29	13.51
5	15.63	14.29	14.78	13.50	15.14	14.76	14.74	14.59	15.69	13.64	13.32	13.70
6	15.69	14.26	14.52	13.95	14.91	14.52	14.78	14.59	15.16	13.69	13.37	13.59
7	15.70	14.29	14.84	14.24	14.25	14.66	14.61	14.60	14.92	13.74	13.45	13.37
8	15.59	14.78	15.03	14.32	14.89	14.62	14.38	14.79	14.81	13.66	13.56	13.35
9	15.55	14.93	15.07	14.20	14.88	14.68	14.53	14.61	14.55	13.82	13.58	13.21
10	15.57	14.86	14.92	14.24	14.62	14.67	14.61	14.39	14.25	13.91	13.51	13.59
11	15.49	14.70	14.48	14.32	14.70	14.28	14.71	14.58	14.18	13.96	13.38	13.69
12	15.29	14.42	14.99	14.18	14.72	14.09	14.77	14.73	14.16	13.93	13.43	13.60
13	15.33	14.72	15.22	14.18	14.54	14.75	14.54	14.89	14.17	13.53	13.42	13.57
14	15.33	15.16	15.10	14.34	14.51	14.81	14.19	14.93	13.93	13.37	13.55	13.66
15	15.33	15.34	14.80	14.30	14.66	14.53	14.63	14.76	13.92	13.32	13.51	13.62
16	15.55	15.31	14.90	14.78	14.85	14.63	14.82	15.01	13.97	13.49	13.47	13.45
17	15.62	15.10	14.68	14.90	14.90	14.25	14.80	15.16	13.88	13.61	13.36	13.40
18	15.50	15.10	14.38	14.60	14.59	14.18	14.83	15.05	13.75	13.61	13.29	13.34
19	15.31	14.62	14.50	14.55	14.31	14.36	14.79	15.16	13.74	13.60	13.28	13.40
20	15.46	14.54	14.54	14.87	14.38	14.31	14.79	15.28	13.85	13.74	13.32	13.33
21	15.03	14.58	14.60	15.03	14.24	13.96	14.79	15.25	13.78	13.75	13.29	13.24
22	14.97	14.68	14.25	14.82	14.67	14.37	14.73	15.27	13.66	13.74	13.44	13.25
23	15.26	14.72	14.15	14.82	14.73	14.43	14.80	15.28	13.71	13.75	13.32	13.31
24	15.56	14.55	13.88	14.66	14.55	14.41	14.92	15.29	13.73	13.97	13.44	13.32
25	15.61	14.68	13.70	14.79	14.59	14.41	14.93	15.47	13.72	13.97	13.50	13.25
26	15.37	14.75	13.76	14.59	14.63	14.34	14.69	15.49	13.59	13.86	13.49	13.30
27	14.91	14.68	13.88	14.30	14.59	14.16	14.37	15.54	13.77	13.73	13.49	13.33
28	14.70	14.46	13.86	14.36	14.60	14.05	14.82	15.57	13.78	13.60	13.44	13.20
29	14.42	14.56	13.64	14.55	14.64	14.01	14.92	15.97	13.81	13.70	13.48	12.94
30	14.57	14.65	13.66	14.66	---	13.88	14.93	16.05	13.83	13.70	13.49	12.93
31	14.55	---	13.80	15.07	---	13.93	---	15.81	---	13.66	13.60	---
MEAN	15.36	14.69	14.51	14.38	14.72	14.41	14.63	15.06	14.33	13.71	13.44	13.40
MAX	15.95	15.34	15.22	15.07	15.34	14.81	14.93	16.05	16.00	13.97	13.64	13.70
MIN	14.42	14.26	13.64	13.50	14.24	13.88	13.86	14.39	13.59	13.32	13.28	12.93



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

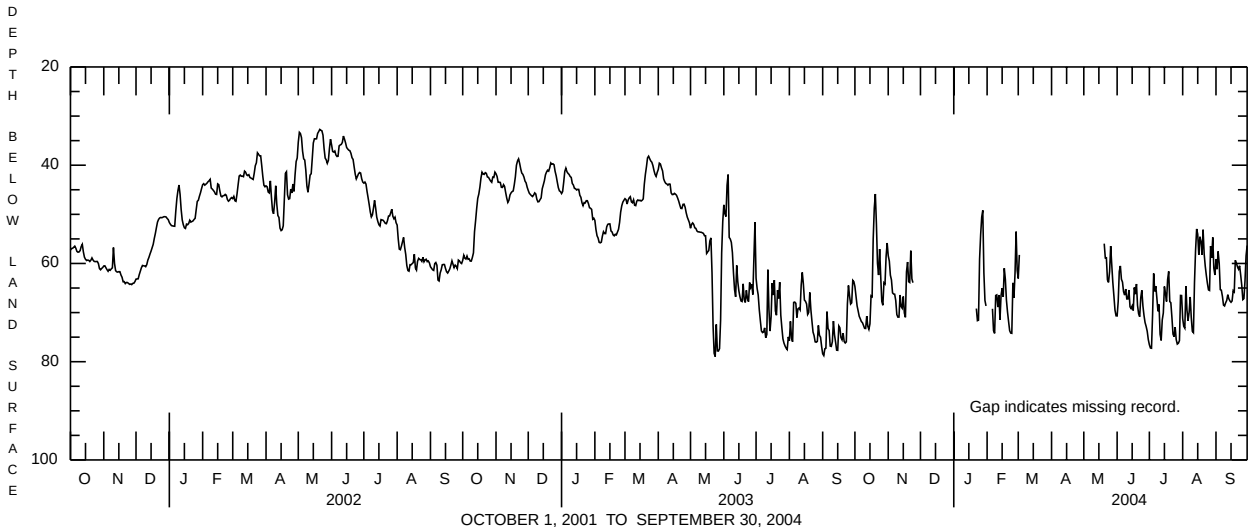
PIKE COUNTY

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.--Electronic data logger with 30-minute recording interval.
DATUM.--Elevation of land-surface datum is 1,180 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 3.27 ft above land-surface datum. Prior to October 1983, published as 1.4 ft above land-surface datum.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--July 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 24.30 ft below land-surface datum, June 1, 1984; lowest recorded, 98.67 ft below land-surface datum, Sept. 10, 26-29, Oct. 1 1998.
EXTREMES FOR CURRENT YEAR.--Highest water level, 42.43 ft below land-surface datum, Oct. 21; lowest, 77.26 ft below land-surface datum, July 3.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.70	58.41	---	---	---	63.06	---	---	70.68	76.55	71.21	59.17
2	66.62	59.51	---	---	---	58.26	---	---	67.75	77.21	72.79	61.17
3	68.61	62.39	---	---	---	---	---	---	61.65	77.26	73.17	57.55
4	69.66	63.35	---	---	---	---	---	---	60.50	70.52	64.64	60.01
5	70.75	65.99	---	---	---	---	---	---	63.21	62.04	69.50	65.32
6	71.27	66.22	---	---	69.23	---	---	---	63.79	65.68	71.65	65.44
7	71.83	66.26	---	---	73.68	---	---	---	65.76	64.62	69.93	66.71
8	72.05	67.54	---	---	74.23	---	---	---	66.45	67.10	66.82	68.47
9	72.63	70.41	---	---	66.52	---	---	---	65.21	69.73	71.02	68.65
10	73.21	70.93	---	---	66.40	---	---	---	67.22	68.35	73.80	68.00
11	73.23	70.92	---	---	68.88	---	---	---	67.22	74.42	74.08	67.52
12	70.71	66.42	---	---	66.42	---	---	---	65.41	75.67	63.88	66.36
13	72.80	68.78	---	---	71.48	---	---	---	68.83	71.50	57.36	67.20
14	73.41	69.11	---	---	66.51	---	---	---	69.18	70.08	52.97	67.64
15	72.29	66.73	---	---	65.05	---	---	---	68.64	64.69	54.04	67.90
16	66.58	70.10	---	---	66.79	---	---	---	69.57	66.14	58.24	67.63
17	66.76	70.96	---	---	60.97	---	---	---	64.90	67.75	54.56	65.53
18	55.11	61.70	---	---	63.27	---	---	---	66.25	63.29	55.49	65.78
19	48.72	59.71	---	---	67.49	---	---	---	64.18	61.61	58.23	59.35
20	45.86	63.71	---	---	69.86	---	---	55.97	68.54	67.76	53.13	59.95
21	51.93	63.87	---	---	71.85	---	---	58.86	70.26	67.99	58.06	60.68
22	59.97	57.40	---	69.18	73.68	---	---	58.84	70.84	71.02	60.53	61.16
23	62.36	63.13	---	71.64	74.17	---	---	63.35	66.97	74.38	62.39	60.47
24	57.07	63.91	---	71.54	74.22	---	---	63.85	65.46	74.91	64.01	62.39
25	62.61	---	---	59.10	63.95	---	---	61.62	68.65	72.98	65.36	64.48
26	67.73	---	---	54.12	67.00	---	---	56.46	70.56	75.51	65.49	67.35
27	68.51	---	---	50.55	61.96	---	---	60.23	72.02	76.41	56.47	67.14
28	63.92	---	---	49.18	53.52	---	---	63.82	72.82	76.24	58.83	63.56
29	64.17	---	---	61.88	61.41	---	---	66.62	73.79	75.71	54.68	58.44
30	58.58	---	---	67.53	---	---	---	69.47	75.47	66.51	60.95	56.36
31	55.84	---	---	68.65	---	---	---	70.66	---	66.53	62.35	---
MEAN	65.14	65.31	---	62.34	67.44	60.66	---	62.48	67.73	70.33	63.08	63.91
MAX	73.41	70.96	---	71.64	74.23	63.06	---	70.66	75.47	77.26	74.08	68.65
MIN	45.86	57.40	---	49.18	53.52	58.26	---	55.97	60.50	61.61	52.97	56.36



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

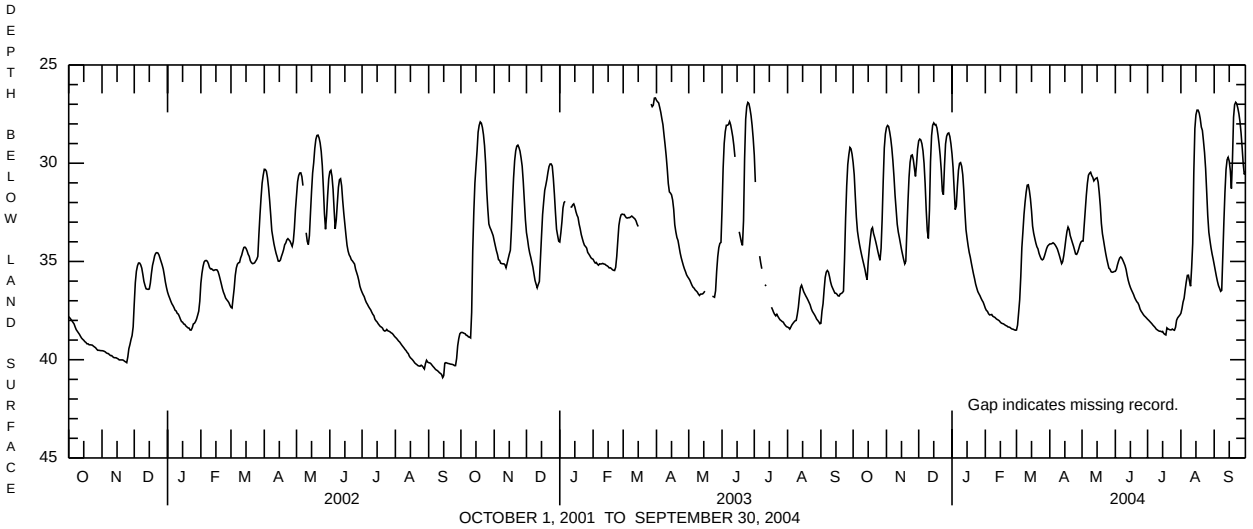
PIKE COUNTY

411833075133601. Local number PI 522.

LOCATION.--Lat 41°18’ 33”, long 75°13’ 36”, Hydrologic Unit 02040103, at Promised Land State Park.
Owner: U.S. Geological Survey.
AQUIFER.-- Catskill Formation.
WELL CHARACTERISTICS.--Drilled unused public supply well, diameter 6 in., depth 150 ft, cased to 28 ft, open hole.
INSTRUMENTATION.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 1,730 ft above National Geodetic Vertical Datum of 1929, from survey. Measuring point: Top of casing, 3.64 ft above land-surface datum.
REMARKS.--In addition to the daily mean water-level table shown below, daily maximum and minimum water levels are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--October 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land-surface datum for the period of record indicated above.
Highest water level, 26.63 ft below land-surface datum, Mar. 30, 31, 2003; lowest, 40.96 ft below land-surface datum, Sept. 15, 2002.
EXTREMES FOR CURRENT YEAR.--Highest water level, 26.88 ft below land-surface datum, Sept. 21; lowest, 38.76 ft below land-surface datum, July 18.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.97	28.19	28.86	29.53	37.38	38.49	34.11	33.96	35.50	37.94	37.64	35.16
2	30.59	28.08	28.77	30.23	37.49	38.24	34.11	33.96	35.40	37.99	37.40	35.45
3	31.69	28.13	28.82	31.32	37.54	37.61	34.09	33.18	35.17	38.05	37.07	35.75
4	32.73	28.41	29.01	32.36	37.66	36.95	34.05	32.39	34.98	38.11	36.87	36.01
5	33.45	28.76	29.38	32.18	37.72	35.77	34.09	31.63	34.83	38.17	36.44	36.23
6	33.83	29.24	30.01	31.18	37.71	34.30	34.16	31.02	34.77	38.24	36.04	36.37
7	34.15	29.88	31.04	30.36	37.70	33.48	34.25	30.61	34.83	38.30	35.71	36.52
8	34.44	30.69	32.39	30.01	37.79	32.60	34.36	30.51	34.94	38.36	35.70	36.47
9	34.70	31.63	33.43	29.97	37.82	31.98	34.53	30.46	35.07	38.44	36.00	34.73
10	34.94	32.35	33.83	30.15	37.85	31.48	34.71	30.62	35.21	38.48	36.26	33.00
11	35.17	33.10	32.40	30.59	37.91	31.12	34.91	30.72	35.41	38.52	35.32	31.49
12	35.41	33.50	29.91	31.41	37.95	31.10	35.11	30.90	35.71	38.55	34.09	30.32
13	35.71	33.78	28.60	32.46	37.98	31.39	35.01	30.82	35.96	38.55	30.49	29.82
14	35.93	34.09	28.07	33.38	38.02	31.81	34.70	30.77	36.16	38.58	28.24	29.70
15	35.02	34.39	27.95	33.81	38.09	32.43	34.30	30.74	36.32	38.56	27.54	29.90
16	34.37	34.65	28.04	34.20	38.14	33.20	33.85	30.96	36.45	38.66	27.30	30.38
17	33.84	34.90	28.03	34.54	38.16	33.56	33.47	31.49	36.57	38.71	27.30	31.29
18	33.38	35.12	28.21	34.78	38.18	33.82	33.25	32.17	36.69	38.74	27.44	29.82
19	33.28	34.99	28.58	35.08	38.22	34.06	33.37	33.06	36.84	38.38	27.73	27.66
20	33.58	33.45	29.04	35.36	38.26	34.25	33.68	33.59	36.95	38.43	28.16	27.02
21	33.77	31.97	29.62	35.64	38.28	34.36	33.86	33.92	37.05	38.46	28.33	26.90
22	33.99	30.72	30.36	35.88	38.33	34.59	34.04	34.26	37.11	38.48	28.86	26.98
23	34.23	29.95	31.43	36.15	38.34	34.74	34.21	34.58	37.23	38.48	29.46	27.20
24	34.49	29.61	31.60	36.35	38.36	34.87	34.41	34.86	37.42	38.44	30.27	27.49
25	34.73	29.58	30.13	36.53	38.41	34.92	34.62	35.11	37.53	38.48	31.44	27.89
26	34.94	29.82	29.02	36.64	38.44	34.88	34.64	35.34	37.61	38.50	32.66	28.47
27	34.33	30.25	28.63	36.74	38.45	34.73	34.53	35.39	37.70	38.35	33.51	29.21
28	32.86	30.67	28.49	36.87	38.48	34.54	34.35	35.52	37.77	37.99	33.92	30.03
29	30.87	30.04	28.46	36.98	38.50	34.35	34.15	35.55	37.82	37.87	34.29	30.57
30	29.22	29.27	28.64	37.07	---	34.22	34.01	35.54	37.88	37.80	34.61	30.44
31	28.52	---	29.01	37.22	---	34.16	---	35.51	---	37.73	34.87	---
MEAN	33.49	31.31	29.67	33.71	38.04	34.13	34.23	32.88	36.30	38.33	32.61	31.28
MAX	35.93	35.12	33.83	37.22	38.50	38.49	35.11	35.55	37.88	38.74	37.64	36.52
MIN	28.52	28.08	27.95	29.53	37.38	31.10	33.25	30.46	34.77	37.73	27.30	26.90



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

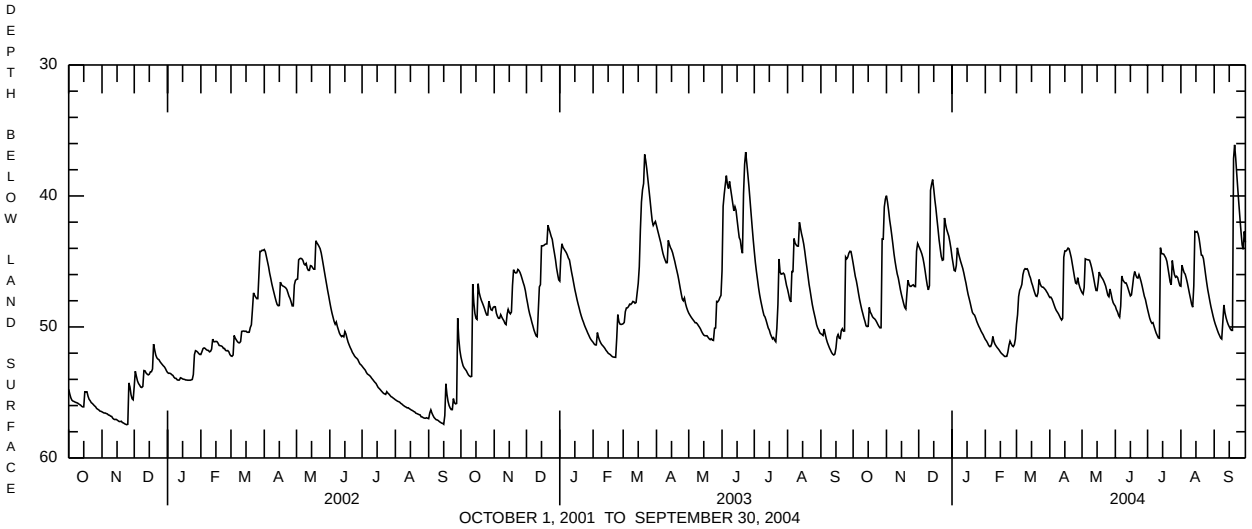
SCHUYLKILL COUNTY

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.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 1,290 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 2.78 ft above land-surface datum. Prior to June 26, 1980, top of casing 2.3 ft above land-surface datum.
REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--July 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 26.27 ft below land-surface datum, May 18, 1989; lowest, 57.46 ft below land-surface datum, Nov. 24, 2001.
EXTREMES FOR CURRENT YEAR.--Highest water level, 35.78 ft below land-surface datum, Sept. 20; lowest, 52.25 ft below land-surface datum, Feb. 19, 20.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.14	39.98	43.83	44.65	50.95	49.79	47.75	47.38	48.42	48.66	46.89	49.51
2	45.65	40.48	44.01	45.16	51.06	49.07	47.73	47.49	48.68	49.00	45.28	49.79
3	46.14	41.11	44.21	45.68	51.21	47.68	47.86	46.99	48.85	49.33	45.59	50.02
4	46.48	41.85	44.44	45.73	51.39	47.20	48.08	44.80	49.11	49.57	45.85	50.26
5	46.94	42.40	44.76	45.31	51.50	47.01	48.32	44.84	49.25	49.72	45.97	50.48
6	47.44	43.03	45.20	43.96	51.49	46.75	48.55	44.87	48.40	49.67	46.28	50.66
7	47.90	43.69	45.73	44.38	51.27	46.01	48.73	44.88	46.11	49.95	46.63	50.84
8	48.30	44.41	46.32	44.69	50.73	45.67	48.86	44.91	46.41	50.22	47.04	50.92
9	48.67	44.99	46.84	44.99	51.11	45.55	48.99	45.17	46.54	50.47	47.46	49.63
10	48.98	45.49	47.17	45.26	51.32	45.58	49.16	45.49	46.64	50.65	47.86	48.32
11	49.30	45.95	46.85	45.53	51.45	45.56	49.34	45.90	46.64	50.83	48.27	48.91
12	49.58	46.26	39.57	45.88	51.57	45.74	49.47	46.35	46.84	50.86	48.49	49.29
13	49.91	46.71	39.10	46.28	51.67	46.05	49.34	46.81	47.10	43.95	46.86	49.58
14	49.97	47.17	38.75	46.66	51.78	46.26	44.68	47.21	47.38	44.40	42.71	49.81
15	49.95	47.55	39.46	47.11	51.91	46.60	44.20	47.22	47.63	44.42	42.75	49.98
16	48.51	47.88	40.27	47.52	52.02	46.84	44.21	46.61	47.55	44.44	42.71	50.15
17	48.87	48.21	40.94	47.85	52.09	47.13	44.12	45.81	46.89	44.59	42.88	50.26
18	49.02	48.51	41.77	48.19	52.17	47.40	43.98	46.02	46.19	44.74	43.28	50.26
19	49.22	48.63	42.54	48.56	52.25	47.63	44.04	46.19	45.77	45.00	43.87	37.14
20	49.32	47.47	43.36	48.89	52.25	47.67	44.36	46.30	46.03	45.51	44.51	36.10
21	49.38	46.44	44.01	49.02	52.24	47.40	44.72	46.46	46.23	46.04	44.54	37.11
22	49.49	46.76	44.62	49.10	51.91	46.38	45.21	46.66	46.27	46.57	44.79	38.33
23	49.64	46.90	44.91	49.31	51.40	46.70	45.70	46.88	46.01	46.78	45.39	39.53
24	49.81	46.90	44.87	49.57	51.08	46.89	46.21	47.23	46.26	44.93	46.02	40.66
25	49.96	46.82	41.68	49.77	51.27	46.96	46.64	47.58	46.55	45.54	46.61	41.74
26	50.07	46.78	42.16	49.96	51.43	46.97	46.70	47.69	46.90	46.01	47.15	42.80
27	50.06	46.91	42.54	50.12	51.50	47.07	46.24	47.10	47.29	46.20	47.60	43.74
28	43.29	46.92	42.81	50.31	51.36	47.16	46.70	47.45	47.66	46.13	48.05	44.07
29	43.30	44.22	43.07	50.46	50.91	47.30	46.99	47.87	47.90	46.23	48.47	42.71
30	40.84	43.63	43.50	50.60	---	47.43	47.20	48.15	48.30	46.55	48.83	43.53
31	40.23	---	44.01	50.79	---	47.61	---	48.30	---	46.85	49.19	---
MEAN	47.79	45.47	43.33	47.46	51.53	46.94	46.80	46.54	47.19	47.22	46.06	46.20
MAX	50.07	48.63	47.17	50.79	52.25	49.79	49.47	48.30	49.25	50.86	49.19	50.92
MIN	40.23	39.98	38.75	43.96	50.73	45.55	43.98	44.80	45.77	43.95	42.71	36.10



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

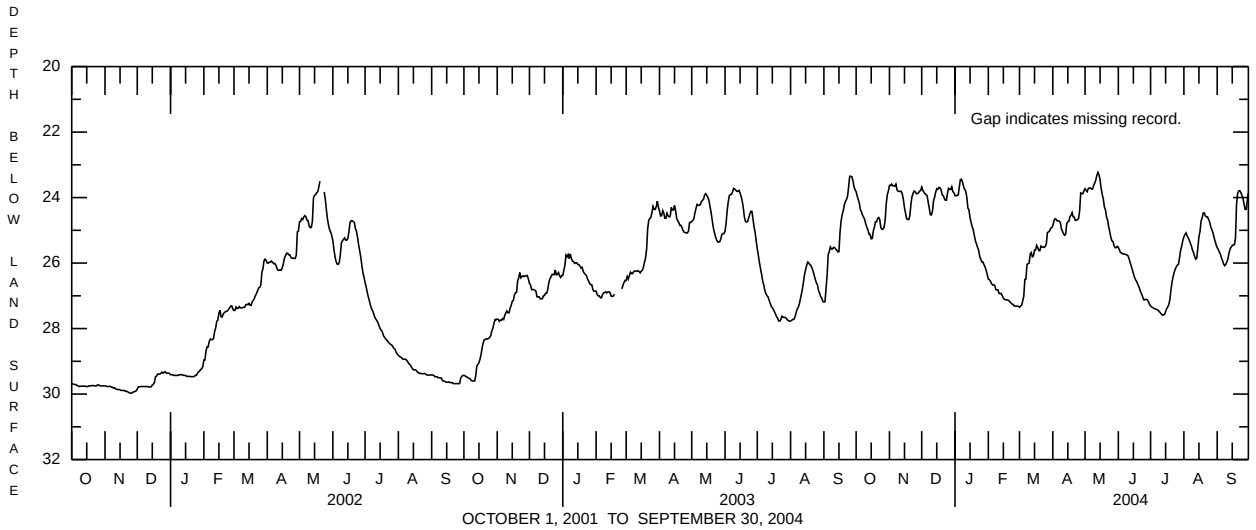
WAYNE COUNTY

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 hole.
INSTRUMENTATION.--Data collection platform with 30-minute recording interval. Satellite telemetry at station.
DATUM.--Elevation of land-surface datum is 1,350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood shelf, 3.92 ft above land-surface datum. Prior to May 7, 1987, top of plywood cover, measuring point above land-surface datum varied.
REMARKS.--Daily maximum water-level data collected prior to May 7, 1987 were referenced to an uncertain datum elevation that cannot be related to any datum after that date. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1994, are also available from the USGS Pennsylvania Water Science Center Office.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Prior to October 2000, the extremes were based on extremes of the daily maximum depth below land-surface datum. Since that date, the extremes are based on the instantaneous depth below land-surface datum.
Highest water level, 7.88 ft below land-surface datum, Nov. 17, 1972; lowest, 32.98 ft below land-surface datum, Nov. 9, 10, 11, 1991.
EXTREMES FOR CURRENT YEAR.--Highest water level recorded, 23.18 ft below land-surface datum, May 13; lowest, 27.59 ft below land-surface datum, July 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.82	23.63	23.68	23.94	26.49	27.35	24.86	23.73	25.52	27.31	25.20	25.53
2	23.96	23.63	23.78	23.95	26.51	27.31	24.72	23.78	25.60	27.34	25.13	25.59
3	24.06	23.59	23.83	23.93	26.55	27.29	24.65	23.82	25.68	27.36	25.08	25.66
4	24.18	23.64	23.88	23.92	26.63	27.16	24.66	23.73	25.69	27.38	25.17	25.73
5	24.37	23.64	23.91	23.68	26.67	27.01	24.71	23.70	25.72	27.40	25.23	25.85
6	24.44	23.65	23.94	23.45	26.66	26.50	24.71	23.71	25.72	27.41	25.30	25.93
7	24.54	23.59	24.13	23.44	26.69	26.49	24.72	23.74	25.73	27.42	25.39	26.03
8	24.60	23.76	24.32	23.53	26.81	26.04	24.76	23.74	25.74	27.44	25.48	26.08
9	24.68	23.81	24.52	23.67	26.82	26.02	24.95	23.63	25.75	27.48	25.60	26.04
10	24.81	23.81	24.53	23.75	26.82	26.00	25.03	23.56	25.78	27.51	25.69	25.96
11	24.91	23.81	24.42	23.81	26.93	25.72	25.11	23.47	25.87	27.56	25.80	25.87
12	24.99	23.81	24.10	23.99	26.93	25.68	25.15	23.32	25.99	27.59	25.88	25.69
13	25.12	23.90	23.99	24.32	26.93	25.81	25.11	23.23	26.09	27.58	25.85	25.57
14	25.13	24.07	23.84	24.38	27.00	25.78	24.79	23.30	26.20	27.57	25.53	25.51
15	25.26	24.32	23.73	24.62	27.07	25.60	24.74	23.46	26.32	27.48	25.20	25.47
16	25.25	24.48	23.75	24.76	27.11	25.60	24.72	23.72	26.43	27.39	25.03	25.44
17	25.02	24.65	23.69	24.89	27.12	25.46	24.58	23.90	26.51	27.34	24.71	25.44
18	24.91	24.67	23.70	24.99	27.12	25.53	24.54	24.04	26.56	27.26	24.62	25.25
19	24.74	24.67	23.75	25.16	27.13	25.62	24.46	24.29	26.64	27.11	24.47	24.20
20	24.74	24.55	23.91	25.32	27.14	25.62	24.59	24.37	26.71	26.81	24.47	23.87
21	24.64	24.19	23.94	25.42	27.19	25.48	24.60	24.59	26.81	26.57	24.56	23.80
22	24.61	23.97	24.02	25.52	27.21	25.51	24.70	24.69	26.90	26.41	24.59	23.79
23	24.68	23.87	24.08	25.61	27.25	25.51	24.69	24.89	26.97	26.28	24.59	23.85
24	24.92	23.80	24.08	25.80	27.26	25.52	24.67	25.04	27.07	26.18	24.67	23.93
25	24.97	23.82	23.87	25.88	27.31	25.49	24.64	25.21	27.13	26.11	24.75	24.02
26	24.96	23.88	23.72	25.97	27.31	25.41	24.40	25.32	27.11	26.06	24.89	24.21
27	24.91	23.88	23.75	25.97	27.31	25.07	23.86	25.34	27.11	26.03	24.98	24.36
28	24.69	23.86	23.75	26.05	27.32	25.05	23.88	25.47	27.12	25.83	25.07	24.36
29	24.19	23.80	23.67	26.12	27.32	25.02	23.88	25.53	27.18	25.60	25.21	24.10
30	23.91	23.79	23.82	26.22	---	24.94	23.79	25.53	27.26	25.48	25.33	23.86
31	23.80	---	23.85	26.35	---	24.92	---	25.49	---	25.31	25.44	---
MEAN	24.64	23.95	23.93	24.79	26.99	25.86	24.62	24.24	26.36	26.89	25.13	25.03
MAX	25.26	24.67	24.53	26.35	27.32	27.35	25.15	25.53	27.26	27.59	25.88	26.08
MIN	23.80	23.59	23.67	23.44	26.49	24.92	23.79	23.23	25.52	25.31	24.47	23.79



OCTOBER 1, 2001 TO SEPTEMBER 30, 2004

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT

The following tables contain water-quality data from wells sampled in Pennsylvania during the second year of the Ground Water Pesticides Network project. The 5-year study is being conducted by the U.S. Geological Survey in cooperation with the Pennsylvania Department of Agriculture. Sites were selected to meet project objectives in the Annual Baseline Network, the Baseline Trends Network, and Hot-Spot Trends Networks. Twenty Annual Baseline Network sites were selected in the Eastern Lake hydrogeologic setting in Erie County to fill an existing data gap in ground-water quality; sites in this network are only sampled one time as part of an occurrence survey. Sixteen Baseline Trend Network sites were selected in four hydrogeologic settings (4 sites per setting) of predominantly carbonate bedrock where wells had previous detections of pesticides. The wells in this network are sampled yearly to evaluate trends. The three Hot-Spot Trend Network sites have well water with recorded pesticide concentrations at or above the Pennsylvania Pesticides and Ground Water Strategy action levels. These wells are sampled four times per year at: 1) declining water levels; 2) stable water levels; 3) rising water levels due to spring/summer flush; and 4) rising water levels due to winter recharge. Samples are identified by network in the third column heading within the table: Baseline Trends = BT, Baseline Trends Quality Assurance = BT-QA, and Hot-Spot Trends = HST. Well locations are shown in figures 16 and 17. The following analytical methods were used to determine results for the samples listed: PA Department of Environmental Protection Laboratory (Analyzing Agency Code 9813), pesticides -SAC USGS2 (EPA 525.2) solid phase extraction gas chromatography/mass spectrometry, nitrate/nitrite - colorimetry (cadmium reduction), total coliform and E. coli bacteria - Colilert Quantitray. Pesticides analyzed for this study are identified in the table which follows quality-control data. Other data for this project can be found in the annual Water Data Report PA-04-2 (Susquehanna and Potomac River Basins) and PA-04-3 (Ohio and St. Lawrence River Basins). For additional information, contact Connie Loper at the U.S. Geological Survey, 215 Limekiln Road, New Cumberland, PA 17070; 717-730-6976 (email caloper@usgs.gov).

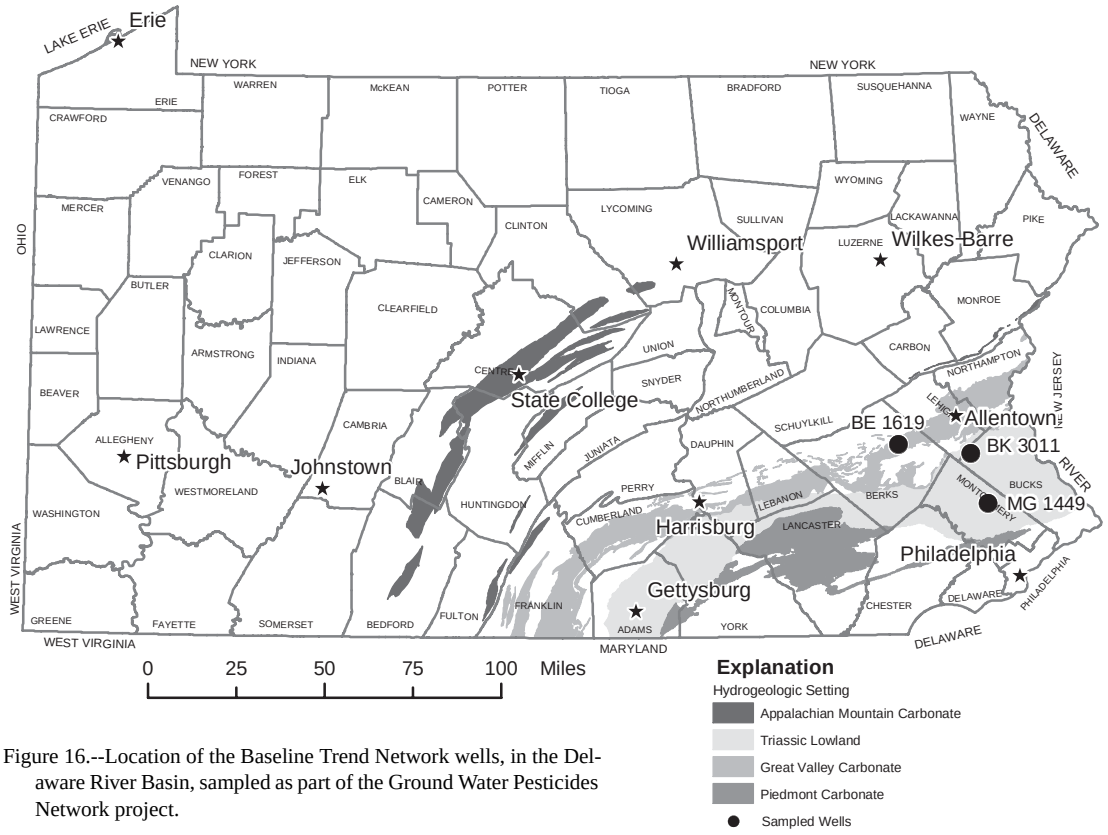


Figure 16.--Location of the Baseline Trend Network wells, in the Delaware River Basin, sampled as part of the Ground Water Pesticides Network project.

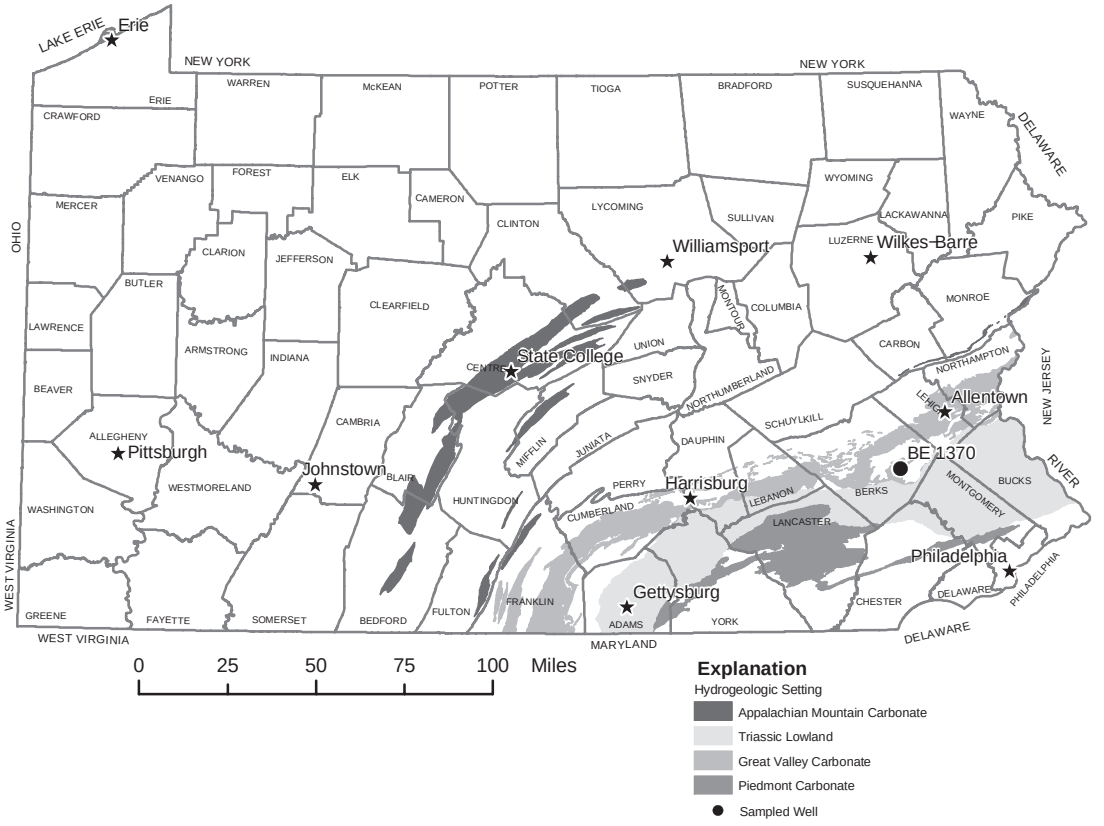


Figure 17.--Location of the Hot-Spot Trend Network well, in the Delaware River Basin, sampled as part of the Ground Water Pesticides Network project.

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT

REMARKS.--Explanation of column headings--Station number: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; Altitude of land surface: land-surface at well site in feet above sea level; Agency analyzing sample code 9813 = PA Department of Environmental Protection Lab in Harrisburg, PA; µS/cm: microsiemens per centimeter at 25 degrees Celsius; deg C: degrees Celsius; µg/L: micrograms per liter (parts per billion); mg/L = milligrams per liter (parts per million); "<" = less than; ">" = more than; MPN = Most Probable Number; GF = Glass fiber filter; Network Identifier HST = Hot-Spot Trends, BT = Baseline Trends, or BT-QA = Baseline Trends Quality Assurance. Quality-control data for replicate samples are shown for Local Well BE 1619 ([nitrate + nitrite] and nitrite) on April 14, 2004 at 1116 and 1117.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Station number	Local Well ID	Network Identifier	Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Turbidity, water, unfltrd field, NTU (61028)
BERKS COUNTY												
402238075443401	BE 1370	HST	10-08-03	1005	1028	9813	110	--	330	45	4040	.1
	BE 1370	HST	12-03-03	1020	1028	9813	110	--	330	45	4040	--
	BE 1370	HST	04-19-04	1055	1028	9813	110	--	330	40	4040	.7
	BE 1370	HST	07-21-04	1000	1028	9813	110	--	330	40	4040	--
402934075481801	BE 1619	BT	04-14-04	1115	1028	9813	150	30.35	400	45	4040	.4
	BE 1619	BT-QA	04-14-04	1116	1028	9813	150	--	400	45	4040	--
	BE 1619	BT-QA	04-14-04	1117	1028	9813	150	--	400	45	4040	--
BUCKS COUNTY												
402704075245701	BK 3011	BT	04-07-04	1055	1028	9813	100	--	550	40	4040	.0
MONTGOMERY COUNTY												
401446075193701	MG 1449	BT	04-05-04	1140	1028	9813	114.5	10.50	265	55	4040	1.8

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	E coli, Defined Substr. Tech., water, MPN/ 100 mL (50468)
BERKS COUNTY													
10-08-03	758	5.6	53	7.2	710	13.6	12.6	--	--	16.2	--	<.010	95
12-03-03	766	7.5	72	7.1	721	13.9	13.8	--	--	21.5	--	<.010	<1
04-19-04	759	9.2	87	7.3	719	20.7	12.4	--	--	21.4	--	<.010	<1
07-21-04	757	7.4	71	7.0	708	25.7	13.0	84.6	19.1	19.1	.066	.020	<1
04-14-04	748	7.3	68	7.3	544	12.2	11.2	--	--	9.61	--	<.010	<1
04-14-04	--	--	--	--	--	--	--	--	--	9.52	--	<.010	--
04-14-04	--	--	--	--	--	--	--	--	--	9.48	--	<.010	--
BUCKS COUNTY													
04-07-04	743	.0	.0	8.0	271	20.0	11.1	--	--	<.040	--	<.010	<1
MONTGOMERY COUNTY													
04-05-04	751	1.4	14	8.2	414	.7	13.5	--	--	2.78	--	<.010	<1

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Total coli-form, Defined Tech., MPN/ 100 mL (50569)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	Atra-zine, water, fltrd, µg/L (39632)	Chloro-thalo-nil, water, fltrd 0.7µ GF µg/L (49306)	Chlor-pyrifos water, fltrd, µg/L (38933)	Dichlo-benil, water, fltrd, µg/L (63009)	Fenpro-pathrin, water, fltrd, µg/L (64044)	Hexa-chloro-cyclo-penta-diene, wat unf µg/L (34386)	Metola-chlor, water, fltrd, µg/L (39415)	Metri-buzin, water, fltrd, µg/L (82630)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Phosmet water, fltrd, µg/L (61601)
BERKS COUNTY													
10-08-03	>200	<.100	<.10	<.10	<.10	<.10	--	--	<.10	.86	<.10	<.100	--
12-03-03	1	<.110	<.11	<.11	<.11	<.11	--	--	<.11	.73	<.11	<.110	--
04-19-04	1	<.100	<.10	<.10	<.10	<.10	--	--	<.10	.22	<.10	<.100	--
07-21-04	48	<.100	.98	.26	<.10	<.10	<.10	<.10	<.10	2.02	<.10	<.100	<.100
04-14-04	6	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
04-14-04	--	--	--	--	--	--	--	--	--	--	--	--	--
04-14-04	--	--	--	--	--	--	--	--	--	--	--	--	--
BUCKS COUNTY													
04-07-04	<1	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
MONTGOMERY COUNTY													
04-05-04	<1	<.250	<.25	<.25	<.25	<.25	--	--	<.25	<.25	<.25	<.250	--

Date	Sima-zine, water, filt, µg/L (04035)	Purpose of site visit, code (50280)	Sample purpose code (71999)	Sam-pling condi-tion, code (72006)	Type of sample related QA data, code (99111)	Type of repli-cate, code (99105)	County	Data base number	Medium code
BERKS COUNTY									
10-08-03	<.10	2001	50.00	8.00	1	--	011	01	6
12-03-03	<.11	2001	50.00	8.00	1	--	011	01	6
04-19-04	<.10	2001	50.00	8.00	1	--	011	01	6
07-21-04	<.10	2001	50.00	8.00	40	--	011	01	6
04-14-04	<.10	2001	50.00	8.00	100	--	011	01	6
04-14-04	--	2098	50.00	8.00	--	30.00	011	02	S
04-14-04	--	2098	50.00	8.00	--	30.00	011	02	S
BUCKS COUNTY									
04-07-04	<.10	2001	50.00	8.00	40	--	017	01	6
MONTGOMERY COUNTY									
04-05-04	<.25	2001	50.00	8.00	1	--	091	01	6

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT

401435076540910 - QUALITY-ASSURANCE RESULTS

REMARKS.--A U.S. Geological Survey Standard Reference Water Sample (SRWS) N78 was submitted to the Pennsylvania Department of Environmental Protection, Bureau of Laboratories, on April 14, 2004 for estimation of accuracy. Blank water concentration is assumed to be less than the reporting limits for purpose of calculation. The concentrations of nitrate-N (in mg/L) and the calculated recovery (in percent) are shown in the table below for estimation of accuracy. Less-than values were set equal to zero for calculation; "<" = less than; "mg/L" = milligrams per liter.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

	Concentration, in milligrams per liter			
		Laboratory results		
Constituent	Assumed concentration of blank Nitrate A	Reported value of Nitrate in SRWS B	Prepared sample value of Nitrate in SRWS C	Recovery in percent [(B-A)/C] x 100
Nitrate-N	<0.04	1.59	1.60	99

402934075481801 - BE 1619

REMARKS.--Triplicate samples were submitted April 14, 2004 to the Pennsylvania Department of Environmental Protection Laboratory for analysis of nitrate and nitrite to determine an estimate of precision in results.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

	Concentration, in milligrams per liter		
	Laboratory results		
Sample time	Nitrate-N	Nitrite-N
1115	9.61	<.01
1116	9.52	<.01
1117	9.48	<.01

Using the results from triplicate sample, the Relative Standard Deviation (RSD), otherwise known as the coefficient of variation, was calculated using the following formula:

RSD = standard deviation of triplicate results divided by the mean concentration of the triplicate results

RSD Nitrate-N = 0.007 mg/L

RSD Nitrite-N = 0.0 mg/L

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT

Compounds analyzed at the Pennsylvania Department of Environmental Protection Laboratory

Pesticide Schedule Used for Baseline Trends and Hot-Spot Trends Networks (SAC USGS2)	
Analyte	NWIS Parameter Code
EPA 525.2	
Acetochlor	49260
Alachlor	46342
Atrazine	39632
Chlorothalonil	49306
Chlorpyriphos (Dursban)	38933
Dichlobenil (added after April 2004)	63009
Fenpropathrin (added after April 2004)	64044
Hexachlorocyclopentadiene	34386
Metolachlor	39415
Metribuzin	82630
Pendimethalin	82683
Phosmet (added after April 2004)	61601
Simazine	04035

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
CHESTER COUNTY GROUND-WATER-QUALITY MONITORING PROGRAM

Ground-water samples were collected from selected wells in Chester County in August through November 2003 as part of the Chester County Ground-Water-Quality Monitoring Program. The monitoring program began in 1980 with objectives that include providing data on ground-water quality (1) near suspected sources of contamination; (2) in areas of different land use or different underlying geology; (3) for specific contaminants or constituents countywide; and (4) in watersheds as part of a regional assessment. Samples typically are collected each summer. In water years 2003 and 2004, 12 of a total of 17 wells sampled in the county were in the Delaware River Basin. Other data for this project can be found in the annual Water Data Report PA-04-2 (Susquehanna and Potomac River Basins). For additional information, contact Lisa Senior at the U.S. Geological Survey, Suite 116, 770 Pennsylvania Drive, Exton, PA 19341; 610-647-9008; (email lasenior@usgs.gov).

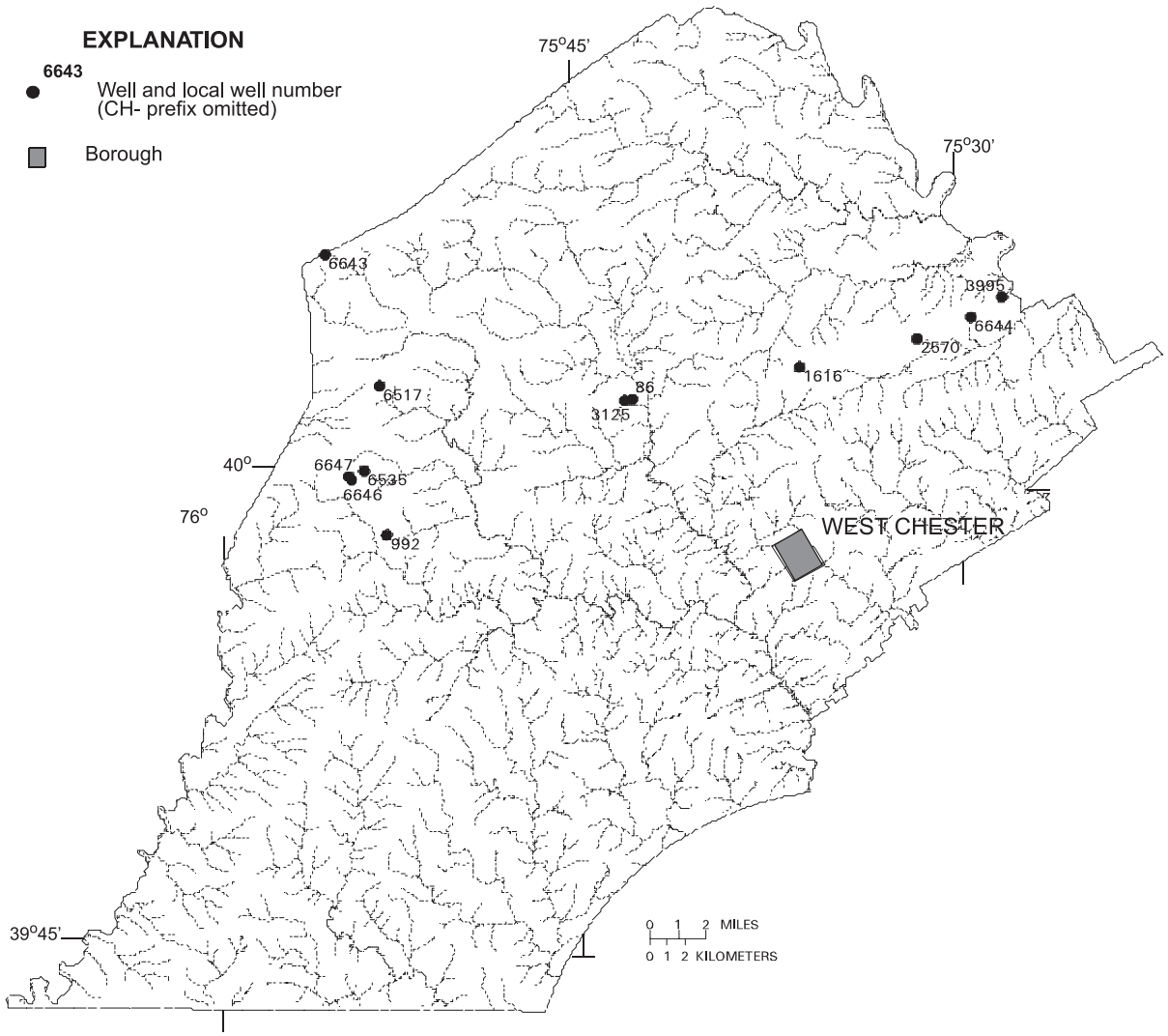


Figure 18.--Locations of selected wells sampled as part of the Chester County ground-water-quality monitoring program.

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
CHESTER COUNTY GROUND-WATER-QUALITY MONITORING PROGRAM

REMARKS.--Some values for "*dissolved*" parameters exceed values for the corresponding "*total*" parameter. These results are within the limits of analytical precision and methods.

WATER-QUALITY DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**

Local well number	Station number	Latitude	Longitude	Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)
CH 86	400227075430801	40 02 27 N	075 43 08 W	11-05-03	0920	1028	80020	300	--
CH 992	395808075530301	39 58 08 N	075 53 03 W	08-19-03	1300	1028	80020	125	23.60
CH 1616	400329075362201	40 03 29 N	075 36 22 W	08-19-03	0950	1028	80020	130	34.61
CH 2570	400424075313601	40 04 24 N	075 31 36 W	08-27-03	1200	1028	80020	250	78.70
CH 3125	400224075432701	40 02 24 N	075 43 27 W	10-28-03	1000	1028	80020	103	--
CH 3995	400543075281001	40 05 43 N	075 28 10 W	09-02-03	1300	1028	80020	150	--
CH 6517	400247075532401	40 02 47 N	075 53 24 W	11-04-03	0900	1028	80020	--	62.49
CH 6535	400008075535901	40 00 08 N	075 53 59 W	08-20-03	1240	1028	80020	89	44.35
CH 6643	400652075554001	40 06 52 N	075 55 40 W	08-25-03	1140	1028	80020	300	--
CH 6646	395957075543601	39 59 57 N	075 54 35 W	08-13-03	1030	1028	80020	--	55.33
CH 6647	395951075543001	39 59 51 N	075 54 30 W	08-20-03	1020	1028	80020	200	66.24
CH 6644	400505075292401	40 05 05 N	075 29 24 W	08-28-03	1420	1028	80020	120	--

Local well number	Date	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)
CH 86	11-05-03	535	--	--	750	8.4	78	4.2	4.3	236	237
CH 992	08-19-03	615	2.5	58	748	1.7	17	5.4	5.8	431	470
CH 1616	08-19-03	615	3.0	74	750	9.5	92	5.3	5.6	239	253
CH 2570	08-27-03	360	2.5	114	750	6.8	69	5.9	5.9	273	307
CH 3125	10-28-03	580	5.0	62	745	6.3	60	5.3	5.3	244	265
CH 3995	09-02-03	340	2.0	57	754	9.7	91	5.7	E6.4	102	102
CH 6517	11-04-03	940	5.5	71	740	10.3	94	5.2	5.7	24	23
CH 6535	08-20-03	760	.25	--	745	1.1	12	5.8	6.1	60	70
CH 6643	08-25-03	880	1.0	--	739	8.3	82	6.0	6.1	68	68
CH 6646	08-13-03	800	3.0	--	748	9.2	93	4.8	4.8	98	95
CH 6647	08-20-03	830	4.0	--	745	5.8	57	5.3	5.7	73	81
CH 6644	08-28-03	560	2.0	--	748	9.3	97	4.3	4.2	184	136

Local well number	Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
CH 86	11-05-03	17.5	12.0	5.81	4.21	1.80	23.1	40.2	.3	6.1	46.8
CH 992	08-19-03	29.5	13.4	26.0	11.3	6.02	38.5	54.2	<.2	7.7	22.7
CH 1616	08-19-03	21.0	13.1	8.46	5.48	1.31	28.5	48.6	<.2	5.2	21.2
CH 2570	08-27-03	28.0	14.8	14.5	13.3	4.09	14.8	67.5	<.2	18.5	.7
CH 3125	10-28-03	9.0	12.5	5.88	4.10	3.56	26.4	26.6	.3	5.7	45.5
CH 3995	09-02-03	20.5	12.0	9.02	3.22	2.02	4.31	13.8	<.2	17.0	2.7
CH 6517	11-04-03	16.5	11.2	.17	.482	1.48	2.29	3.23	<.2	9.5	<.2
CH 6535	08-20-03	28.0	17.8	2.72	1.97	2.12	4.18	6.91	<.2	6.2	<.2
CH 6643	08-25-03	24.5	13.0	6.90	1.64	2.70	2.90	3.56	<.2	14.9	.6
CH 6646	08-13-03	26.0	14.6	3.53	3.22	1.62	6.49	17.7	<.2	7.0	5.7
CH 6647	08-20-03	26.5	13.5	1.07	1.99	1.83	8.38	9.91	<.2	6.3	2.6
CH 6644	08-28-03	28.0	16.1	5.02	4.10	1.64	13.4	32.1	.3	5.7	36.2

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
CHESTER COUNTY GROUND-WATER-QUALITY MONITORING PROGRAM

WATER-QUALITY DATA, **WATER YEARS OCTOBER 2002 TO SEPTEMBER 2004**

Local well number	Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)
CH 86	11-05-03	<.04	.96	<.008	<.02	E.1	29	6	.97	5.00	71.8
CH 992	08-19-03	1.00	21.2	E.006	E.01	<.3	127	E5	.34	.34	477
CH 1616	08-19-03	<.04	1.84	<.008	<.02	<.3	20	E7	1.49	1.92	70.2
CH 2570	08-27-03	E.03	1.37	.009	<.02	<.3	19	2550	.40	1.47	102
CH 3125	10-28-03	5.08	3.69	.014	<.02	E.1	2950	492	1.91	2.06	36.8
CH 3995	09-02-03	<.04	1.70	<.008	E.01	<.3	11	10	1.05	1.87	12.0
CH 6517	11-04-03	<.04	.06	<.008	<.02	<.2	E5.5	E4	1.96	1.95	2.4
CH 6535	08-20-03	.30	.52	.008	<.02	<.3	<7.0	4420	.40	1.14	163
CH 6643	08-25-03	<.04	1.33	<.008	.19	<.3	9.7	15	.24	.29	6.0
CH 6646	08-13-03	<.04	1.46	<.008	<.18	<.3	12	44	8.82	8.85	170
CH 6647	08-20-03	E.04	1.98	.014	<.02	<.3	19	1670	.28	1.54	226
CH 6644	08-28-03	<.04	.19	<.008	<.02	<.3	29	80	3.20	3.27	149

Local well number	Date	Gross alpha 30 day recount wat unf Th-230, pCi/L (63016)	Gross alpha radioac 72 hr, wat unf Th-230, pCi/L (63014)	Gross beta 30 day recount wat unf Cs-137, pCi/L (63017)	Gross beta radioac 72 hr, wat unf Cs-137, pCi/L (63015)	Pb-210, water, unfltrd pCi/L (17501)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)
CH 86	11-05-03	76	529	100	194	M	42	1700
CH 992	08-19-03	3	3	8	7	2	--	--
CH 1616	08-19-03	28	23	59	54	1	58	3890
CH 2570	08-27-03	M	2	5	7	M	22	320
CH 3125	10-28-03	25	83	24	32	M	30	900
CH 3995	09-02-03	M	M	2	4	M	38	1550
CH 6517	11-04-03	5	9	3	3	2	83	7760
CH 6535	08-20-03	M	1	3	5	M	34	1150
CH 6643	08-25-03	M	M	3	3	M	26	570
CH 6646	08-13-03	16	33	41	17	M	46	2440
CH 6647	08-20-03	2	3	5	5	3	50	2830
CH 6644	08-28-03	77	161	71	83	M	27	660

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Calendar for Water Year 2004

2003

October

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

November

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

December

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

2004

January

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

February

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

March

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

April

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

May

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

June

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

July

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

August

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

September

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

Conversion Factors

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter (m)
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
	Area	
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
	Volume	
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second day [(ft^3/s) d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.233×10^{3}	cubic meter (m^3)
	1.233×10^{-3}	cubic hectometer (hm^3)
	1.233×10^{-6}	cubic kilometer (km^3)
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second (m^3/s)
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
	Mass	
ton (short)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

°F = (1.8 x °C) + 32