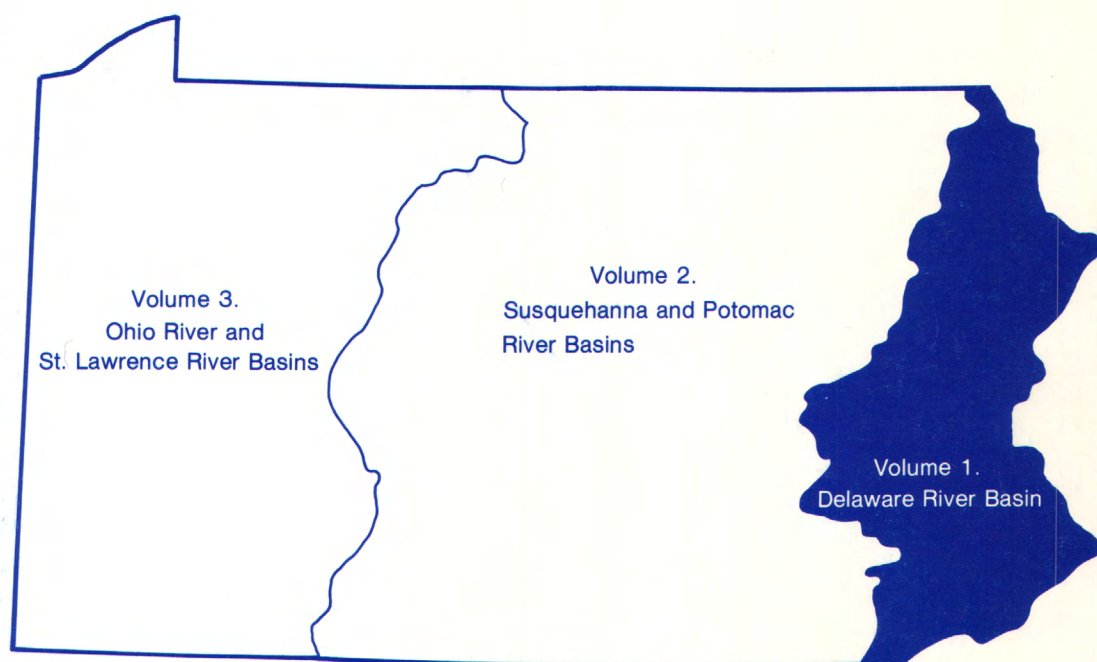


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Water Resources Data Pennsylvania Water Year 1991

Volume 1. Delaware River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-91-1
Prepared in cooperation with the Pennsylvania Department
of Environmental Resources, the Philadelphia Water
Department and with other State, municipal, and
Federal agencies

CALENDAR FOR WATER YEAR 1991

1990-

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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7	8	9	10	11	12	13								2	3	4	5	6	7	8
14	15	16	17	18	19	20	4	5	6	7	8	9	10	9	10	11	12	13	14	15
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28	29	30	31				18	19	20	21	22	23	24	23	24	25	26	27	28	29
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1991

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



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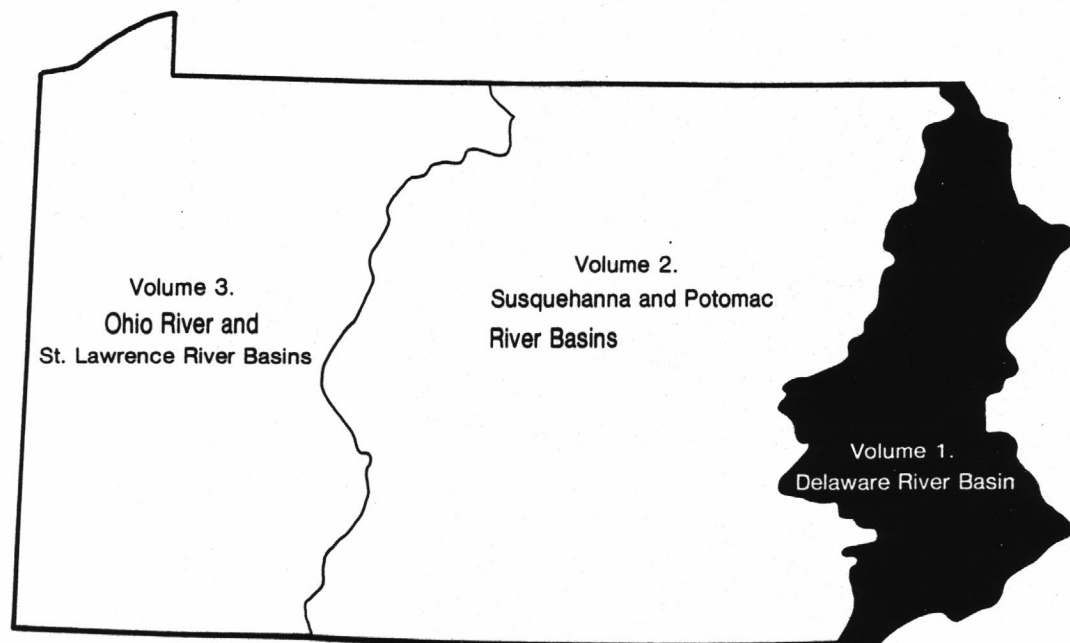
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Water Resources Data Pennsylvania Water Year 1991

Volume 1. Delaware River Basin

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-91-1
Prepared in cooperation with the Pennsylvania Department
of Environmental Resources, the Philadelphia Water
Department and with other State, municipal, and
Federal agencies



U.S. DEPARTMENT OF THE INTERIOR
MANUEL LUJAN, JR., SECRETARY
U.S. GEOLOGICAL SURVEY
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Lemoyne, PA 17043
1992

PREFACE

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

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

Volume 1 was prepared in cooperation with the Commonwealth of Pennsylvania and the other agencies under the general supervision of David E. Click, District Chief, Pennsylvania District, and Charles R. Wood, Subdistrict Chief, Malvern Subdistrict. It is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data.

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George Jung
Cynthia R. Lesitsky
Karen Vogel
Michael Collins

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Curtis Schreffler
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15. Supplementary Notes Prepared in cooperation with the State of Pennsylvania and other agencies.				13. Type of Report & Period Covered Annual Oct. 1, 1990, to Sept. 30, 1991
16. Abstract (Limit: 200 words) Water-resources data for the 1991 water year for Pennsylvania consist of records of discharge and water quality of streams; contents and elevations of lakes and reservoirs; and water levels and water quality of ground-water wells. This report, Volume 1, includes records from the Delaware River basin. Specifically, it contains: (1) discharge records for 83 continuous record streamflow-gaging stations and 75 partial-record stations, 2 special study, and 5 miscellaneous streamflow sites; (2) elevation and contents records for 12 lakes and reservoirs and elevations for 1 tidal station; (3) water-quality records for 23 gaging stations, for 67 ungaged streamsites; and (4) water-level records for 17 observation wells. Locations of these sites are shown on figures 9-11. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data, together with the data in Volumes 2 and 3, represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Pennsylvania.				14.
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CONTENTS

Preface	111
List of gaging stations, in downstream order, for which records are published <u>in this volume</u>	vi
List of ground-water wells, by county, for which records are published <u>in this volume</u>	viii
List of discontinued surface-water discharge stations	ix
List of discontinued surface-water-quality stations	x
Introduction	1
Cooperation	1
Drought in Pennsylvania	2
Summary of hydrologic conditions	6
Surface water	6
Ground water	8
References	10
Special networks and programs	10
Explanation of the records	10
Station identification numbers	10
Downstream order system	11
Latitude-longitude system	11
Records of stage and water discharge	11
Data collection and computation	11
Data presentation	12
Station manuscript	12
Data table of daily mean values	13
Statistics of monthly mean data	13
Summary statistics	13
Identifying estimated daily discharge	14
Accuracy of the records	14
Other records available	15
Records of surface-water quality	15
Classification of records	15
Arrangement of records	15
On-site measurements and sample collection	15
Water temperature	16
Sediment	16
Laboratory measurements	16
Data presentation	16
Remark Codes	17
Records of ground-water levels	17
Data collection and computation	17
Data presentation	18
Records of ground-water quality	18
Data collection and computation	18
Data presentation	19
Access to Watstore data	19
Definition of terms	20
Publications on techniques of water-resources investigations	26
Station records, surface water	
Continuous water-discharge and water-quality station records	32
Discharge at partial-record stations and miscellaneous sites	268
Crest-stage partial-record stations	268
Low-flow partial-record stations	271
Miscellaneous sites	276
Seepage investigations	277
Analyses of samples collected at water-quality partial-record stations	285
Analyses of samples collected at miscellaneous sites	302
Ground-water levels	322
Index	339

ILLUSTRATIONS

Figure 1.--Runoff as cubic feet per second per square mile for June 1991	3
2 --Runoff as cubic feet per second per square mile for July 1991	4
3.--Runoff as cubic feet per second per square mile for September 1991	5
Figure 4.--Comparison of precipitation in the Delaware River basin above Allentown, PA during the 1991 water year with mean precipitation for 1951-80	6
5.--Comparison of discharge at two long term representative gaging stations during the 1991 water year with median discharge for period 1951-80	7
6.--Relation between mean 1991 seasonal water levels and long term mean water levels	8
7.--Diurnal fluctuation of dissolved oxygen concentration at three stations on the Brandywine Creek	9
8.--System for numbering wells and miscellaneous sites	11
9-12.--Maps showing:	
9.--Location of data-collection stations	28
10.--Location of data-collection stations in lower Delaware Basin	29
11.--Location of partial-record data-collection stations	30
12.--Location of partial-record data-collection stations in lower Delaware basin	31

GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

(letter after station name designates types of data: (d) discharge, (c) chemical, (b) biological, (t) water temperature, (e) elevation, gage height, or contents, (s) sediment)

	Station number	Page
DELAWARE RIVER BASIN		
Delaware River at Lordville, NY (t)	01427207	32
Delaware River at Callicoon, NY (dt)	01427510	34
Delaware River above Lackawaxen River near Barryville, NY (dt)	01428500	37
LACKAWAXEN RIVER BASIN		
West Branch Lackawaxen River near Aldenville (dt)	01428750	40
West Branch Lackawaxen River at Prompton (dt)	91429000	43
Dyberry Creek near Honesdale (d)	01429500	47
Lackawaxen River near Honesdale (d)	01430000	49
Lackawaxen River at Hawley (d)	01431500	51
Wallenpaupack Creek at Wilsonville (d)	01432000	53
Lakes and Reservoirs in Lackawaxen River basin (e)		55
Delaware River at Barryville, NY (t)	01432160	57
Delaware River at Pond Eddy, NY (t)	01432805	59
Delaware River at Port Jervis, NY (dct)	01434000	61
Delaware River at Montague, NJ (d)	01438500	65
BUSH KILL BASIN		
Bush Kill at Shoemakers (d)	01439500	68
Delaware River below Tocks Island damsite, near Delaware Water Gap (d)	01440200	70
BRODHEAD CREEK BASIN		
Brodhead Creek near Analomink (d)	01440400	71
Brodhead Creek at Minisink Hills (d)	01442500	73
Delaware River at Belvidere, NJ (d)	01446500	75
LEHIGH RIVER BASIN		
Lehigh River at Stoddartsville (dt)	01447500	77
Tobyhanna Creek:		
Tunkhannock Creek near Long Pond (d)	01447680	81
Tobyhanna Creek near Blakeslee (dt)	01447720	83
Lehigh River below Francis E. Walter Lake near White Haven (dt)	01447800	87
Mud Run:		
Dilldown Creek near Long Pond (d)	01448500	91
Lehigh River at Lehighon (d)	01449000	93
Pohopoco Creek at Kresgeville (dt)	01449360	94
Pohopoco Creek below Beltzville Dam near Parryville (dt)	01449800	97
Aquashicola Creek at Palmerton (d)	01450500	100
Lehigh River at Walnutport (d)	01451000	102
Little Lehigh Creek near East Texas (d)	01451420	103
Little Lehigh Creek near Allentown (d)	01451500	104
Little Lehigh Creek at Tenth Street Bridge, Allentown (d)	01451650	106
Jordan Creek near Schnectksville (d)	01451800	107
Jordan Creek at Allentown (d)	01452000	109
Monocacy Creek at Bethlehem (d)	01452500	111
Lehigh River at Bethlehem (d)	01453000	112
Lehigh River at Glendon (d)	01454700	114
Lehigh River at Easton (ct)	01454720	115
Lakes and Reservoirs in Lehigh River basin (e)		120
COOKS CREEK BASIN		
Cooks Creek at Durham Furnace (d)	01457790	122
TINICUM CREEK BASIN		
Tinicum Creek near Ottsville (d)	01458900	123
TOHICKON CREEK BASIN		
Tohickon Creek Near Pipersville (d)	01459500	124
Reservoir in Tohickon Creek Basin (e)		126
PAUNNACUSSING CREEK BASIN		
Paunnacussing Creek at Carversville (d)	01460800	127
Delaware River at Trenton, NJ (dctsb)	01463500	128
NESHAMINY CREEK BASIN		
North Branch Neshaminy Creek below Lake Galena near New Britian (d)	01464645	138
Pine Run at Chalfont (d)	01464710	139
North Branch Neshaminy Creek at Chalfont	01464720	141
Neshaminy Creek near Rushland (d)	01464750	142
Little Neshaminy Creek at Walton Road near Jacksonville (d)	01464984	143
Mill Creek near Wycombe (d)	01465050	144
Neshaminy Creek near Langhorne (d)	01465500	145
POQUESSING CREEK BASIN		
Poquessing Creek at Grant Avenue, Philadelphia (d)	01465798	147
Pennypack Creek at Lower Rhawn Street Bridge, Philadelphia (d)	01467048	149
FRANKFORD CREEK BASIN		
Frankford Creek at Castor Avenue Philadelphia (d)	01467087	151
Delaware River at Benjamin Franklin Bridge at Philadelphia (ct)	01467200	152
SCHUYLKILL RIVER BASIN		
Schuylkill River at Landingville (d)	01468500	159
Little Schuylkill River at Tamaqua (d)	01469500	161
Schuylkill River at Berne (d)	01470500	163
Maiden Creek		
Maiden Creek at Virginville (d)	01470756	164
Tulpehocken Creek near Bernville (dt)	01470779	166
Furnace Creek at Robesonia	01470853	170
Tulpehocken Creek at Blue Marsh damsite near Reading (dt)	01470960	172

GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

	Station number	Page
DELAWARE RIVER BASIN-Continued		
Tulpehocken Creek near Reading (d)	01471000	176
Schuylkill River at Reading (d)	01471510	178
Manatawny Creek near Pottstown (d)	01471980	179
Schuylkill River at Pottstown (d)	01472000	180
Schuylkill River at Vincent Dam at Linfield (t)	01472104	181
French Creek near Phoenixville (dc)	01472157	183
Perkiomen Creek at East Greenville (d)	01472198	185
Northwest Branch Perkiomen Creek at Hillegass (d)	01472199	186
East Branch Perkiomen Creek near Dublin (d)	01472620	187
East Branch Perkiomen Creek near Schwenksville	01472810	189
Perkiomen Creek at Graterford (d)	01473000	190
Skippack Creek near Collegeville (d)	01473120	193
Valley Creek at Pennsylvania Turnpike Bridge near Valley Forge (d)	01473169	194
Wissahickon Creek at mouth, Philadelphia (d)	01474000	195
Schuylkill River at Philadelphia (dc)	01474500	197
Schuylkill River above Passyunk Avenue at Philadelphia (e)	01474505	201
Lakes and Reservoirs in Schuylkill River basin (e)		202
Delaware River at Fort Mifflin at Philadelphia (ct)	01474703	204
DARBY CREEK BASIN		
Darby Creek at Waterloo Mills near Devon (dc)	01475300	208
CRUM CREEK BASIN		
Crum Creek near Newtown Square (d)	01475850	210
RIDLEY CREEK BASIN		
Ridley Creek at Media (d)	01476480	211
CHESTER CREEK BASIN		
Chester Creek near Chester (d)	01477000	212
Delaware River at Chester (ct)	01477050	214
CHRISTINA RIVER BASIN		
Red Clay Creek Near Kennett Square (d)	01479820	221
West Branch Brandywine Creek near Honey Brook (d)	01480300	222
West Branch Brandywine Creek at Coatesville (d)	01480500	223
West Branch Brandywine Creek at Modena (dct)	01480617	225
East Branch:		
Marsh Creek near Glenmoore (d)	01480675	234
Marsh Creek near Downingtown (d)	01480685	235
East Branch Brandywine Creek near Downingtown (dc)	01480700	236
East Branch Brandywine Creek below Downingtown (dct)	01480870	239
Valley Creek at Ravine Road near Downingtown (dc)	01480887	248
Brandywine Creek at Chadds Ford (dct)	01481000	251
Reservoir in Christina River basin (e)		260
Delaware River at Reedy Island Jetty, DE (ct)	01482800	261

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

GROUND-WATER LEVELS

BERKS COUNTY	
Well 402615075530501 Local number BE 623	322
BUCKS COUNTY	
Well 402643075150501 Local number BK 929	323
Well 401157075032001 Local number BK 1020	324
CARBON COUNTY	
Well 410123075425401 Local number CB 104	325
CHESTER COUNTY	
Well 395450075485401 Local number CH 10	326
DELAWARE COUNTY	
Well 395949975341801 Local number DE 3	327
Well 395512075293701 Local number DE 723	328
LEBANON COUNTY	
Well 403429075392401 Local number LB 372	329
LEHIGH COUNTY	
Well 403429075392401 Local number LE 644	330
MONROE COUNTY	
Well 411223075234901 Local number MO 190	331
MONTGOMERY COUNTY	
Well 400808075210401 Local number MG 225	332
Well 401310075181702 Local number MG 884	333
NORTHAMPTON COUNTY	
Well 403511075210001 Local number NP 83	334
PHILADELPHIA COUNTY	
Well 395342075102101 Local number PH 12	335
PIKE COUNTY	
Well 410940074583401 Local number PI 200	336
SCHUYLKILL COUNTY	
Well 404708076070701 Local number SC 296	337
WAYNE COUNTY	
Well 414333075153201 Local number WN 64	338

WATER RESOURCES DATA - PENNSYLVANIA, 1991

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations (listed in downstream order) in Pennsylvania have been discontinued. Daily streamflow records were collected and published for the period of record shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Information regarding these stations may be obtained from the District Office at the address given on the back of the title page of this report

Discontinued 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
Lackawaxen River at West Hawley	01430500	206	1922-37
Shohola Creek near Shohola	01432500	83.6	1920-28
Middle Creek near Hawley	01431000	78.4	1945-59
McMichaels Creek at Stroudsburg	01441000	65.3	1912-37
Pocono Creek near Stroudsburg	01441500	41.0	1912-19
Martins Creek near East Bangor	01446600	10.4	1962-77
Beaver Creek near Pocono Pines	01447550	0.96	1988-89
Lehigh River at Tannery	01448000	322	1919-58
Wild Creek at Hatchery	01449500	16.8	1941-78
Pohopoco Creek near Parryville	01450000	109	1941-69
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
Tohickon Creek at Point Pleasant	01460000	107	1884-98, 1901-12
Cooks Run at New Britain	01464741	3.08	1985-89
Neshaminy Creek at Rushland	01465000	134	1885-1912
Poquessing Creek at Trevoise Road, Philadelphia	01465770	5.08	1932-33
Poquessing Creek above Byberry Creek at Philadelphia	01465780	13.2	1965-80
Walton Run at Philadelphia	01465785	2.17	1965-70
Byberry Creek at Chalfont Road, Philadelphia	01465790	5.34	1965-77
Byberry Creek at Grant Avenue, Philadelphia	01465795	7.13	1966-77
Pennypack Creek at Pine Road, Philadelphia	01467042	37.9	1965-70
Pennypack Creek below Verree Road, Philadelphia	01467045	42.8	1965-80
Wooden Bridge Run at Philadelphia	01467050	3.35	1965-70
Tacony Creek near Jenkintown	01467083	5.25	1966-80
Rock Creek above Curtis Arboretum near Philadelphia	01467084	1.15	1973-78
Jenkintown Creek at Elkins Park	01467085	1.17	1972-78
Tacony Creek above Adams Avenue, Philadelphia	01467086	16.7	1974-78
Frankford Creek at Torresdale Avenue, Philadelphia	01467089	33.8	1966-86
Schuylkill River at Pottsville	01467500	53.4	1967-80
Little Schuylkill River at Dreherstown	01470000	122	1944-69
			1948-50
			1964-65
Maiden Creek Tributary at Lenhartsville	01470720	7.46	1966-79
Monocacy Creek at Limekiln	01471700	6.68	1982
Limekiln Creek at Limekiln	01471710	2.49	1982
Pine Creek Near Manatawny	01471800	9.70	1982
Bieber Creek near Lobachsville	01471835	9.08	1982
Oysterville Creek at Manatawny	01471845	9.29	1982
Manatawny Creek at Earlville	01471900	60.9	1982
Pickering Creek near Chester Springs	01472174	5.98	1967-82
Perkiomen Creek near Frederick	01472500	152	1885-1912
Schuylkill River at Norristown	01473500	1760	1928-32
Wissahickon Creek at Fort Washington	01473900	40.8	1962-68
Wissahickon Creek at Bells Mill Road, Philadelphia	01473950	53.6	1966-80
Wissahickon Creek at Livezey Lane, Philadelphia	01473980	59.2	1967-70
Darby Creek near Darby	01475510*	37.4	1964-90
Cobbs Creek at US Highway No.1 at Philadelphia	01475530	4.78	1965-80
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
East Branch Brandywine Creek at Dorlan	01480665	33.4	1967-68
Marsh Creek near Lyndell	01480680	17.8	1961-69
East Branch Brandywine Creek at Downingtown	01480800	81.6	1958-68

WATER RESOURCES DATA - PENNSYLVANIA, 1991

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

The following abbreviations are used to identify the record type: SC (specific conductance); pH (pH); Temp (water temperature; DO (dissolved oxygen); Sed (sediment concentration and discharge); Biol (biological).

Discontinued continuous-record 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, NJ	01412350	--	SC, Temp	1968-86
Delaware River at Narrowsburg, NY	01427740	2,023	SC, pH	1948-51
Delaware River at Montague, NJ	01438500	3,480	Temp	1956-57
			SC, pH	1956-73
Delaware River at Dingmans Ferry, PA	01439000	3,542	Temp, SC, pH	1950-53
Delaware River near East Stroudsburg, PA	01440090	3,830	SC, DO, Temp	1966-78
			pH	1972-78
Delaware River at Dunnfield, NJ	01442750	4,120	Sed	1964-75
Delaware River at Belvidere, NJ	01448000	4,535	Temp	1944-47
				1962-63
			SC	1962-63
Delaware River at Easton, PA	01446700	4,636	SC, DO, Temp, pH	1967-77
Lehigh River at Walnutport, PA	01451000	889	Sed	1948-53
Jordan Creek near Schnecksville, PA	01451800	53.0	Sed	1967-69
Jordan Creek at Allentown, PA	01452000	75.8	Sed	1967-69
Lehigh River at Bethlehem, PA	01453000	1,279	SC, pH	1906-07
				1956-72
Delaware River at Burlington-Bristol Bridge	01464600	7,163	Temp	1954-75, 1979-80
			DO	1961-75, 1978-80
			SC, pH	1967-75, 1978-80
Neshaminy Creek near Langhorne, PA	01465500	210	Sed	1956-58, 1965-69
Poquessing Creek at Trevoise Road, Philadelphia, PA	01465770	5.08	Sed	1965-69
Poquessing Creek above Byberry Creek, Philadelphia, PA	01465780	13.2	Sed	1965-70
Walton Run at Philadelphia, PA	01465785	2.17	Sed	1965-68
Byberry Creek at Chalfont Road, Philadelphia, PA	01465790	5.34	Sed	1966-68, 1970
Byberry Creek at Grant Avenue, Philadelphia, PA	01465795	7.13	Sed	1965-70
Poquessing Creek at Grant Avenue, Philadelphia, PA	01465798	21.4	Sed	1965-70
Delaware River at Torresdale Intake, Philadelphia, PA	01467030	7,781	Temp	1956-57, 1960-81
			DO	1961-81
			SC	1963-81
			pH	1968-81
Pennypack Creek at Pine Road, Philadelphia, PA	01467042	37.9	Sed	1965-69
Pennypack Creek below Verre Road, Philadelphia, PA	01467045	42.8	Sed	1965-69
Wooden Bridge Run at Philadelphia, PA	01467049	3.35	Sed	1965-70
Delaware River at Palmyra, NJ	01467060	7,850	Sed	1962-64
Tacony Creek at County Line, Philadelphia, PA	01467084	16.2	Sed	1966-69
Frankford Creek at Torresdale Avenue, Philadelphia, PA	01467088	33.8	Sed	1966-70
Delaware River at Lehigh Avenue, Philadelphia, PA	01467100	7,935	Temp, SC, pH, DO	1949-68
Delaware River at Wharton Street, Philadelphia, PA	01467300	7,998	Temp, SC, pH, DO	1949-68
Delaware River at League Island, Philadelphia, PA	01467400	8,072	Temp, SC, pH, DO	1949-68
Schuylkill River at Port Carbon, PA	01467470	27.1	SC, pH, Sed	1949-51, 1963
Schuylkill River at Pottsville, PA	01467500	53.4	SC, pH, Sed	1948-51, 1963-66
			Sed	1963-66
West Branch Schuylkill River at Cressona, PA	01467950	52.5	Sed	1963-66
Schuylkill River at Landingville, PA	01468500	133	SC, pH, Temp	1947-53
			Sed	1947-53, 1963-65
Schuylkill River at Auburn, PA	01469000	160	Sed, SC, pH	1947-51, 1963-65
Little Schuylkill River at South Tamaqua, PA	01469700	65.7	SC, pH	1948-51, 1963
			Sed	1950-53, 1963
Little Schuylkill River at Drechersville, PA	01470000	122	SC, pH, Temp, Sed	1947-51, 1963-65
Schuylkill River at Berne, PA	01470500	355	Temp	1948-53, 1957-81
			SC, pH	1963-81
			Sed	1947-81
Maiden Creek Tributary at Lenhartsville, PA	01470720	7.46	Sed	1963-65
Maiden Creek near East Berkley, PA	01470760	192	Sed	1963-65
Tulpehocken Creek near Reading, PA	01471000	211	Sed	1963-65
Schuylkill River at Pottstown, PA	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, PA	01472054	4.20	Biol	1970-83
Pigeon Creek at Porters Mill, PA	01472065	6.97	Biol	1970-83
Stony Run at Spring City, PA	01472110	4.07	Biol	1970-83
Schuylkill River at Black Rock Dam at Mont Clare, PA	01472119	--	SC, DO	1986-90
French Creek at Trythall, PA	01472126	5.06	Biol	1971-83

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Discontinued continuous-record water-quality stations--Continued

Station name	Station number	Drainage area (mi ²)	Type of Record	Period of record (water years)
DELAWARE RIVER BASIN				
French Creek near Knauertown, PA	01472129	11.7	Biol	1970-83
Pickering Creek near Chester Springs, PA	01472174	5.98	Sed	1967-69
Perkiomen Creek at Graterford, PA	01473000	279	SC,pH,Temp	1946-51
			Sed	1948-53
Schuylkill River at Norristown Dam at Bridgeport, PA	01473499	--	SC,DO	1963-66
Schuylkill River at Plymouth Dam, PA	01473675	--	SC,DO	1985-90
Schuylkill River at Flat Rock Dam at West Manayunk, PA	01473780	--	SC,DO	1985-90
Schuylkill River at Manayunk, PA	01473800	893	SC,pH	1947-70
			Sed	1947-86
			Temp	1956-70
Wissahickon Creek at Fort Washington, PA	01473900	40.8	Sed	1963-69
Wissahickon Creek at Bells Mill Road, Philadelphia, PA	01473950	53.6	Sed	1966-69
Wissahickon Creek at Livezey Lane, Philadelphia, PA	01473980	59.2	Sed	1966-69
Wissahickon Creek at mouth, Philadelphia, PA	01474000	64.0	Sed	1966-69
Darby Creek near Darby, PA	01475510	37.4	Sed	1965-69
Cobbs Creek at US Highway 1 near Philadelphia, PA	01475530	4.78	Sed	1965-70
Cobbs Creek below Indian Creek near Upper Darby, PA	01475540	9.65	Sed	1965-69
Cobbs Creek at Darby, PA	01475550	22.0	Sed	1965-69
Crum Creek near Paoli, PA	01475830	6.16	Biol	1970-83
Delaware River at Eddystone, PA	01476200	10,190	Temp,SC,pH,DO	1949-68
Delaware River at Marcus Hook, PA	01477200	10,370	Temp,SC,pH,DO	1949-77
West Branch Brandywine Creek near Honey Brook, PA	01480300	18.7	Sed	1965-66,1968
East Branch Brandywine Creek near Struble Dam, PA	01480647	4.36	Biol	1972-1982
Marsh Creek near Lyndell, PA	01480680	17.8	Temp	1965-66
			Sed	1965-66,1968
Marsh Creek near Downingtown, PA	01480695	20.3	Temp	1973-87
Brandywine Creek at Chadds Ford, PA	01481000	287	Sed	1963-70
Delaware River at Delaware Memorial Bridge, DE	01482100	11,030	Temp	1956-81
			DO	1962-81
			SC	1963-81
			pH	1968-81

WATER RESOURCES DATA - PENNSYLVANIA, 1991

INTRODUCTION

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

This report, Volume 1, specifically contains (1) discharge records for 83 continuous record stream flow-gaging stations, 75 partial-record stations, and 2 special study sites; 5 miscellaneous streamflow sites; (2) elevation and contents records for 12 lakes and reservoirs; and elevations for 1 tidal station; (3) water-quality records for 23 gaging stations, and 67 ungaged streamsites; and (4) water-level records for 17 observation wells.

Publications similar to this report are published annually by the Geological Survey for all States. For the purpose of archiving, these official reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-91-1." These water-data reports, beginning with the 1971 water year, are for sale as paper copy or microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

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

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

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of title page or by contacting the District Hydrologic Information Specialist, telephone (717) 730-6916.

COOPERATION

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

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

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

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

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

City of Bethlehem, Gordon Mowrer, Mayor;

City of Philadelphia, Water Department, J. Plonski, Water Commissioner;

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

Borough of Media, Water Department, S. C. Scarfone, Manager;

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

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

Corps of Engineers, U.S. Army, in collecting records for 25 streamflow-gaging stations, 1 tidal station, 5 reservoir stations, and 10 crest-stage gages;

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991**DROUGHT IN PENNSYLVANIA**

Pennsylvania receives an average annual precipitation that ranges from 36 to 39 inches in the north and west, to 41 to 45 inches in the south and east. About 25 inches, or more than one-half of the average annual precipitation, returns to the atmosphere by evaporation and transpiration.

Droughts in the Commonwealth most commonly are dry periods that last less than a month. Historically, four droughts were of significant extent and duration: 1930-34, 1939-42, 1953-55, and 1961-67.

During the 1991 water year precipitation statewide was above normal for October and December. The remaining months had precipitation amounts that were slightly to well below normal. Since the first quarter of the 1991 year was above normal precipitation, water supplies were adequate. Beginning with the second quarter, precipitation amounts were below normal in 49 of 67 counties. The largest impact was found in western and central Pennsylvania. February continued as a dry month with all 67 counties reporting below normal precipitation. As the year progressed, precipitation levels continued to be below normal in most counties. By the end of September 1991, 66 counties showed a deficit in precipitation. Twenty-two counties, Crawford, Indiana, Somerset, Mercer, Cambria, Potter, Clinton, Centre, Fulton, Adams, Perry, Juniata, Mifflin, Union, Lycoming, Tioga, York, Lancaster, Schuylkill, Lackawaxen, Susquehanna, and Wayne, had a precipitation deficit of 9 to 12 inches.

Ground water deficiencies were of great concern throughout the state. Average August ground water levels showed 10 counties with record low levels. Thirty-six counties had wells with water levels registering below normal for August and September.

On July 24, 1991, 39 counties were declared drought emergency areas by the governor's office. On August 16, 1991, 16 counties were added to the emergency area, bringing the total Pennsylvania counties affected to 55.

Streamflow at ungaged locations on essentially unregulated streams were measured as part of a statewide effort to monitor the low flow conditions during the months of June, July and September. Gaged streams were also monitored on a continuous basis during this period. Figures 1, 2, and 3 show runoff in cubic feet per second per square mile (cfs/m) as contoured from discharges of selected gaged and ungaged sites for June, July, and September, respectively. Streamflows were approaching 0.10 cfs/m in some areas for the month of June. As the drought continued, streamflows in the 0.10 cfs/m range became more widespread. Figure 2 indicates the areas of greatest impact to be the upper Susquehanna basin and the south central part of the state. Figure 3 shows the severity of the drought continued through September, especially in the northern areas of the Susquehanna and Delaware River basins. The extreme southeastern part of the state was the only area not severely affected by the drought. Record-low streamflows were recorded in many areas of the state during the months of June through September.

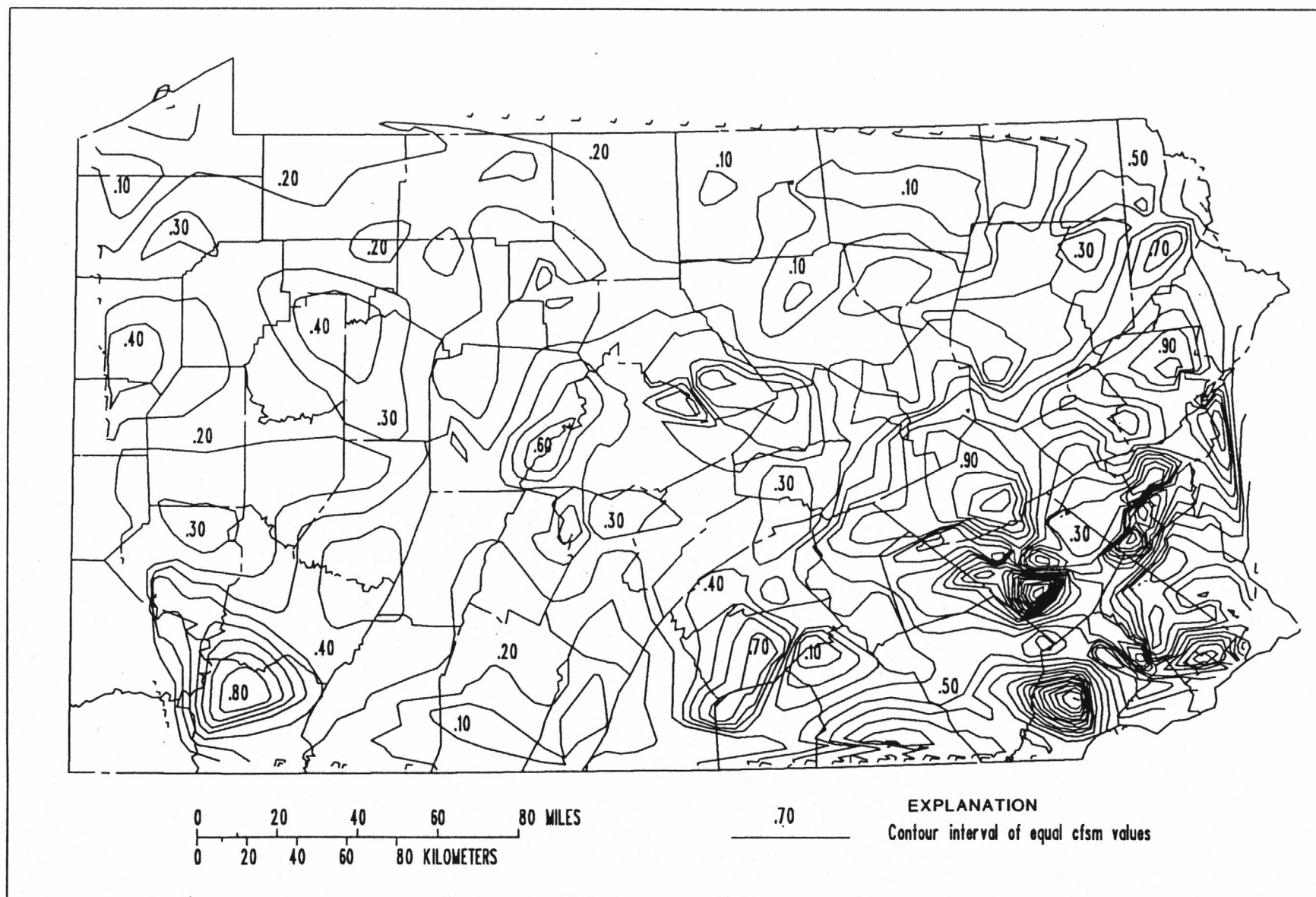


Figure 1.--Runoff as cubic feet per second per square mile for June 1991.

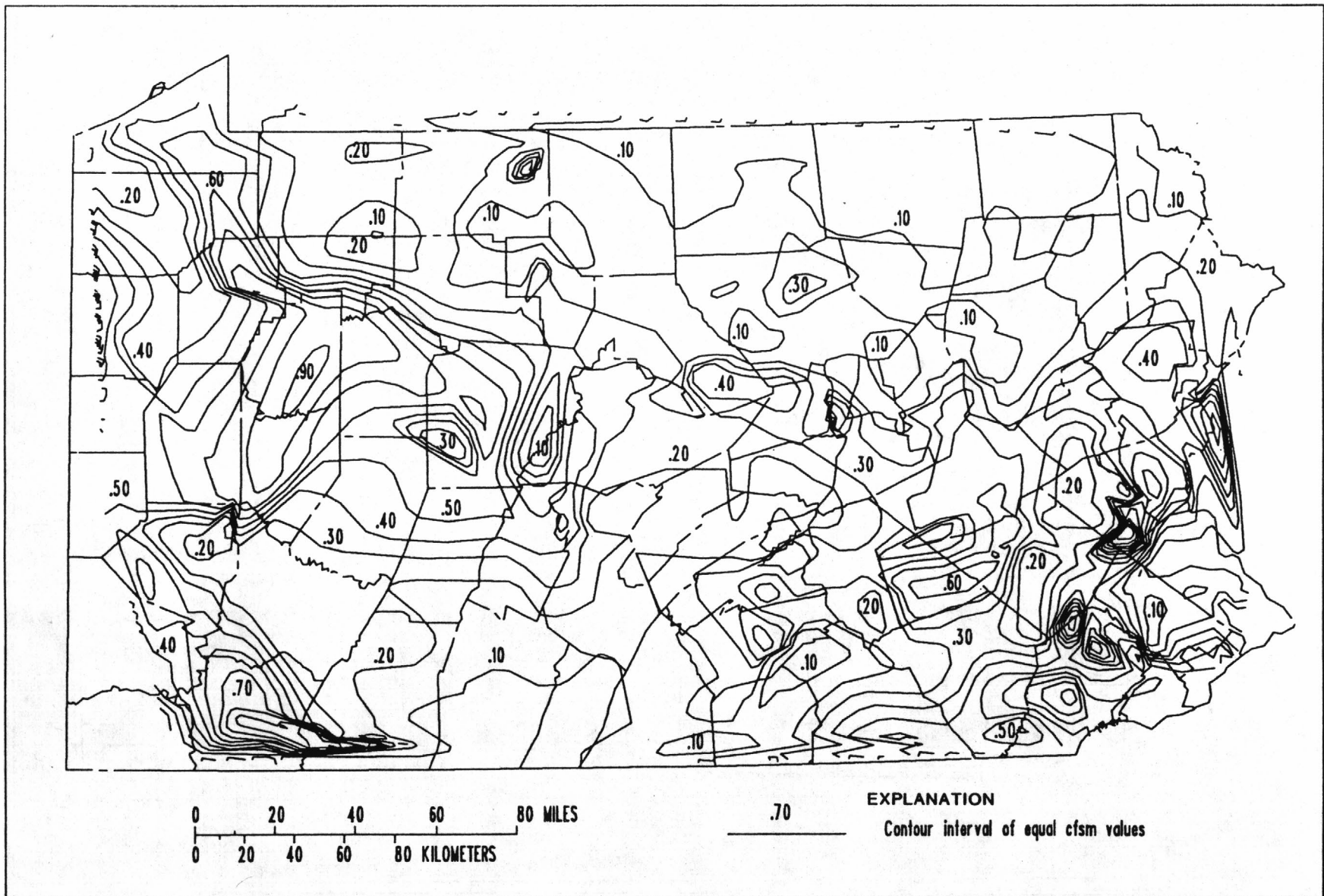


Figure 2.--Runoff as cubic feet per second per square mile for July 1991.

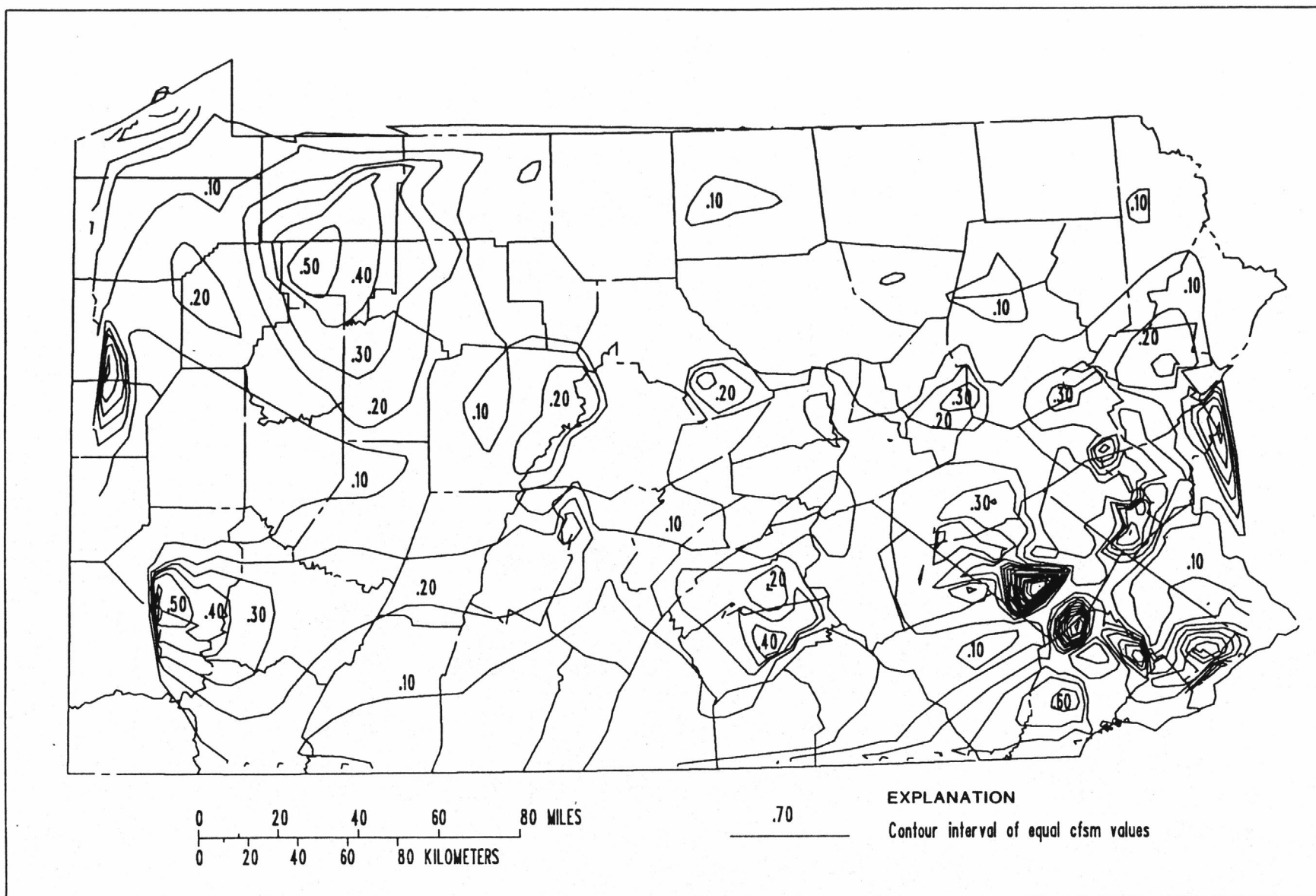


Figure 3.--Runoff as cubic feet per second per square mile for September 1991.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

SUMMARY OF
HYDROLOGIC CONDITIONS

Precipitation for the 1991 water year was below the 1951-80 normal for the Delaware River basin. Figure 4 compares the 1991 monthly precipitation with the 1951-80 monthly mean precipitation recorded at Allentown, Pa. December was the wettest month with rainfall about 154 percent of normal. November, January, February, March, April, May, June, August and September had rainfall below normal. October, December and July had more rain than normal. Rainfall for the year was 6.04 inches below normal.

Streamflow for the Delaware River basin was normal during the 1991 water year. Figure 5 compares the 1991 monthly and yearly mean discharges with the median discharges for 1951-80 at two representative gaging stations. The yearly mean discharge was 99 percent of the 1951-80 median at Schuylkill River at Pottstown, and 91 percent of the median at Bush Kill at Shoemakers.

Although yearly means were near normal, the monthly means show much greater variation from the normals. Bush Kill at Shoemakers had discharges 169 percent of normal for the period October to February. December flows were 210 percent of normal. March through September discharges were only 64 percent of normal with the July flow only 36 percent of normal. Schuylkill River at Pottstown discharges showed a similar pattern. October to January discharges were 185 percent of normal, with October discharges 236 percent of normal. February to September discharge were only 76 percent of normal. September flows at Pottstown were only 57 percent of normal.

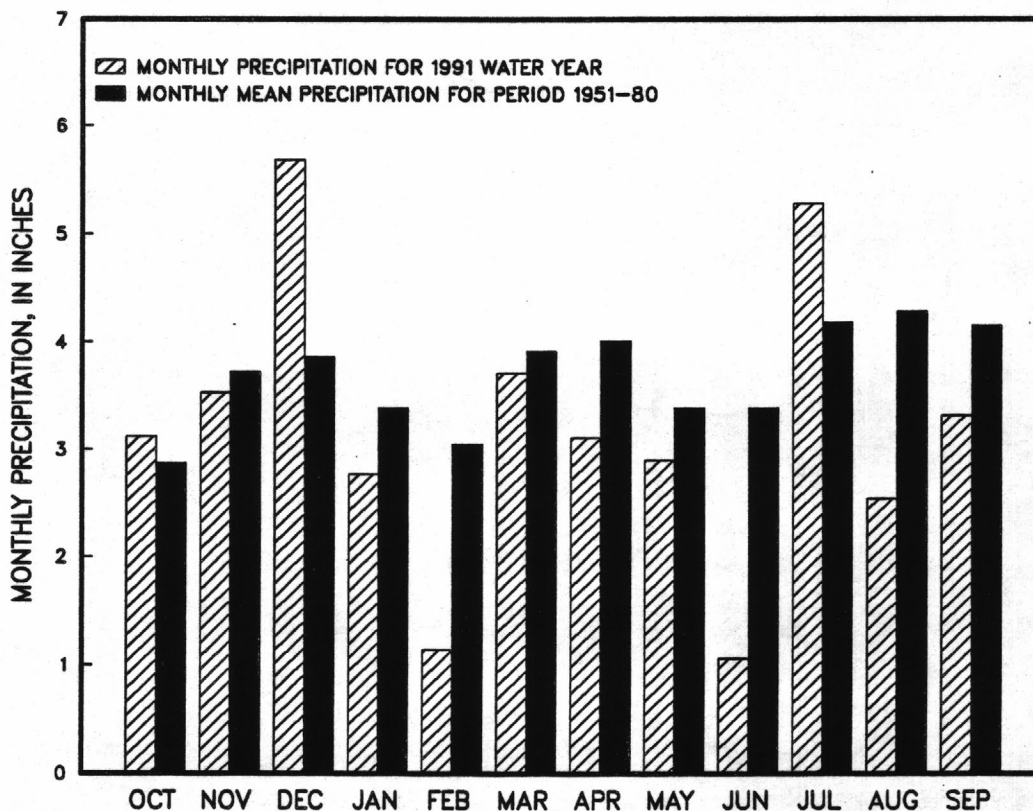
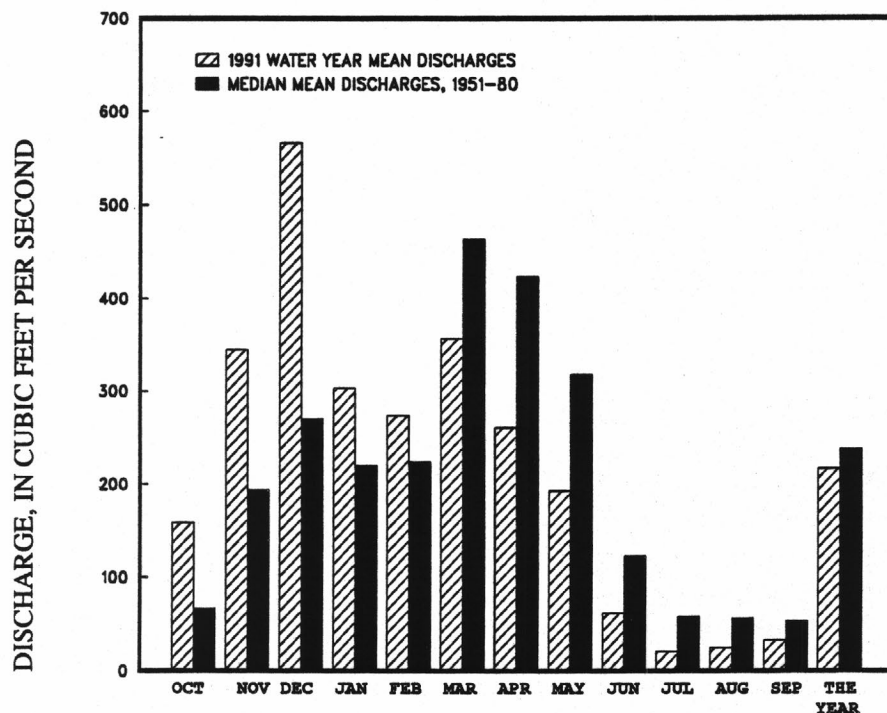


Figure 4.--Comparison of precipitation in the Delaware River basin above Allentown, Pa. during the 1991 water year with mean precipitation for 1951-80.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

BUSH KILL AT SHOEMAKERS



SCHUYLKILL RIVER AT POTTSTOWN

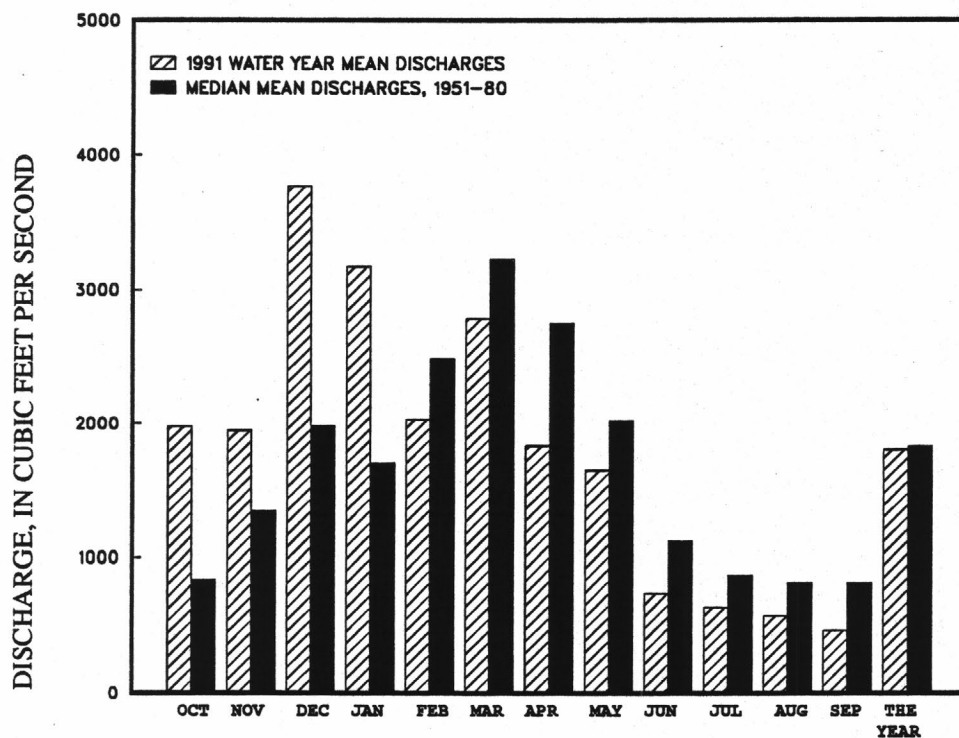


Figure 5.—Comparison of discharge at two long-term representative gaging stations during the 1991 water year with median discharge for period 1951-80.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

Ground-water levels, which were generally normal throughout much of the Delaware River basin during the 1990 water year, were generally below normal during the 1991 water year. However, water levels varied substantially throughout the basin due to an uneven distribution of precipitation. Seasonal mean water levels in 17 observation wells relative to long-term seasonal mean levels are shown in figure 6. Long-term mean water levels were calculated from records ranging from 3 to 41 years in length.

During the fall water levels were generally above normal in the basin except for the carbonate rocks of the Great Valley, which were normal. Recharge was sufficient during late fall and early winter and levels were above normal throughout the basin except for Pike County, which was much below normal. Spring levels started to show the effects of the rainfall deficit with levels below normal to much below normal except for the extreme southeastern part of the basin. Summer levels were much below normal over most of the basin, again with the exception of the southeast, which was above normal. The rainfall deficit was much less in the southeastern part of the basin as well.

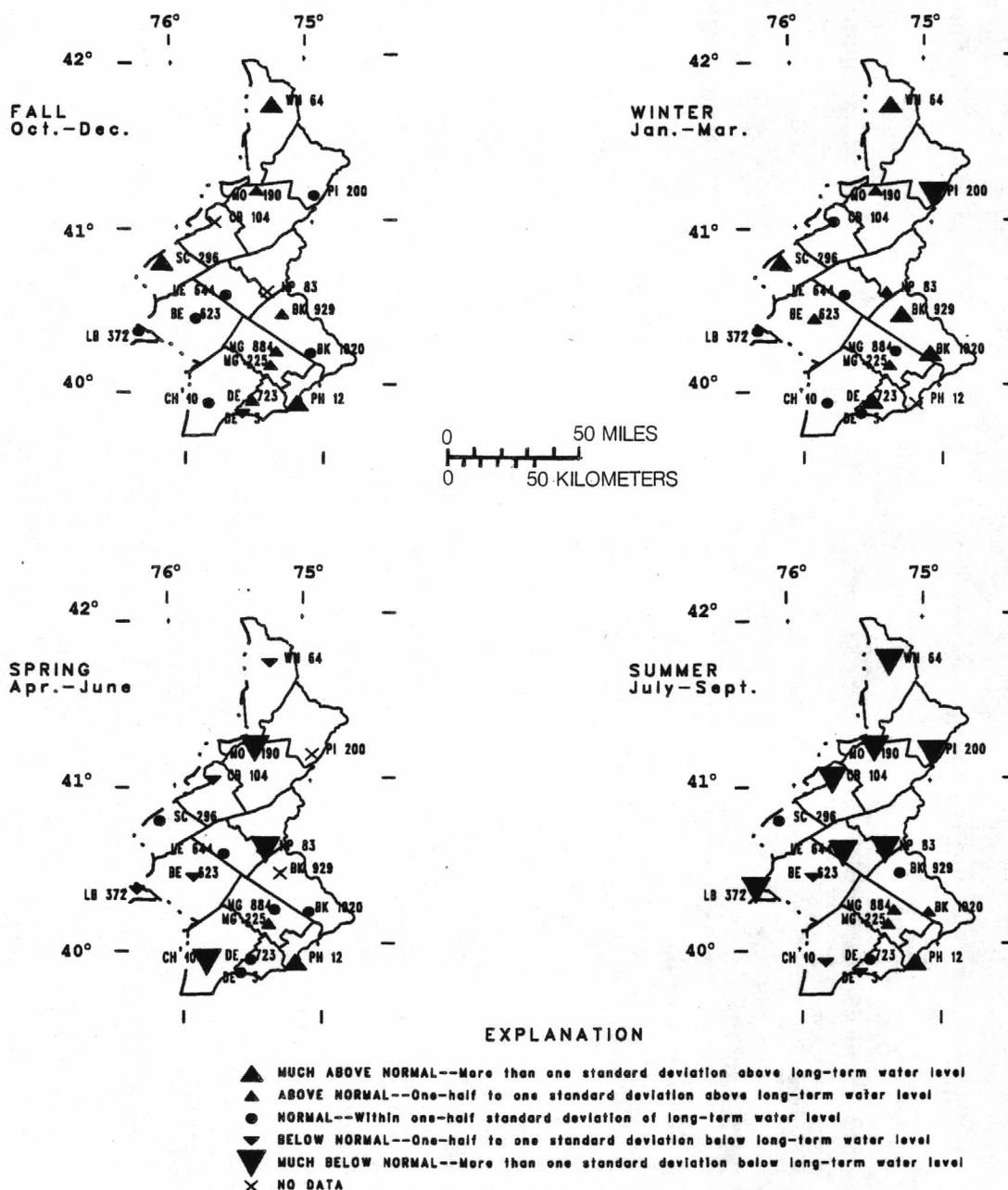


Figure 6.--Relation between mean 1991 seasonal water levels and long-term water levels.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

During 1991, a program of monitoring the dissolved oxygen levels of the Brandywine Creek basin was continued. All these stations are equipped with a satellite data collection platform (DCP) to provide near-real-time data. Figure 7 shows the diurnal fluctuations of dissolved oxygen concentration at three stations on the Brandywine Creek for the period of July 31 to August 8, 1991.

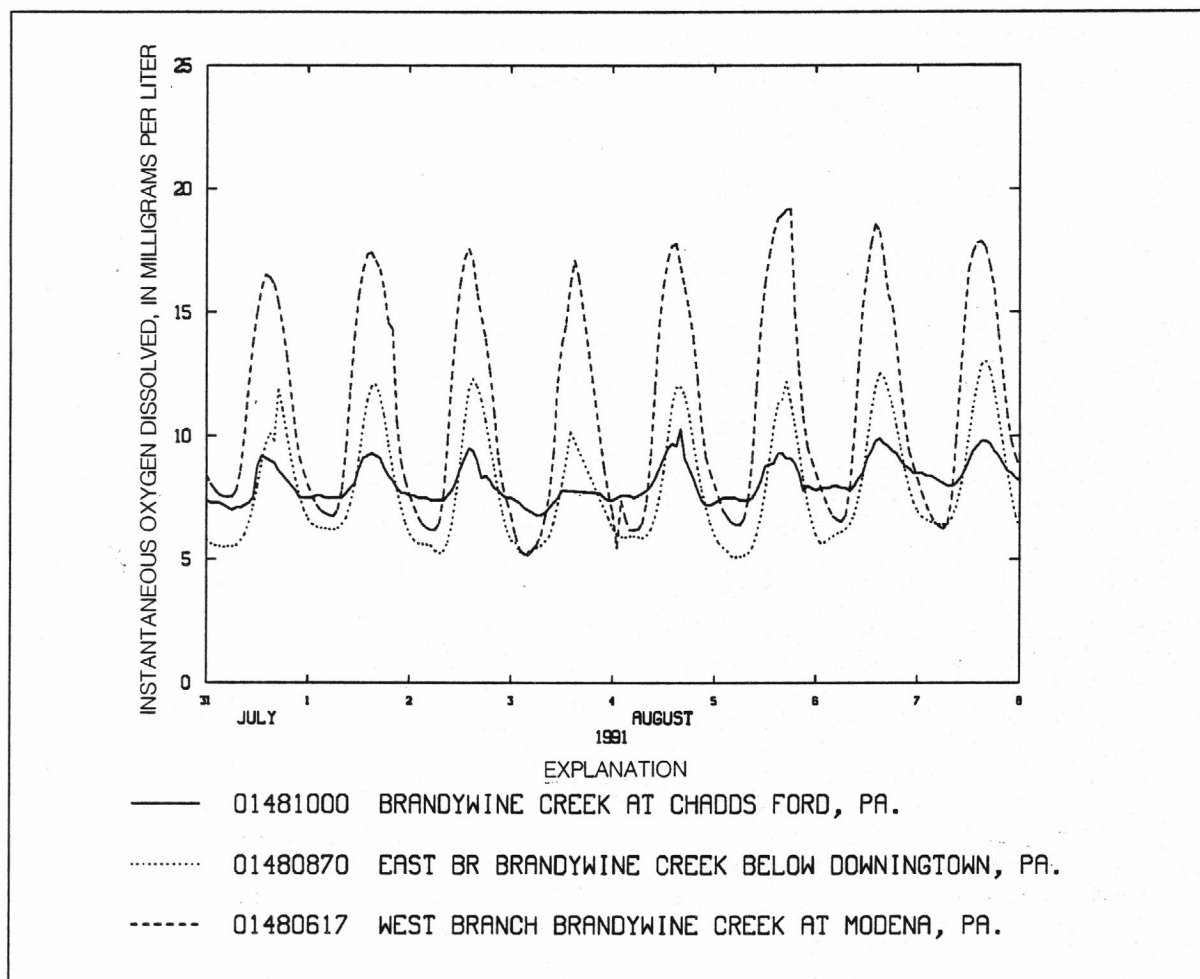


Figure 7.-Diurnal fluctuation of dissolved oxygen concentration at three stations on the Brandywine Creek.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records in this report are for the 1991 water year that began October 1, 1990, and ended September 30, 1991. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The location of these stations and wells are shown in figures 9-12. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream-Order System

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 8 below.

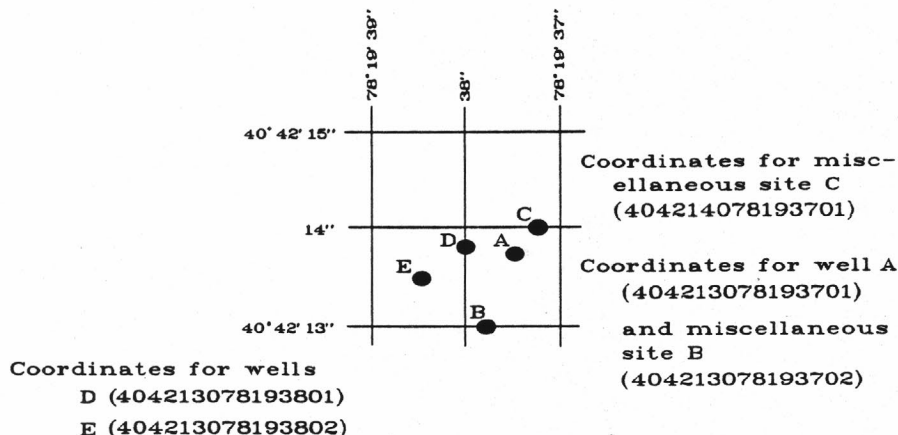


Figure 8.--System for numbering wells and miscellaneous sites (latitude and longitude).

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

Records of Stage and Water Discharge

Records of stage and water discharge may be continuous or partial. Continuous records of discharge are those obtained using a continuous stage-recording device through which either instantaneous water discharges may be computed for any time, or mean discharges may be computed for any period of time, during the period of record. Because daily mean discharges or, for reservoirs end-of-day contents, commonly are published for such stations, they are referred to as "daily stations" or "continuous-record stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial-record stations," or "Low-flow partial-record stations." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all continuous-record and partial-record stations for which data are given in this report are shown in figures 9-12.

Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, or with data collection platforms (DCP's) that electronically record and then transmit the data via satellite to ground receiving stations. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

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

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

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

Data Presentation

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

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

Station manuscript

For each continuous-record station, the manuscript provides, under various headings, descriptive information such as station location, period of record, historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following comments, as appropriate, clarify information presented under the various headings of the station description.

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

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

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

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

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

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

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

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

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published 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.)

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

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

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

ANNUAL RUNOFF (CFSM).--Indicates the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area for the year.

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

10 PERCENT EXCEEDS.--The discharge that is exceeded by 10 percent of the flow for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded by 50 percent of the flow for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow for the designated period.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (telephone number: 717-730-6900).

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 9 - 12.

Arrangement of Records

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

On-site Measurements and Sample Collections

During the collection of water-quality data, assurance that the data obtained represent the in-situ quality of the water is a major concern. Certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures need to be followed when collecting the samples, when treating the samples to prevent changes in quality pending analysis, and when shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," (TWRI's) Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4 and in U.S. Geological Survey Open-File Report 90-140. All of the TWRI references are listed on a following page in this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the U.S. Geological Survey District Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples collected for the National Stream Quality Accounting Network (see definitions) are obtained from several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors that must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an

WATER RESOURCES DATA - PENNSYLVANIA, 1991

apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are determined from data that are recorded at 15-, 30-, or 60-minute intervals by digital recorders that punch each value on a paper tape, or with data collection platforms (DCP's). More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office whose address is given on the back of the title page of this report.

Water Temperature

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

Sediment

Suspended-sediment concentrations are determined from samples collected by hand or by pump samplers. Hand samples utilize the appropriate sampler (dependent on stream depth and velocity) and are collected using the depth-integrating method at single or multiple verticals in the cross section. Samples collected by pump samplers use an intake set to a fixed location in the cross section. The intake is located at a site that best represents the entire cross section on the basis of simultaneous samples collected at various stages by the pumping sampler and by hand. During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, every 15 minutes). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge, mean concentration, and the constant 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

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

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

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

Data Presentation

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

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

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

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

EXTREMES.--Maximums and minimums are given only for constituents measured daily or more frequently. None are given for constituents measured less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

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

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

Remarks Codes

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

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
G	Biological organism estimated as dominant

Records of Ground-Water Levels

Ground-water level data from a basic network of observation wells and from ground-water projects are published herein. Locations of observation wells in the basic network are shown in figures 9 and 10.

Data Collection and Computation

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

Water-level records are obtained from direct measurements with a steel tape, from the graph or punched tape of a water-stage recorder, with solid-state electronic data loggers, or with data collection platforms (DCP's). The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for each day.

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

Data Presentation

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

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

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

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

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

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

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

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. These tables are usually reported as maximum depth (in feet) above or below land-surface datum. The highest and lowest maximum depths for the water year and their dates of occurrence are shown on a line below the table. Missing records are indicated by dashes in place of the water level. A hydrograph for a selected period of record follows each water-level table.

Records of Ground-Water Quality

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

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were collected by trained personnel.

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

Data Presentation

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

ACCESS TO WATSTORE DATA

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

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

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

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

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 and 3-1/2 inch floppy disk; and as noted in the introduction, beginning with the 1990 water year, on Compact Disc - Read Only Memory (CD-ROM) discs. All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

DEFINITION OF TERMS

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

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

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

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

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

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and thread like in shape often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at $44.5^{\circ}\text{C} + 0.2^{\circ}\text{C}$ on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

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

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

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

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

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

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

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

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

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

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a year 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 data of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

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

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

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 μm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

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

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

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

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

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

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

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

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

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

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

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

Organism is any living entity.

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

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

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay	0.00024 - 0.004	Sedimentation
Silt004 - .062	Sedimentation
Sand062 - 2.0	Sedimentation or sieve
Gravel	2.0 - 64.0	Sieve

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1991

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027.

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

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 mm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

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

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons-per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day (T/day) is the quantity of substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample).

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS—TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS—TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS—TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS—TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. McCary: USGS—TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. Scott Keys: USGS—TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS—TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS—TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS—TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS—TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS—TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS—TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS—TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS—TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W. P. Somers: USGS—TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS—TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS—TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G.F. Smoot and C.E. Novak: USGS—TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS—TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS—TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS—TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS—TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS—TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS—TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathburn, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS—TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels of streamflow gaging stations*, by E.J. Kennedy: USGS—TWRI Book 3, Chapter A19. 1990. 27 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS—TWRI Book 3, Chapter B1. 1971. 26 pages.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS-TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by Richard L. Cooley and Richard L. Neff: USGS-TWRI Book 3, Chapter B4. 1990. 232 pages.
- 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, Chapter B5. 1987. 15 pages.
- 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, Chapter B6. 1987. 28 pages.
- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H.P. Guy and V.W. Norman: USGS-TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman: USGS-TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for 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, Chapter A3. 1987. 80 pages.
- 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, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS-TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI Book 6, Chapter A1. 1988. 586 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS-TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS-TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI Book 8, Chapter B2. 1968. 15 pages.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

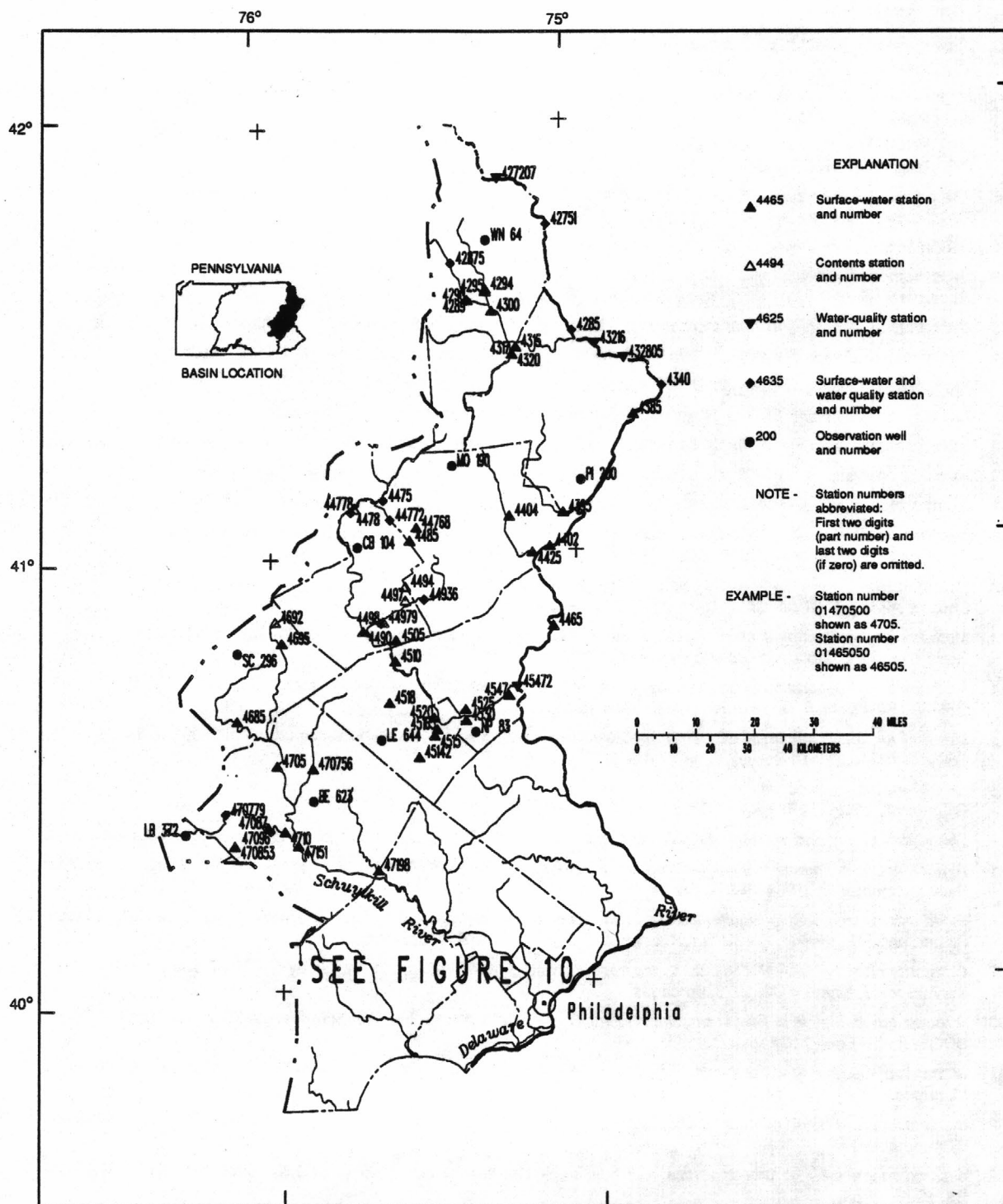


Figure 9.--Location of data-collection stations.

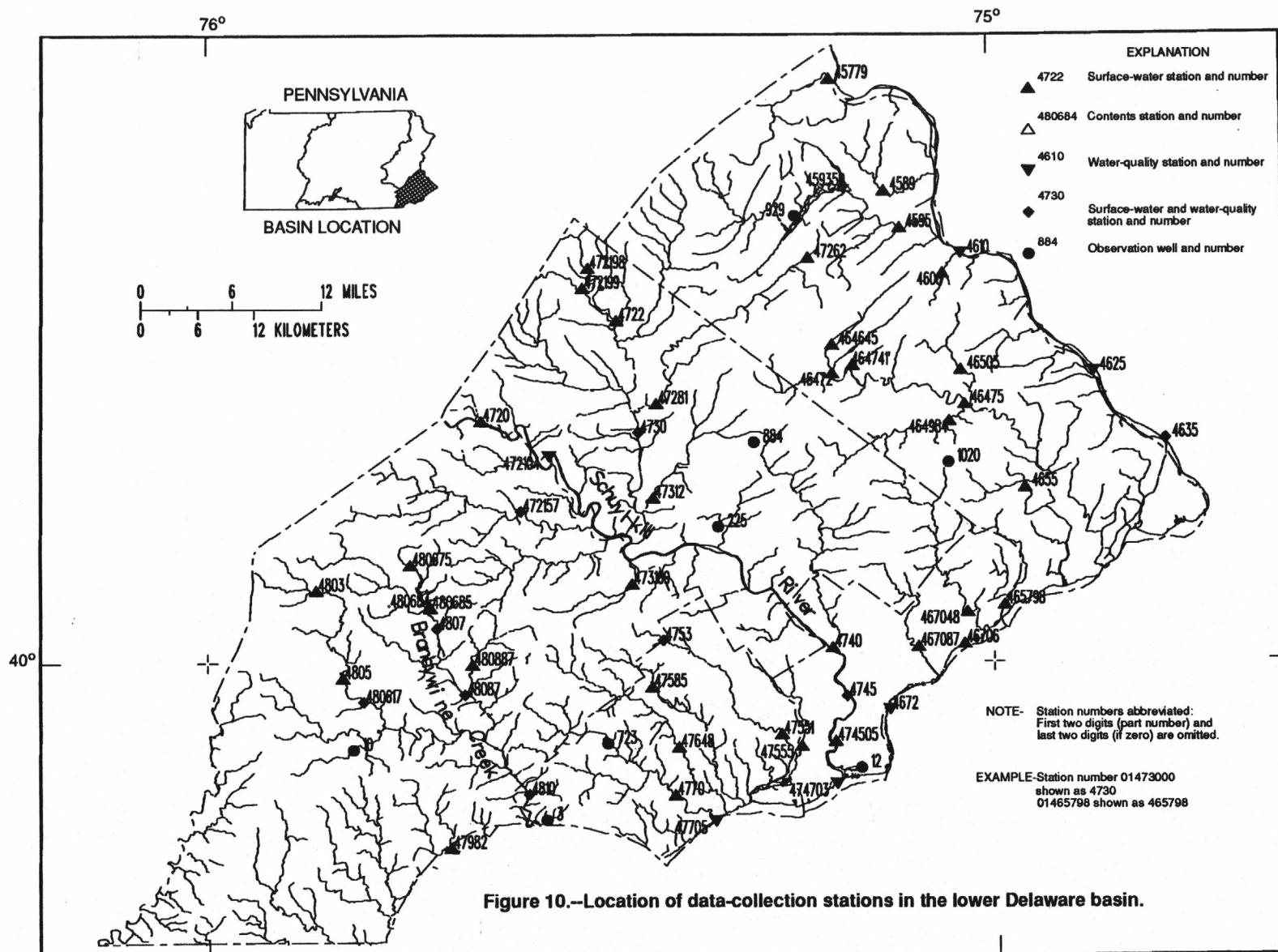


Figure 10.--Location of data-collection stations in the lower Delaware basin.

WATER RESOURCES DATA - PENNSYLVANIA, 1991

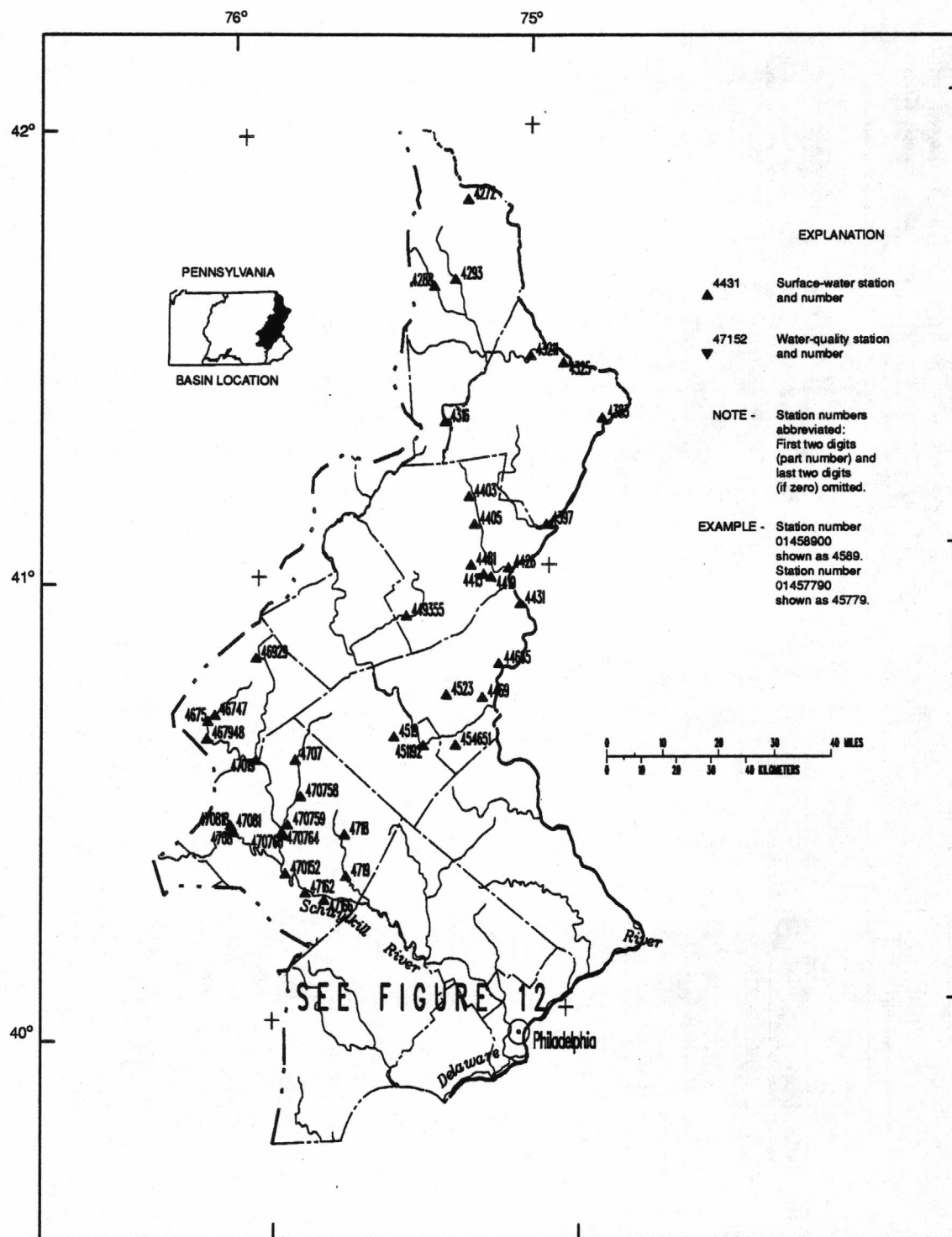
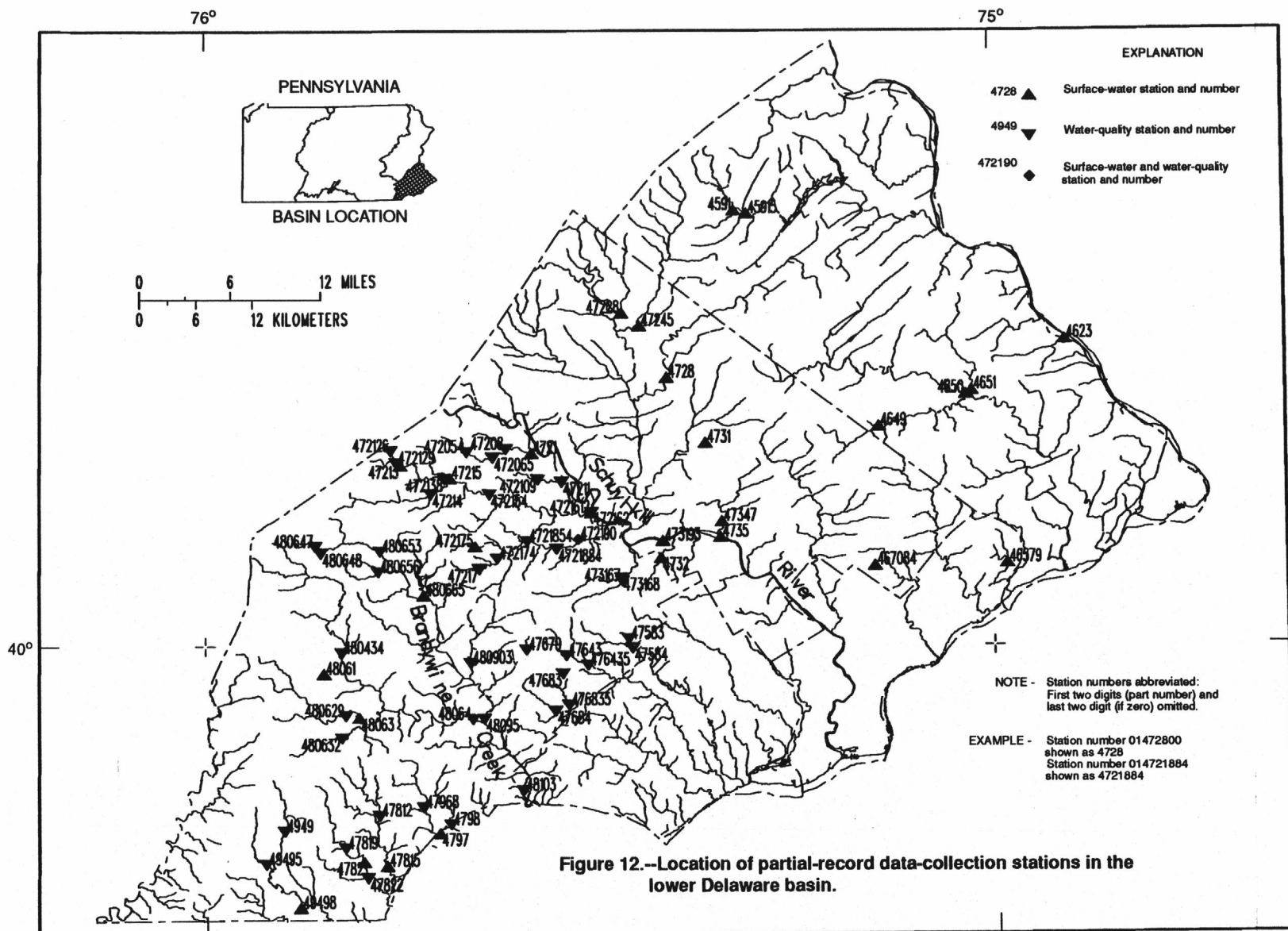


Figure 11.--Location of partial-record data-collection stations.



DELAWARE RIVER BASIN

01427207 DELAWARE RIVER AT LORDVILLE, NY

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

DRAINAGE AREA.--1,590 mi².

PERIOD OF DAILY RECORD.--

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

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

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

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

REMARKS.--Interruptions of record were due to malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum (water years 1968-70, 1973, 1975-86, 1989, 1991) 30.5°C, June 16, 1976, July 10, 1981; minimum (water years 1968-71, 1974, 1977-78, 1980-91), 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 25.0°C, May 23; minimum, 0.0°C on many days during winter period.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	12.0	13.0	8.5	7.0	8.0	3.5	2.5	3.0	2.0	1.0	1.5
2	12.5	11.0	12.0	9.5	8.0	---	3.5	2.5	3.0	2.5	1.0	2.0
3	12.5	10.5	11.5	---	8.5	---	3.0	.5	1.5	2.5	2.0	2.5
4	12.0	11.5	12.0	---	---	---	4.0	.5	3.0	2.5	1.0	2.0
5	13.5	11.0	12.0	11.0	9.5	---	3.5	2.0	3.0	1.5	.0	.5
6	14.5	12.0	13.0	10.5	8.5	10.0	2.0	1.5	2.0	2.0	1.0	1.5
7	15.5	13.0	14.0	8.5	7.0	7.5	3.0	2.5	2.5	2.0	.5	1.5
8	15.0	14.0	14.0	7.0	5.5	6.5	3.0	2.5	3.0	.5	.0	.0
9	15.0	13.5	14.0	5.5	4.5	5.0	3.5	3.0	3.0	.0	.0	.0
10	17.0	15.0	16.0	6.5	5.0	5.5	3.0	2.0	2.5	1.0	.0	.5
11	17.0	16.5	17.0	6.5	---	---	2.0	1.0	1.0	.5	.0	.0
12	18.5	16.5	17.5	5.5	---	---	1.5	.5	1.0	.0	.0	.0
13	18.5	18.0	18.0	3.5	2.5	3.0	2.5	1.5	2.0	.0	.0	.0
14	18.0	16.0	17.0	3.5	2.0	2.5	2.0	.5	1.0	.5	.0	.0
15	16.5	15.0	15.5	4.5	2.5	3.5	.5	.0	.0	.0	.0	.0
16	15.0	13.0	14.0	6.0	4.0	5.0	1.0	.0	.5	1.0	.0	.5
17	14.0	11.5	12.5	6.5	5.5	6.0	1.5	1.0	1.0	1.5	1.0	1.0
18	14.5	13.0	13.5	5.0	3.0	4.0	2.5	1.5	2.0	1.5	.5	1.0
19	14.0	10.0	12.0	3.0	1.5	2.0	3.5	2.5	3.0	2.5	1.0	1.5
20	10.5	9.0	10.0	3.0	1.5	2.5	3.0	2.0	2.0	2.5	2.0	2.0
21	10.5	8.5	9.5	4.0	3.0	3.5	3.5	2.0	2.5	2.5	.0	1.5
22	11.0	9.5	10.0	5.0	3.5	4.0	6.0	3.5	5.0	.5	.0	.0
23	12.5	11.0	11.5	5.5	5.0	5.0	7.0	6.0	6.5	.5	.0	.0
24	12.5	11.5	12.0	5.5	4.5	5.0	6.5	3.5	5.5	.5	.0	.0
25	11.0	10.0	10.5	5.0	4.0	4.5	3.5	2.0	2.5	.5	.0	.0
26	10.0	8.0	9.0	5.0	3.5	4.5	2.0	1.0	1.5	.5	.0	---
27	8.0	6.5	7.0	5.0	4.0	4.5	1.5	.5	1.0	.0	.0	.0
28	7.5	7.0	7.0	7.5	4.5	5.5	1.5	.0	.5	.0	.0	.0
29	7.0	6.0	6.5	8.0	6.0	7.0	3.0	1.5	2.0	.0	.0	.0
30	7.0	5.0	6.0	5.5	3.5	4.5	3.5	3.0	3.0	.0	.0	.0
31	8.5	6.5	7.5	---	---	---	3.0	1.5	2.5	.0	.0	.0
MONTH	18.5	5.0	12.0	---	---	---	7.0	0.0	2.5	2.5	0.0	---

DELAWARE RIVER BASIN

01427207 DELAWARE RIVER AT LORDVILLE, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY

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 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi² of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin), and subsequent to October 1963, entire flow from 454 mi² of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during period of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft³/s, Mar. 15, 1986, gage-height, 13.42 ft; maximum gage height, 14.83 ft, Jan. 9, 1979 (ice jam); minimum discharge, 307 ft³/s, Aug. 23, 1985; minimum gage height, 2.20 ft, Sept. 13, 1977, Aug. 23, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,000 ft³/s, Nov. 11, gage height, 9.81 ft; minimum, 355 ft³/s, Sept. 26, 27, gage height, 2.38 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1670	1120	9120	●1850	2070	3970	2600	1430	1140	1310	1270
2	1250	1500	1080	7190	●1600	2600	3900	2580	1120	1340	1290	1350
3	1160	1360	1060	5990	●1500	4800	3630	2490	958	1480	1300	1300
4	1140	1260	10600	4990	●1650	10600	3270	2160	939	1430	1340	1400
5	1040	1170	10300	4000	●1800	10300	3030	1900	984	1480	1370	1390
6	1160	1680	6100	3600	2130	7910	2910	1940	828	1420	1310	1390
7	1110	2250	4460	3090	5530	7660	2870	3410	759	1290	1350	1500
8	1100	1810	3510	●2500	●7300	6780	2790	3060	1020	1130	1200	1390
9	844	1630	2880	●2400	6320	5420	3030	2620	1070	1160	1410	1230
10	735	8970	2460	2380	5550	4520	3550	2490	969	1280	1400	1220
11	828	24700	2100	●2000	4730	3720	3500	2440	1030	1540	1140	1230
12	834	9860	1870	●1700	●3600	3250	3190	2190	1270	1440	607	1200
13	1270	6350	1720	●1600	●3200	2940	2940	1910	1420	1490	539	1240
14	3130	4620	1590	●1400	3270	2750	2770	1680	1340	1550	503	1420
15	2330	3660	1430	●1600	3290	2660	2700	1530	1240	1360	934	1290
16	1590	3090	1460	●2000	●2500	2480	2800	1360	1080	1540	893	757
17	1250	2820	1520	3740	●1950	2370	2400	1210	1000	1350	1320	744
18	1230	2710	2200	3720	●1900	2520	2060	1190	1110	1160	1200	671
19	6430	2280	5380	3000	1950	3050	1830	1150	1070	1240	1100	931
20	4250	2020	4510	2720	3140	3250	1650	984	1100	1480	762	1150
21	2810	1840	4200	2620	4770	2890	1830	879	1300	1250	1010	1080
22	2190	1690	5710	●2000	4100	2700	5400	807	1240	758	1960	968
23	2680	1750	6100	●1500	3930	3160	6010	892	1260	748	724	557
24	12100	1890	9730	●1700	●3200	4010	5380	973	1120	881	712	459
25	8530	1680	9680	●1650	3100	5050	5120	903	1170	704	900	409
26	5530	1520	7510	●1450	2750	4710	4630	925	1100	961	1000	375
27	4010	1390	5970	●1550	2460	4570	4070	936	1100	1480	1080	458
28	3090	1330	5110	●1500	2200	5560	3520	1180	1270	1020	1100	1020
29	2590	1280	4550	●1400	---	5310	3050	1030	1310	831	1170	1050
30	2180	1190	5060	●1400	---	4840	2750	1070	1200	879	1300	722
31	1900	---	12300	●2000	---	4410	---	1920	---	1250	1340	---
TOTAL	81471	100970	143270	87510	91270	138860	100550	52409	33807	38062	34574	31171
MEAN	2628	3366	4622	2823	3260	4479	3352	1691	1127	1228	1115	1039
MAX	12100	24700	12300	9120	7300	10600	6010	3410	1430	1550	1960	1500
MIN	735	1170	1060	1400	1500	2070	1650	807	759	704	503	375

CAL YR 1990 TOTAL 1187944 MEAN 3255 MAX 24700 MIN 579
WTR YR 1991 TOTAL 933924 MEAN 2559 MAX 24700 MIN 375

● Estimated.

WATER-QUALITY RECORDS

WATER TEMPERATURE: June 1975 to current year.

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

WATER TEMPERATURE: Maximum recorded, (water years 1976-91), 30.5°C, July 12, 1987; minimum, 0.0°C on many days during winter periods.

WATER TEMPERATURE: Maximum, 26.5°C, May 25, but may have been higher during period of instrument malfunction; minimum, 0.0°C on many days during winter period.

[illegible]

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

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 mi².

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 mi² of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi² of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow of these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft³/s, Aug. 19, 1955, gage height, 26.40 ft, from floodmarks in gage house, from rating curve extended above 55,000 ft³/s, on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 122 ft³/s, Sept. 5, 1953, gage height, 1.11 ft; minimum daily, 126 ft³/s, Sept. 4, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,400 ft³/s, Nov. 11, gage height, 13.10 ft; minimum daily discharge, 427 ft³/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	1980	1430	10700	●2000	2540	4310	3010	1820	1240	1390	1420
2	1340	1790	1370	8030	●1850	2750	4210	2960	1430	1340	1410	1370
3	1410	1640	1350	6550	●1700	4800	3960	2910	1190	1590	1360	1450
4	1290	1530	8900	5420	●1800	11400	3610	2580	1130	1530	1450	1420
5	1250	1430	13200	4370	●2000	12600	3370	2290	1150	1540	1460	1510
6	1210	1780	7160	3920	2540	9290	3230	2240	1110	1570	1400	1450
7	1390	2510	5100	3490	●5400	8400	3170	3760	874	1420	1460	1500
8	1180	2160	4030	●2700	●9000	7850	3100	3670	1050	1300	1310	1560
9	1170	1950	3390	●2500	7390	6070	3100	3120	1190	1160	1430	1370
10	851	7250	2940	●2600	6310	5060	3590	2890	1190	1310	1530	1310
11	989	30400	2570	●2200	5390	4220	3690	2830	1120	1500	1500	1270
12	893	12700	2270	●1750	●4200	●3600	3420	2640	1330	1590	838	1330
13	1160	7620	2110	●1800	●3500	3380	3190	2350	1540	1540	653	1270
14	2640	5370	1980	●1650	3690	3180	3040	2090	1610	1620	589	1420
15	2870	4210	1710	●1750	●3600	3130	2970	1910	1360	1500	782	1480
16	1940	3590	1760	●2200	●2800	2950	3140	1730	1370	1550	922	1030
17	1520	3300	1940	3710	●2200	2830	2820	1560	1120	1530	1260	813
18	1340	3220	2340	●4400	●2100	2980	2460	1450	1210	1300	1350	786
19	5160	2800	5600	●3700	●2200	3630	2200	1480	1250	1280	1390	873
20	4870	2460	5220	3200	3080	3780	2000	1290	1210	1490	1140	1160
21	3170	2270	4460	3080	5490	3410	2110	1150	1300	1490	881	1230
22	2480	2090	5770	●2400	4630	3150	5570	1050	1420	1070	1950	1130
23	2370	2120	6410	●1650	4480	3480	6660	1000	1420	802	1130	862
24	11400	2330	9680	●1800	●3650	4760	5910	1180	1330	983	734	563
25	10400	2110	11300	●1800	3530	5710	5580	1070	1210	870	905	564
26	6180	1920	8410	●1650	3270	5340	5090	1100	1310	886	1060	474
27	4400	1760	6520	●1700	2950	4980	4460	1100	1150	1360	1150	427
28	3450	1660	5500	●1800	2680	5780	3920	1270	1320	1400	1230	754
29	2940	1610	4930	●1800	---	5660	3460	1340	1440	923	1200	1200
30	2530	1520	4700	●1900	---	5230	3170	1170	1350	828	1320	947
31	2220	---	12800	●2200	---	4770	---	1930	---	1290	1410	---
TOTAL	87243	119080	156850	98420	103430	156710	110510	62120	38504	40802	37594	33943
MEAN	2814	3969	5060	3175	3694	5055	3684	2004	1283	1316	1213	1131
MAX	11400	30400	13200	10700	9000	12600	6660	3760	1820	1620	1950	1560
MIN	851	1430	1350	1650	1700	2540	2000	1000	874	802	589	427

CAL YR 1990 TOTAL 1321331 MEAN 3620 MAX 30400 MIN 634
WTR YR 1991 TOTAL 1045206 MEAN 2864 MAX 30400 MIN 427

● Estimated.

DELAWARE RIVER BASIN

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

WATER-QUALITY RECORDS

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

CHEMICAL DATA: 1971-73 (a).

NUTRIENT DATA: 1971 (a).

PERIOD OF DAILY RECORD.--

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

INSTRUMENTATION.--Water-temperature digital recorder since October 1975, provides one-hour-interval data. Prior to October 1975, water-temperature recorder provided continuous recordings.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum (water years 1968-75, 1980-81, 1983, 1985-91), 32.0°C, Aug. 2, 3, 1975, July 10, 1981, July 12, 1987; minimum (water years 1968, 1977-91), 0.0°C, on many days during winter periods, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.0°C, July 24; minimum, 0.0°C on several days during January.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	5.5	3.5	4.5	2.0	1.0	1.5
2	---	---	---	---	---	---	4.5	3.5	4.0	1.5	1.0	1.0
3	---	---	---	---	---	---	3.5	2.0	3.0	2.0	1.0	1.5
4	---	---	---	---	---	---	4.5	3.0	3.5	2.0	1.5	1.5
5	---	---	---	---	---	---	3.5	3.0	3.5	1.5	.5	1.0
6	---	---	---	---	---	---	3.0	2.5	2.5	1.0	.5	1.0
7	---	---	---	---	---	---	2.5	2.0	2.5	1.5	1.0	1.0
8	---	---	---	---	---	---	3.0	2.5	3.0	1.0	.0	.5
9	---	---	---	---	---	---	3.5	3.0	3.0	.0	.0	.0
10	---	---	---	---	---	---	3.5	2.5	3.0	1.0	.0	.5
11	---	---	---	---	---	---	2.5	1.5	2.0	.0	.0	.0
12	---	---	---	---	---	---	2.0	1.5	2.0	.0	.0	.0
13	---	---	---	---	---	---	2.5	1.5	2.0	.0	.0	.0
14	---	---	---	---	---	---	2.0	.5	1.5	.0	.0	.0
15	---	---	---	---	---	---	.5	.5	.5	.5	.0	.5
16	---	---	---	---	---	---	1.5	.5	1.0	.5	.5	.5
17	---	---	---	---	---	---	1.5	.5	1.0	.5	.5	.5
18	---	---	---	---	---	---	2.0	1.0	1.5	.5	.5	.5
19	---	---	---	4.0	---	---	3.0	2.0	2.5	1.0	.5	.5
20	---	---	---	4.0	3.0	3.5	3.0	2.5	3.0	1.5	.5	1.0
21	---	---	---	4.5	3.0	3.5	3.0	2.5	2.5	1.5	.0	1.0
22	---	---	---	5.0	3.5	4.0	5.0	3.0	4.0	.0	.0	.0
23	---	---	---	5.5	4.5	5.0	7.0	5.0	6.5	.0	.0	.0
24	---	---	---	6.0	5.0	5.5	7.0	5.0	6.5	.0	.0	.0
25	---	---	---	6.0	5.0	5.5	5.0	2.0	3.5	.5	.0	.5
26	---	---	---	6.0	4.5	5.5	2.0	1.0	1.5	.5	.5	.5
27	---	---	---	5.5	4.5	5.0	1.0	.5	.5	.5	.5	.5
28	---	---	---	7.5	5.0	6.0	.5	.5	.5	1.0	.5	.5
29	---	---	---	7.5	6.0	7.0	1.5	.5	.5	1.0	.5	.5
30	---	---	---	6.0	4.5	5.5	3.0	1.5	2.5	.5	.5	.5
31	---	---	---	---	---	---	3.0	2.0	3.0	.5	.5	.5
MONTH	---	---	---	---	---	---	7.0	0.5	2.5	2.0	0.0	0.5

DELAWARE RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	.5	.5	.5	3.5	1.0	2.0	5.0	4.5	4.5	16.0	13.0	14.5
2	1.0	.5	.5	5.0	2.5	4.0	5.0	4.0	4.5	16.0	14.0	15.5
3	2.0	.5	1.0	7.0	4.5	5.5	6.5	4.0	5.5	14.0	12.5	13.5
4	1.5	.5	1.0	7.0	5.0	6.0	8.0	6.0	7.0	14.5	11.5	13.0
5	1.0	.5	1.0	5.0	3.5	4.0	8.5	7.5	8.0	16.5	12.0	14.0
6	1.0	.5	1.0	4.0	3.0	3.5	11.0	8.5	9.5	15.0	14.0	14.5
7	1.0	.5	.5	4.5	4.0	4.5	13.5	10.5	12.0	14.5	14.0	14.0
8	1.0	.5	.5	4.0	2.5	3.0	15.0	13.0	14.0	15.5	13.5	14.5
9	2.5	1.0	1.5	3.0	1.5	2.5	16.0	14.5	15.0	14.5	14.0	14.0
10	3.0	2.0	2.5	3.0	1.5	2.5	15.5	13.5	14.5	16.0	13.5	14.5
11	2.5	1.5	2.0	2.5	1.0	2.0	13.5	10.5	12.0	17.5	14.0	16.0
12	1.0	.5	.5	2.0	1.0	1.5	10.5	9.0	10.0	19.5	16.0	17.5
13	1.0	.5	.5	2.5	1.5	2.0	9.0	7.5	8.5	22.0	18.0	20.0
14	.5	.5	.5	2.5	2.0	2.5	9.5	7.5	8.5	22.5	19.5	21.0
15	.5	.5	.5	3.5	2.5	3.0	8.5	8.0	8.5	23.5	19.5	21.5
16	.5	.5	.5	4.5	2.5	3.5	11.0	8.0	9.5	24.5	20.0	22.0
17	.5	.5	.5	6.0	3.5	4.5	10.5	10.0	10.0	24.5	20.5	22.5
18	.5	.5	.5	5.0	4.5	5.0	10.5	9.5	10.0	24.0	20.5	22.0
19	1.0	.5	.5	5.5	4.0	5.0	12.0	9.0	10.5	23.0	19.0	21.0
20	1.5	.5	1.0	6.5	5.0	5.5	11.0	10.0	10.5	23.5	18.5	21.0
21	1.5	.5	1.0	5.5	5.0	5.5	10.0	9.0	9.5	24.5	18.5	21.5
22	2.0	1.0	1.5	5.0	4.5	5.0	9.0	7.5	8.0	26.5	20.5	23.0
23	2.0	1.0	1.5	4.5	3.5	4.0	9.5	7.0	8.5	27.5	22.0	24.5
24	1.0	.5	.5	3.5	3.0	3.5	10.0	9.0	9.5	27.0	23.0	25.0
25	1.5	.5	1.0	4.0	3.5	3.5	12.0	9.5	10.5	28.5	23.5	26.0
26	2.0	1.0	1.5	6.0	4.0	5.0	13.0	10.5	12.0	26.5	24.5	25.5
27	2.5	1.5	2.0	6.0	5.5	6.0	14.5	12.5	13.5	28.0	23.5	25.5
28	2.0	1.0	1.5	8.5	6.0	7.0	15.0	14.0	14.5	28.5	24.0	26.0
29	---	---	---	8.0	7.5	7.5	14.5	13.0	14.0	28.5	24.0	26.0
30	---	---	---	7.5	5.5	6.5	14.0	13.0	13.5	28.0	25.0	26.0
31	---	---	---	5.5	4.5	5.0	---	---	---	25.5	24.0	25.0
MONTH	3.0	0.5	1.0	8.5	1.0	4.0	16.0	4.0	10.0	28.5	11.5	20.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.0	23.0	24.5	27.5	22.0	24.5	27.5	22.5	25.0	25.0	21.0	23.0
2	27.0	22.0	24.5	24.0	22.0	23.0	27.0	23.0	25.0	23.5	19.0	21.0
3	27.5	22.0	25.0	22.0	20.0	21.0	25.0	23.5	24.0	23.0	18.5	20.5
4	25.5	22.0	24.0	20.5	19.0	20.0	25.0	22.0	23.5	20.5	19.0	20.0
5	24.5	20.5	22.0	18.5	17.5	18.0	23.5	21.0	22.0	23.0	19.0	21.0
6	24.0	19.5	21.5	21.0	17.0	19.0	24.0	19.5	22.0	23.5	19.0	21.0
7	25.5	19.5	22.5	23.0	19.5	21.0	24.0	19.5	22.0	23.0	19.0	21.0
8	27.0	20.5	23.5	25.5	20.5	22.5	25.5	20.0	22.5	22.5	19.5	21.0
9	27.5	21.5	24.5	27.0	21.0	24.0	23.0	21.5	22.0	23.0	19.5	21.5
10	27.5	22.0	25.0	26.0	21.0	23.5	23.5	20.5	22.0	22.0	20.5	21.5
11	27.0	23.0	24.5	25.5	21.0	23.5	21.5	20.0	21.0	23.5	20.5	21.5
12	26.5	23.0	24.0	24.0	20.5	22.5	23.5	19.0	21.5	22.5	18.5	20.5
13	24.0	20.0	22.0	22.5	21.0	21.5	25.0	20.5	23.0	22.0	17.5	20.0
14	23.5	18.5	21.0	23.5	20.0	21.5	26.0	22.0	24.0	22.0	18.5	20.5
15	25.5	19.5	22.5	24.0	19.0	21.5	25.0	23.5	24.0	20.5	19.5	20.0
16	26.0	22.0	24.0	25.0	20.0	22.5	28.0	22.5	25.0	24.5	19.0	21.5
17	28.5	23.0	25.5	26.0	21.5	23.5	27.5	24.0	25.5	25.5	21.5	23.0
18	25.0	23.5	24.5	27.0	22.0	24.5	25.5	23.5	24.5	24.5	21.0	23.0
19	25.0	23.0	23.5	27.5	23.0	25.0	24.5	22.0	23.5	23.0	19.0	21.0
20	27.5	22.0	24.5	28.0	24.0	26.0	22.0	21.0	21.5	21.0	17.5	19.0
21	28.5	22.5	25.5	27.0	24.0	25.5	25.0	21.0	22.5	19.5	15.5	17.5
22	25.5	22.5	23.5	27.0	24.0	25.5	23.0	20.5	22.0	19.0	14.0	16.5
23	24.0	21.0	22.5	28.5	24.5	26.0	24.0	20.5	22.5	15.5	14.5	15.0
24	25.5	20.0	23.0	29.0	23.5	26.0	25.5	21.0	23.0	18.0	14.5	16.0
25	26.0	20.5	23.0	26.0	24.0	25.0	26.0	22.5	24.0	16.5	16.0	16.0
26	26.5	21.0	23.5	25.0	23.5	24.5	26.5	21.5	24.0	19.5	15.5	17.0
27	27.0	21.5	24.5	26.0	22.5	24.0	27.5	22.0	24.5	18.0	14.5	16.0
28	28.0	22.5	25.5	26.0	22.0	24.0	27.5	23.0	25.0	18.0	13.0	15.0
29	28.0	24.0	26.0	25.0	21.5	23.0	27.5	23.0	25.5	15.0	12.5	14.0
30	28.0	24.5	26.0	26.0	21.0	23.5	28.0	24.5	26.0	16.0	11.5	13.5
31	---	---	---	27.0	23.0	24.5	27.0	23.5	25.5	---	---	---
MONTH	28.5	18.5	24.0	29.0	17.0	23.0	28.0	19.0	23.5	25.5	11.5	19.5

LACKAWAXEN RIVER BASIN

01428750 WEST BRANCH LACKAWAXEN RIVER NEAR ALDENVILLE, PA

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

DRAINAGE AREA.--40.6 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records good except for periods of estimated discharge, which are poor. Published as station 01427950, 1975-1988. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	56	43	272	85	e67	77	72	27	8.1	7.6	14
2	17	52	42	175	75	e125	80	77	21	8.6	8.1	13
3	16	46	70	132	83	291	75	64	19	10	8.7	14
4	18	42	1460	99	121	750	66	56	24	9.7	8.8	13
5	25	40	470	e80	142	358	62	49	19	11	8.1	9.5
6	20	151	253	e74	169	218	62	161	17	12	8.6	7.4
7	18	77	172	e65	704	e180	62	172	16	11	8.3	6.5
8	17	67	130	e63	402	137	56	101	14	10	8.2	5.9
9	17	56	106	e62	237	111	57	83	13	9.0	23	5.7
10	17	879	93	e58	169	90	53	77	13	8.7	16	5.5
11	20	559	85	e52	118	81	46	67	14	8.8	11	6.2
12	70	277	82	84	92	e71	42	59	19	7.9	10	5.3
13	91	179	74	e70	95	e64	41	50	18	9.6	10	4.7
14	71	131	60	e62	90	62	43	45	14	9.4	10	4.3
15	45	111	76	e58	87	62	59	41	13	8.5	9.9	4.3
16	35	97	63	e96	72	61	60	36	12	7.5	11	4.5
17	32	107	60	244	89	67	47	33	13	7.2	15	4.2
18	348	91	226	123	77	79	44	35	13	7.0	13	4.6
19	363	75	339	89	79	112	42	30	15	6.8	15	15
20	128	68	164	82	392	109	40	27	14	7.0	19	9.5
21	91	65	184	73	298	89	164	25	12	7.7	31	6.8
22	79	60	206	e66	e215	84	280	23	12	7.9	21	5.8
23	504	87	177	e56	e150	112	167	22	12	8.1	18	5.5
24	650	73	505	e52	e125	182	171	21	12	9.0	14	5.9
25	290	63	239	e50	e96	191	184	20	11	8.4	12	10
26	171	58	155	e46	e86	136	119	19	9.2	11	14	8.6
27	118	53	140	e45	e71	127	100	31	8.3	12	18	6.7
28	98	51	e130	e43	e68	121	84	46	8.2	9.3	13	5.7
29	88	49	110	e41	---	99	74	25	8.2	8.3	13	5.3
30	72	45	500	e62	---	89	78	33	8.1	7.6	18	5.0
31	63	---	648	122	---	78	---	47	---	7.6	15	---
TOTAL	3611	3765	7062	2696	4487	4403	2535	1647	429.0	274.7	416.3	222.4
MEAN	116	125	228	87.0	160	142	84.5	53.1	14.3	8.86	13.4	7.41
MAX	650	879	1460	272	704	750	280	172	27	12	31	15
MIN	16	40	42	41	68	61	40	19	8.1	6.8	7.6	4.2
CFSM	2.87	3.09	5.61	2.14	3.95	3.50	2.08	1.31	.35	.22	.33	.18
IN.	3.31	3.45	6.47	2.47	4.11	4.03	2.32	1.51	.39	.25	.38	.20

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR

	63.7	115	94.6	64.6	101	116	107	124	59.3	31.2	24.7	46.4
MEAN	63.7	115	94.6	64.6	101	116	107	124	59.3	31.2	24.7	46.4
MAX	116	199	228	122	192	173	183	258	200	63.0	54.6	156
(WY)	1991	1987	1991	1990	1990	1987	1987	1989	1989	1989	1990	1987
MIN	10.4	74.8	21.2	21.9	33.7	87.0	58.7	39.5	14.3	8.86	12.9	7.41
(WY)	1989	1988	1989	1989	1987	1989	1988	1987	1991	1991	1988	1991

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1987 - 1991
ANNUAL TOTAL	39303	31548.4	
ANNUAL MEAN	108	86.4	78.7
HIGHEST ANNUAL MEAN			91.0
LOWEST ANNUAL MEAN			53.4
HIGHEST DAILY MEAN	1460	Dec 4	1460
LOWEST DAILY MEAN	14	Jul 8	4.2
ANNUAL SEVEN-DAY MINIMUM	15	Jul 5	4.6
INSTANTANEOUS PEAK FLOW			2650
INSTANTANEOUS PEAK STAGE			6.69
ANNUAL RUNOFF (CFSM)	2.65	2.13	7.40
ANNUAL RUNOFF (INCHES)	36.01	28.91	1.94
10 PERCENT EXCEEDS	237	179	26.34
50 PERCENT EXCEEDS	65	56	174
90 PERCENT EXCEEDS	20	8.1	44
			12

LACKAWAXEN RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURE: July 1988 to current year.

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

REMARKS.--Missing record due to downlink problems.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26°C, June 29, July 20, Aug. 30; minimum, 0.0°C, many days during winter period.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	11.0	12.5	9.5	6.5	7.5	3.5	1.0	2.5	.5	.0	.0
2	13.5	10.0	11.5	9.5	7.0	8.5	5.0	3.0	3.5	1.5	.0	.5
3	13.5	8.0	10.5	11.5	8.5	10.0	3.0	.0	1.5	1.5	.5	1.0
4	13.0	10.5	11.5	---	---	---	3.5	1.0	2.5	1.0	.0	.5
5	14.5	10.5	12.5	11.0	9.0	10.0	2.5	1.5	2.0	.0	.0	.0
6	16.5	11.5	13.5	10.5	7.0	9.0	2.5	1.0	1.5	1.5	.0	1.0
7	17.0	12.0	14.5	7.0	6.0	6.5	3.0	2.5	2.5	1.0	.0	.5
8	16.5	13.0	14.5	6.5	4.5	5.5	3.0	1.5	2.0	1.0	.0	.5
9	17.5	13.5	15.5	5.0	3.0	4.0	3.5	2.5	2.5	.5	.0	.5
10	18.5	14.5	16.5	6.0	4.5	5.5	4.0	1.5	2.5	.5	.0	.0
11	17.0	16.0	16.5	5.5	4.5	5.0	1.5	.5	1.0	.5	.5	.5
12	18.0	16.0	17.0	4.5	3.0	3.5	2.5	.5	1.5	.5	.0	.5
13	17.5	16.5	17.0	3.5	2.0	2.5	4.0	1.5	2.5	.5	.0	.5
14	17.0	14.5	16.0	3.5	1.5	2.5	2.0	.0	1.0	.5	.0	.5
15	15.0	12.0	13.5	5.5	3.0	4.0	.0	.0	.0	.0	.0	.0
16	13.0	9.5	11.5	8.0	5.0	6.5	2.0	.0	1.0	.0	.0	.0
17	13.5	8.5	11.0	7.5	4.5	6.5	2.5	1.0	1.5	.0	.0	.0
18	14.5	11.5	13.0	4.0	2.0	3.0	2.0	1.5	1.5	.5	.0	.5
19	12.5	9.0	10.5	2.5	1.0	2.0	3.0	2.0	2.0	1.5	.0	.5
20	10.5	8.0	9.0	3.5	1.5	3.0	2.0	.5	1.5	2.0	1.0	1.5
21	10.5	7.0	9.0	5.0	3.0	4.0	3.0	2.0	2.5	1.0	.0	.5
22	11.5	8.0	10.0	5.5	3.0	4.5	6.0	3.0	4.5	.0	.0	.0
23	12.5	11.5	12.0	6.0	5.0	5.5	7.5	6.0	6.5	.5	.0	.0
24	12.5	10.0	11.5	5.0	3.0	4.5	6.0	1.5	4.0	.0	.0	.0
25	10.5	9.0	10.0	5.5	3.0	4.0	1.0	.0	.5	.0	.0	.0
26	10.0	7.0	8.5	5.0	3.5	4.0	.5	.0	.0	.0	.0	.0
27	7.5	5.5	6.5	5.5	3.0	4.5	.0	.0	.0	.0	.0	.0
28	8.0	6.0	7.0	9.0	4.5	6.5	.0	.0	.0	.0	.0	.0
29	6.5	5.0	6.0	9.0	4.5	6.5	1.5	.0	.5	.0	.0	.0
30	7.5	4.0	5.5	4.0	2.0	3.5	2.0	1.0	1.5	.0	.0	.0
31	9.0	6.5	7.5	---	---	---	2.0	.0	1.0	.0	.0	.0
MONTH	18.5	4.0	11.7	11.5	1.0	5.3	7.5	.0	1.9	2.0	.0	.3

LACKAWAXEN RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	.5	.0	.0	3.5	.0	1.5	3.5	1.5	2.5	17.0	10.0	13.5
2	.5	.0	.5	4.0	2.0	3.0	5.5	2.0	3.5	12.5	9.5	11.5
3	.0	.0	.0	5.5	2.5	4.0	7.5	2.5	4.5	11.5	8.5	9.5
4	.0	.0	.0	4.5	2.5	3.0	9.5	2.5	5.5	14.5	7.0	10.5
5	1.0	.0	.5	3.5	2.0	2.5	9.0	5.5	7.0	15.5	7.5	11.5
6	1.0	.5	1.0	4.5	1.0	3.0	12.5	6.5	9.5	12.5	11.0	11.5
7	1.0	.5	.5	4.5	1.5	3.5	15.0	8.5	11.5	13.0	10.0	11.0
8	2.5	1.0	1.5	2.5	.0	1.0	15.5	10.0	12.5	14.5	9.0	11.5
9	3.5	1.0	2.0	2.5	.0	1.0	16.0	12.0	14.0	11.5	9.5	10.5
10	2.5	1.5	2.0	3.0	.0	1.0	15.0	9.5	12.5	15.5	10.5	12.5
11	1.0	.0	.5	.5	.0	.0	11.5	6.5	8.5	17.0	10.0	13.5
12	.0	.0	.0	1.5	.0	.5	10.5	4.5	7.0	18.0	12.0	15.0
13	.5	.0	.0	2.5	.0	1.0	6.5	5.0	5.5	20.0	13.5	16.5
14	.0	.0	.0	1.5	1.0	1.5	11.0	4.5	7.5	19.0	14.5	16.5
15	.5	.0	.0	2.5	.5	1.5	7.0	6.0	6.5	19.5	14.0	16.5
16	.0	.0	.0	5.0	.0	2.0	12.5	6.0	9.0	20.0	13.0	16.5
17	.0	.0	.0	6.0	.5	3.0	10.0	8.0	9.0	20.5	14.5	17.5
18	.0	.0	.0	3.0	2.0	2.0	9.0	7.5	8.0	18.0	13.0	15.5
19	.0	.0	.0	5.5	2.0	3.5	12.5	6.5	9.0	17.5	11.0	14.0
20	.5	.0	.5	6.0	2.5	4.0	8.5	7.0	7.5	18.0	10.5	14.0
21	2.0	.0	1.0	4.0	1.5	3.0	7.0	5.5	6.5	19.0	10.5	14.5
22	3.0	1.0	1.5	4.0	2.0	3.0	6.5	4.5	5.5	20.5	13.0	16.5
23	.5	.0	.0	3.5	2.0	2.5	11.0	5.0	8.0	21.5	14.0	17.5
24	.5	.0	.0	3.5	2.0	2.5	9.0	7.0	8.0	20.5	15.0	18.0
25	2.0	.5	1.0	3.5	2.5	3.0	12.5	7.0	9.5	22.0	16.5	19.5
26	2.0	.5	1.0	6.5	2.5	4.5	13.0	7.5	10.5	19.5	16.5	18.0
27	1.0	.0	.5	5.5	4.5	5.0	15.0	10.0	12.5	22.0	17.0	19.5
28	1.0	.0	.5	10.0	5.0	7.0	14.5	10.5	12.5	22.5	18.0	19.5
29	---	---	---	7.5	5.0	6.0	11.5	10.0	10.5	22.5	16.0	19.0
30	---	---	---	5.5	2.5	4.0	14.0	10.0	11.5	21.0	17.5	19.0
31	---	---	---	6.0	1.0	3.5	---	---	---	21.0	18.0	19.0
MONTH	3.5	.0	.5	10.0	.0	2.8	16.0	1.5	8.5	22.5	7.0	15.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	22.0	17.5	19.5	23.0	16.0	19.0	24.0	16.0	20.0	20.5	15.5	18.0
2	21.0	15.0	18.0	18.0	16.0	17.0	24.5	17.5	21.0	19.5	12.5	16.0
3	21.0	14.0	17.5	17.5	16.5	17.0	20.0	18.5	19.0	20.0	13.5	17.0
4	18.5	15.0	17.0	19.0	16.5	17.5	22.5	18.0	19.5	18.5	16.5	17.5
5	18.0	13.5	15.5	17.0	16.5	16.5	21.5	17.0	19.0	21.0	16.0	18.0
6	18.0	12.0	15.0	23.0	16.0	19.5	21.5	15.0	18.0	20.0	14.0	17.0
7	19.0	12.0	15.5	22.0	18.0	20.0	22.5	14.5	18.0	20.0	13.5	17.0
8	20.5	12.5	16.5	24.0	18.5	21.0	23.0	15.5	19.0	20.5	14.0	17.5
9	21.5	14.0	17.5	23.5	17.0	20.0	18.5	17.5	18.0	20.5	14.5	18.0
10	22.0	14.0	18.0	22.0	15.0	18.5	21.0	17.0	18.5	18.5	17.0	17.5
11	21.0	16.0	18.0	22.0	15.0	18.5	19.0	16.5	17.5	20.5	15.5	18.0
12	21.0	15.5	18.0	22.0	14.5	18.5	20.5	15.5	18.0	19.0	13.5	16.0
13	19.5	13.5	16.0	18.5	17.5	18.0	22.0	16.0	19.0	18.5	12.0	15.5
14	20.5	12.0	16.0	22.5	17.0	19.0	22.5	16.0	19.5	21.0	15.0	17.5
15	21.5	14.0	17.5	22.5	15.0	18.5	20.0	18.0	19.0	18.0	17.0	17.5
16	23.0	17.0	20.0	24.0	15.0	19.5	---	---	---	23.5	17.5	20.5
17	22.0	18.0	20.0	24.5	16.0	20.0	---	---	---	23.5	19.0	21.0
18	19.5	18.0	19.0	24.5	17.5	21.0	22.5	19.5	21.0	21.5	16.0	19.0
19	21.0	17.0	18.5	25.5	18.5	21.5	21.0	19.0	20.0	19.0	14.0	16.5
20	24.0	17.0	20.0	26.0	19.0	22.5	19.0	18.5	19.0	15.0	12.0	13.5
21	24.0	16.0	20.0	24.0	19.5	22.0	20.5	18.5	19.5	14.0	9.5	11.5
22	19.0	16.5	17.5	23.5	19.5	21.5	22.5	17.0	19.5	14.5	8.0	11.5
23	20.5	16.0	18.0	25.5	20.5	22.5	21.5	18.5	20.0	12.5	10.0	11.5
24	21.5	14.0	17.5	24.5	18.5	21.0	22.5	18.0	20.0	15.0	10.0	13.0
25	21.5	14.0	18.0	22.0	18.0	20.0	20.5	18.0	19.0	13.5	12.5	13.0
26	23.0	16.0	19.5	20.0	18.0	19.0	22.5	16.5	19.5	15.0	11.5	13.0
27	24.0	16.5	20.0	22.0	16.5	19.0	24.0	19.0	21.5	12.5	9.5	11.0
28	25.0	17.0	21.0	21.5	15.5	18.5	25.0	19.0	21.5	12.0	7.5	9.5
29	26.0	19.5	22.5	20.5	16.5	18.5	24.5	18.5	21.5	11.5	6.5	9.0
30	23.5	19.0	21.0	21.5	15.0	18.5	26.0	20.5	23.0	11.5	6.0	9.0
31	---	---	---	23.5	18.0	20.0	25.0	19.5	22.5	---	---	---
MONTH	26.0	12.0	18.3	26.0	14.5	19.5	26.0	14.5	19.7	23.5	6.0	15.3

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 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good. Flow regulated since 1960 by Prompton Reservoir (station 01428900) 500 ft upstream. Satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	91	63	491	88	105	115	97	37	13	11	14
2	26	82	60	332	82	135	114	98	36	12	10	14
3	26	75	60	252	78	224	111	95	35	13	10	13
4	25	68	1010	201	84	572	103	87	35	12	10	13
5	26	63	873	159	110	536	98	79	34	12	10	14
6	26	100	468	144	156	349	95	87	32	14	9.5	13
7	26	122	318	127	461	278	93	166	31	14	9.0	12
8	26	103	241	98	557	227	90	153	30	14	8.8	11
9	25	88	193	90	373	182	87	126	28	13	10	10
10	24	459	165	87	272	153	84	109	28	13	14	9.2
11	24	936	141	81	209	126	78	97	26	12	14	8.7
12	27	534	127	77	162	110	69	87	25	11	14	8.1
13	33	354	118	79	135	102	64	78	25	11	13	7.5
14	44	260	103	73	131	100	63	70	24	11	13	7.1
15	52	208	86	71	133	99	65	63	24	11	13	6.9
16	50	178	86	77	114	95	76	57	23	11	13	6.6
17	44	160	86	159	102	94	74	52	22	11	13	6.5
18	61	154	128	198	99	103	69	50	21	10	13	6.3
19	388	132	309	164	98	123	65	46	21	10	13	10
20	263	114	278	138	191	142	61	43	21	11	13	11
21	177	101	228	127	345	135	76	41	20	10	14	11
22	134	91	250	99	300	124	204	39	19	10	16	10
23	190	100	238	84	272	132	213	37	19	10	16	9.2
24	702	110	385	82	203	161	179	37	18	11	16	9.0
25	482	99	389	78	173	224	203	36	17	11	16	9.5
26	317	89	277	67	149	205	176	35	16	11	15	10
27	227	81	204	66	130	182	148	34	15	12	15	11
28	176	75	170	67	112	172	126	35	15	12	15	10
29	147	71	160	66	---	153	109	36	14	12	15	9.3
30	124	66	260	65	---	138	101	36	14	12	14	8.7
31	105	---	722	83	---	124	---	36	---	11	14	---
TOTAL	4024	5164	8196	3982	5319	5605	3209	2142	725	361	400.3	299.6
MEAN	130	172	264	128	190	181	107	69.1	24.2	11.6	12.9	9.99
MAX	702	936	1010	491	557	572	213	166	37	14	16	14
MIN	24	63	60	65	78	94	61	34	14	10	8.8	6.3
MEAN*	137	188	278	97.7	192	181	102	57.9	28.2	13.3	13.8	8.49
CFSM*	2.29	3.15	4.66	1.64	3.22	3.03	1.71	.97	.47	.22	.23	.14
IN.*	2.64	3.52	5.37	1.89	3.35	3.49	1.91	1.12	.52	.25	.27	.16

LACKAWAXEN RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.6	95.4	115	92.9	128	215	223	136	73.5	41.5	29.8	43.8
MAX	307	362	272	312	369	620	413	329	260	133	71.5	221
(WY)	1978	1973	1972	1979	1981	1977	1983	1989	1973	1984	1986	1987
MIN	7.15	7.65	31.8	19.1	19.0	60.4	86.5	45.8	17.5	10.2	9.43	6.67
(WY)	1965	1965	1965	1981	1980	1981	1988	1965	1962	1966	1962	1964

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1961 - 1991

ANNUAL TOTAL	49532						39426.9					
ANNUAL MEAN	136	\$139					108	\$108		104		
HIGHEST ANNUAL MEAN										176		1977
LOWEST ANNUAL MEAN										49.7		1965
HIGHEST DAILY MEAN	1010			Dec 4			1010	Dec 4		2340		Jun 30 1973
LOWEST DAILY MEAN	24			Oct 10			6.3	Sep 18		1.8		Oct 22 1966
ANNUAL SEVEN DAY MINIMUM	25			Oct 5			7.0	Sep 12		2.0		Oct 22 1966
INSTANTANEOUS PEAK FLOW							1520	Dec 4		3610		Mar 14 1977
INSTANTANEOUS PEAK STAGE							4.56	Dec 4		7.00		Mar 14 1977
INSTANTANEOUS LOW FLOW							5.7	Sep 18		1.8		Oct 22 1966
ANNUAL RUNOFF (CFSM)	2.27	\$ 2.32					1.81	\$ 1.81		1.75		
ANNUAL RUNOFF (INSCHES)	30.86	\$31.64					24.57	\$24.49		23.78		
0 PERCENT EXCEEDS	310						245			242		
50 PERCENT EXCEEDS	89						76			55		
90 PERCENT EXCEEDS	31						11			15		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1960, BY WATER YEAR (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 TOTAL												
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						
INSTANTANEOUS PEAK FLOW	a5860				Aug 18	1955						
INSTANTANEOUS PEAK STAGE	9.24				Aug 18	1955						
INSTANTANEOUS LOW FLOW	b.00				Jul 26	1960						
ANNUAL RUNOFF (CFSM)	1.95											
ANNUAL RUNOFF (INSCHES)	26.56											
10 PERCENT EXCEEDS	257											
50 PERCENT EXCEEDS	62											
90 PERCENT EXCEEDS	15											

† Adjusted for change in contents of Prompton Reservoir.

a From rating curve extended above 3,600 ft³/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 TEMPERATURE: October 1987 to current year.

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

REMARKS.--Missing record due to probe malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.0°C, June 30; minimum, 1.5°C, Jan. 17-21, Feb. 7-11, 18-23.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.0	15.0	15.5	9.0	8.5	8.5	4.0	4.0	4.0	2.0	2.0	2.0
2	16.0	15.0	15.5	9.0	8.0	8.5	4.5	4.0	4.0	2.5	2.0	2.5
3	15.5	15.0	15.5	9.5	8.0	9.0	4.0	4.0	4.0	2.0	2.0	2.0
4	15.0	15.0	15.0	---	---	---	4.0	3.5	4.0	2.5	2.0	2.0
5	15.5	14.5	15.0	9.5	8.0	8.5	3.5	2.5	3.0	2.5	2.0	2.5
6	15.5	15.0	15.0	9.5	8.0	9.0	2.5	2.5	2.5	2.5	2.0	2.0
7	15.5	15.0	15.0	9.0	8.5	9.0	2.5	2.5	2.5	2.0	2.0	2.0
8	15.0	15.0	15.0	9.0	8.0	8.5	2.5	2.0	2.5	2.5	2.5	2.5
9	15.5	15.0	15.0	8.0	8.0	8.0	2.5	2.5	2.5	3.0	2.5	2.5
10	15.5	15.0	15.0	8.0	7.5	8.0	2.5	2.0	2.5	2.5	2.0	2.5
11	15.5	15.0	15.0	7.5	6.5	7.0	2.0	2.0	2.0	2.5	2.0	2.5
12	16.5	15.5	16.0	6.5	5.0	5.5	---	---	---	3.0	2.5	2.5
13	16.5	15.5	16.0	5.0	4.0	4.5	---	---	---	2.5	2.0	2.5
14	17.5	16.0	16.5	4.0	3.5	4.0	---	---	---	3.0	2.5	2.5
15	18.5	16.5	17.5	4.0	3.5	4.0	---	---	---	2.5	2.5	2.5
16	18.0	16.5	17.0	4.5	4.0	4.5	---	---	---	2.5	2.0	2.0
17	17.0	16.0	16.5	4.5	4.0	4.5	---	---	---	2.0	1.5	1.5
18	16.5	15.5	16.0	4.0	3.5	4.0	---	---	---	1.5	1.5	1.5
19	16.0	15.0	15.5	3.5	3.5	3.5	2.0	2.0	2.0	1.5	1.5	1.5
20	15.5	14.0	15.0	3.5	3.0	3.5	2.0	2.0	2.0	1.5	1.5	1.5
21	14.0	11.5	13.0	3.5	3.5	3.5	2.0	2.0	2.0	2.0	1.5	2.0
22	13.0	12.5	12.5	4.0	3.5	3.5	2.5	2.0	2.5	2.5	2.0	2.5
23	12.5	12.0	12.5	4.0	4.0	4.0	3.0	2.5	2.5	3.0	2.5	2.5
24	13.0	12.5	12.5	4.0	2.0	3.5	3.0	3.0	3.0	3.0	2.5	3.0
25	13.0	12.0	12.5	4.0	3.5	4.0	3.0	2.5	2.5	3.0	2.5	2.5
26	12.0	11.0	11.5	4.0	4.0	4.0	3.0	3.0	3.0	3.0	2.5	2.5
27	11.0	10.5	11.0	4.0	4.0	4.0	3.5	3.0	3.0	2.5	2.5	2.5
28	10.5	10.0	10.5	4.5	4.0	4.0	3.5	2.5	3.0	2.5	2.5	2.5
29	10.0	9.0	9.5	4.5	4.5	4.5	3.0	2.5	2.5	2.5	2.0	2.5
30	9.5	8.5	9.0	4.5	4.0	4.5	2.5	2.5	2.5	2.5	2.0	2.5
31	10.0	8.5	9.0	---	---	---	2.5	2.0	2.0	2.5	2.0	2.0
MONTH	18.5	8.5	14.1	9.5	2.0	5.6	4.5	2.0	2.7	3.0	1.5	2.3

LACKAWAXEN RIVER BASIN

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

WATER TEMPERATURE, DEGREE CELSIUS, WATER OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.5	2.5	2.5	2.5	2.0	2.0	5.0	5.0	5.0	13.5	10.5	12.0
2	2.5	2.5	2.5	2.5	2.0	2.5	5.5	5.0	5.5	13.5	12.5	13.0
3	2.5	2.0	2.5	2.5	2.5	2.5	6.5	5.0	6.0	13.0	13.0	13.0
4	2.5	2.0	2.0	3.0	2.5	2.5	6.5	6.0	6.0	13.5	12.5	13.0
5	2.5	2.0	2.0	3.5	3.0	3.0	6.5	6.0	6.0	13.5	12.5	13.0
6	2.0	2.0	2.0	3.5	3.0	3.5	9.0	6.5	8.0	13.5	12.5	13.0
7	2.0	1.5	2.0	3.5	3.0	3.0	9.5	8.0	8.5	14.0	13.0	13.5
8	1.5	1.5	1.5	3.5	3.0	3.0	10.0	8.0	9.0	14.5	13.0	14.0
9	1.5	1.5	1.5	4.0	3.0	3.5	11.5	10.0	10.5	14.0	13.5	14.0
10	1.5	1.5	1.5	4.0	3.5	3.5	11.5	10.0	11.0	15.0	13.5	14.0
11	2.0	1.5	2.0	3.5	3.0	3.5	14.5	12.0	13.0	16.5	14.0	15.0
12	2.5	2.0	2.0	4.0	3.0	3.5	12.0	11.0	11.5	16.5	15.0	15.5
13	2.5	2.5	2.5	4.0	3.5	4.0	11.0	10.5	11.0	17.0	15.0	16.0
14	2.5	2.0	2.0	4.0	3.5	3.5	10.5	10.0	10.5	17.5	15.5	16.5
15	2.0	2.0	2.0	3.0	2.5	3.0	10.0	10.0	10.0	17.0	16.0	16.5
16	2.0	2.0	2.0	3.5	3.0	3.0	11.5	10.0	10.5	16.5	15.0	16.0
17	2.0	2.0	2.0	4.0	3.0	3.5	11.0	10.5	10.5	16.0	14.5	15.5
18	2.0	1.5	2.0	3.5	3.5	3.5	10.5	10.0	10.0	17.0	14.5	15.5
19	2.0	1.5	1.5	4.0	3.5	3.5	10.0	9.5	9.5	16.0	15.0	15.5
20	2.0	1.5	1.5	4.0	3.5	3.5	10.0	9.5	9.5	16.5	15.0	15.5
21	2.0	1.5	1.5	3.5	3.5	3.5	10.0	9.0	9.5	17.0	15.0	15.5
22	1.5	1.5	1.5	4.0	3.5	3.5	9.5	9.0	9.5	16.5	15.0	16.0
23	2.0	1.5	1.5	3.5	3.5	3.5	10.0	9.0	9.5	17.0	15.5	16.0
24	2.0	2.0	2.0	3.5	3.5	3.5	9.5	9.0	9.5	17.0	16.0	16.5
25	2.0	2.0	2.0	3.5	3.5	3.5	11.5	9.5	10.5	17.0	16.5	16.5
26	2.0	2.0	2.0	4.0	3.0	3.5	10.5	9.5	10.0	17.5	16.5	17.0
27	2.0	2.0	2.0	4.0	4.0	4.0	13.5	9.5	11.5	18.0	17.0	17.5
28	2.5	2.0	2.0	5.5	4.0	4.5	12.0	9.0	11.0	19.0	15.5	17.5
29	---	---	---	5.5	5.0	5.5	11.0	9.5	10.5	19.0	17.5	18.5
30	---	---	---	5.5	5.0	5.0	12.5	11.0	11.5	19.0	17.5	18.5
31	---	---	---	5.5	5.0	5.0	---	---	---	19.5	17.5	19.0
MONTH	2.5	1.5	1.9	5.5	2.0	3.5	14.5	5.0	9.5	19.4	10.3	15.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	22.5	17.5	19.5	23.5	20.0	21.5	23.5	21.0	22.0	23.0	21.0	22.0
2	20.5	19.5	20.0	21.5	20.0	21.0	23.0	21.0	22.5	22.5	21.0	21.5
3	20.5	19.5	20.0	21.5	21.5	21.5	22.5	21.5	22.0	22.0	20.5	21.0
4	24.0	19.0	21.5	21.5	21.0	21.5	23.0	22.0	22.0	21.5	20.5	21.0
5	23.0	20.0	21.5	21.5	21.0	21.0	24.5	21.0	23.0	22.0	20.5	21.0
6	22.0	20.0	21.0	22.5	20.5	21.5	24.0	22.0	23.0	21.5	20.0	20.5
7	21.0	19.5	20.5	22.0	20.5	21.0	24.0	22.0	23.0	21.5	20.5	20.5
8	21.5	19.0	20.5	22.0	20.0	21.0	24.0	21.5	22.5	21.5	20.0	20.5
9	20.5	19.0	20.0	23.0	20.5	21.5	22.0	21.0	21.5	21.5	20.0	20.5
10	20.5	19.5	20.0	22.5	20.5	21.0	23.0	22.0	22.5	21.0	20.0	20.5
11	21.0	19.5	20.0	22.0	20.5	21.5	22.5	21.5	22.0	22.0	20.0	21.0
12	21.0	19.0	20.0	22.5	20.0	21.5	22.5	21.0	21.5	22.0	20.5	21.0
13	23.0	20.5	22.0	21.5	21.0	21.5	22.5	21.0	21.5	22.0	20.0	20.5
14	22.0	20.5	21.5	24.0	21.5	22.5	22.0	21.0	21.5	22.0	20.0	20.5
15	21.5	20.5	21.0	23.0	21.0	22.5	21.5	21.0	21.0	20.0	20.0	20.0
16	21.0	20.5	20.5	23.5	21.0	22.0	22.5	21.0	21.5	22.0	20.0	20.5
17	21.5	20.0	20.5	23.5	21.0	22.0	---	---	---	22.0	19.5	20.5
18	21.0	20.5	20.5	23.0	21.5	22.0	22.0	21.0	21.5	21.5	19.5	20.0
19	21.0	20.5	20.5	23.0	21.5	22.0	23.0	21.0	21.5	21.5	20.0	20.5
20	21.5	20.0	21.0	23.5	21.5	22.0	21.5	20.5	21.0	21.0	19.5	20.0
21	21.5	20.0	21.0	23.0	21.5	22.0	22.0	21.0	21.5	20.0	19.0	19.5
22	21.0	20.5	20.5	23.0	21.5	22.0	22.0	20.5	21.0	20.0	18.5	19.0
23	21.0	20.0	20.5	23.0	21.5	22.0	21.5	21.0	21.0	18.0	17.5	18.0
24	21.5	20.0	20.5	23.5	21.0	22.0	21.5	20.5	21.0	18.5	17.5	18.0
25	21.5	20.5	20.5	22.5	21.5	22.0	21.5	20.5	21.0	17.5	17.0	17.5
26	21.5	20.0	20.5	22.0	21.0	22.0	21.5	21.0	21.0	18.0	17.0	17.0
27	21.5	20.5	20.5	23.0	21.0	22.0	22.0	20.5	21.0	17.5	16.5	17.0
28	22.0	20.0	20.5	22.5	21.0	21.5	22.0	20.5	21.0	17.5	16.0	16.5
29	22.5	20.0	21.0	22.5	21.0	21.5	21.5	21.0	21.0	16.5	16.0	16.0
30	25.0	20.0	22.0	22.5	21.5	22.0	22.0	21.0	21.5	16.5	15.0	15.5
31	---	---	---	24.0	21.0	22.5	23.5	21.0	22.0	---	---	---
MONTH	25.0	17.5	20.6	24.0	20.0	21.7	24.5	20.5	21.7	23.0	15.0	19.6

LACKAWAXEN RIVER BASIN

01429500 DYBERRY CREEK NEAR HONESDALE, PA

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

DRAINAGE AREA.--64.6 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	75	65	362	92	105	116	113	45	8.3	5.6	3.6
2	24	71	64	228	79	168	125	120	33	8.1	4.9	3.0
3	21	67	64	189	79	248	115	102	27	9.5	4.4	2.8
4	22	62	852	157	101	740	104	90	33	11	4.4	3.3
5	26	59	1000	129	129	482	97	80	28	11	4.4	3.5
6	25	125	336	130	177	267	95	124	23	12	4.0	3.3
7	22	100	229	117	616	249	101	214	22	11	3.8	3.4
8	21	85	187	87	556	204	90	135	20	9.6	3.6	3.6
9	24	75	158	●75	296	163	85	107	19	8.6	5.7	3.5
10	20	593	139	●70	226	142	78	97	17	7.7	16	3.5
11	20	1280	120	●68	179	119	69	88	16	6.9	10	3.2
12	58	647	108	91	128	107	61	79	22	6.3	7.8	2.8
13	107	258	105	94	127	100	58	72	21	6.9	6.7	2.8
14	129	191	96	84	136	100	63	65	18	7.0	5.4	2.4
15	70	165	84	84	150	105	76	60	16	6.6	6.1	2.4
16	51	147	94	109	108	102	97	54	15	6.2	6.4	2.6
17	42	150	96	216	108	109	78	50	14	5.6	6.1	2.5
18	74	142	204	175	103	139	71	51	14	4.9	5.2	2.8
19	405	121	351	130	109	183	64	45	15	5.4	6.4	15
20	137	108	201	119	257	187	61	45	14	5.1	8.2	12
21	92	102	191	117	317	145	162	38	13	5.2	13	8.3
22	77	94	244	84	243	131	486	35	13	5.5	18	6.8
23	189	118	204	●73	●200	171	236	32	13	6.3	11	5.9
24	727	111	442	●68	160	253	187	29	12	7.5	8.2	6.5
25	294	98	303	●63	147	290	263	28	11	7.3	6.7	13
26	170	88	190	●60	132	214	171	26	10	7.8	6.0	13
27	129	81	143	●58	120	180	143	50	9.7	11	5.0	11
28	111	78	133	●56	105	171	127	48	9.4	9.6	4.4	8.4
29	100	75	151	●56	---	143	110	36	8.8	7.7	3.8	6.7
30	87	71	303	73	---	129	120	32	8.4	6.4	3.7	5.9
31	81	---	843	114	---	121	---	58	---	6.1	3.5	---
TOTAL	3378	5437	7700	3536	5180	5967	3709	2203	540.3	238.1	208.4	167.5
MEAN	109	181	248	114	185	192	124	71.1	18.0	7.68	6.72	5.58
MAX	727	1280	1000	362	616	740	486	214	45	12	18	15
MIN	20	59	64	56	79	100	58	26	8.4	4.9	3.5	2.4
MEAN†	109	181	248	114	185	192	124	71.1	18.0	7.68	6.72	5.58
CFM†	1.69	2.81	3.85	1.77	2.86	2.98	1.91	1.10	.28	.12	.10	.09
IN.†	1.95	3.13	4.43	2.04	2.98	3.44	2.14	1.27	.31	.14	.12	.10

† Adjusted for change in contents at General Jadwin Reservoir.

● Estimated.

LACKAWAXEN RIVER BASIN

01429500 DYBERRY CREEK NEAR HONESDALE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.5	109	122	103	149	235	234	144	77.0	44.2	29.7	44.2
MAX	292	413	326	362	466	552	525	397	291	170	114	281
(WY)	1977	1973	1974	1979	1981	1977	1970	1989	1972	1973	1976	1987
MIN	4.17	5.48	28.2	20.8	20.2	73.0	83.6	43.3	12.0	3.23	5.32	2.26
(WY)	1965	1965	1965	1981	1980	1981	1985	1965	1962	1962	1966	1980

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR				FOR 1991 WATER YEAR				WATER YEARS 1960 - 1991			
ANNUAL TOTAL	50571				38264.3							
ANNUAL MEAN	139				105				112			
HIGHEST ANNUAL MEAN					139				186			
LOWEST ANNUAL MEAN									51.4			
HIGHEST DAILY MEAN	1280				128				2190			
LOWEST DAILY MEAN	15				2.4				1.2			
ANNUAL SEVEN-DAY MINIMUM	18				2.6				1.8			
INSTANTANEOUS PEAK FLOW					1360				2200			
INSTANTANEOUS PEAK STAGE					5.85				6.89			
INSTANTANEOUS LOW FLOW					2.1				1.74			
ANNUAL RUNOFF (CFSM)	2.14				1.62				1.62			
ANNUAL RUNOFF (INCHES)	29.12				22.03				22.03			
10 PERCENT EXCEEDS	298				220				250			
50 PERCENT EXCEEDS	92				75				54			
90 PERCENT EXCEEDS	27				5.5				10			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1959, BY WATER YEAR (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 TOTAL				
ANNUAL MEAN	114			
HIGHEST ANNUAL MEAN	170			
LOWEST ANNUAL MEAN	77.2			
HIGHEST DAILY MEAN	5880			
LOWEST DAILY MEAN	2.0			
ANNUAL SEVEN-DAY MINIMUM	2.3			
INSTANTANEOUS PEAK FLOW	b15500			
INSTANTANEOUS PEAK STAGE	c14.60			
INSTANTANEOUS LOW FLOW				
ANNUAL RUNOFF (CFSM)	1.76			
ANNUAL RUNOFF (INCHES)	23.91			
10 PERCENT EXCEEDS	252			
50 PERCENT EXCEEDS	54			
90 PERCENT EXCEEDS	9.4			

† Adjusted for change in contents at General Jadwin Reservoir.

a Result of shutoff at General Jadwin Reservoir.

b From rating curve extended above 2,500 ft³/s on basis of slope-area measurement at gage height 13.70 ft, for site and datum then in use.

c Site and datum then in use.

LACKAWAXEN RIVER BASIN

01430000 LACKAWAXEN RIVER NEAR HOMESDALE, 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, 1.2 miles downstream from Dyberry Creek.

DRAINAGE AREA.--164 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	202	173	1170	283	267	306	307	171	49	20	17
2	61	186	170	731	219	362	312	319	149	47	19	18
3	58	172	172	557	191	595	299	289	138	47	17	18
4	57	158	2330	450	235	1660	270	258	143	45	19	19
5	61	146	2470	356	302	1380	253	234	137	47	17	18
6	60	266	1060	337	412	828	248	295	128	48	16	18
7	57	264	690	301	1360	687	247	568	123	49	17	16
8	55	221	529	256	1500	556	232	440	117	43	17	14
9	54	192	438	230	905	441	219	352	116	39	24	15
10	53	1620	385	228	659	377	205	313	111	36	39	14
11	53	3120	334	197	504	310	188	286	105	33	29	14
12	91	1640	307	232	378	272	173	260	117	32	24	14
13	173	820	290	219	327	260	163	238	117	30	22	11
14	235	578	266	243	335	255	169	221	109	30	21	11
15	157	469	234	195	360	266	188	203	103	31	30	10
16	121	407	245	227	304	260	246	184	102	29	21	10
17	101	387	254	462	292	278	224	171	98	28	19	9.6
18	113	371	486	478	251	343	208	169	97	26	20	11
19	1020	317	937	371	254	412	190	162	100	28	27	25
20	567	280	676	322	607	438	181	152	95	29	27	24
21	337	258	565	314	958	368	341	145	88	28	30	20
22	247	238	665	300	758	332	1070	135	81	28	37	19
23	455	273	599	●273	●600	425	750	133	81	35	32	18
24	2000	290	1100	●207	475	611	556	126	77	30	27	17
25	1170	262	963	●191	420	723	703	125	72	26	24	28
26	684	241	620	●178	364	573	535	122	69	28	23	27
27	468	219	454	●169	323	492	440	144	65	31	22	24
28	362	210	395	●161	279	465	376	142	59	29	22	21
29	301	203	399	●155	---	406	327	133	58	27	20	19
30	252	189	716	168	---	362	314	135	52	23	20	18
31	223	---	2130	250	---	330	---	186	---	23	20	---
TOTAL	9709	14199	21052	9928	13855	15334	9933	6947	3078	1054	722	517.6
MEAN	313	473	679	320	495	495	331	224	103	34.0	23.3	17.3
MAX	2000	3120	2470	1170	1500	1660	1070	568	171	49	39	28
MIN	53	146	170	155	191	255	163	122	52	23	16	9.6
MEAN†	320	489	692	290	497	495	326	213	107	35.7	24.2	15.8
CFSM†	1.95	2.98	4.22	1.77	3.03	3.02	1.99	1.30	.65	.22	.15	.10
IN.†	2.25	3.32	4.87	2.04	3.16	3.48	2.22	1.50	.73	.25	.17	.11

† Adjusted for change in contents of General Edgar Jadwin Reservoir and Prompton Reservoir
● Estimated.

LACKAWAXEN RIVER BASIN

01430000 LACKAWAXEN RIVER NEAR HONESDALE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	144	285	262	220	287	566	500	356	184	89.7	78.1	123
MAX	344	650	679	416	716	1133	1050	985	544	220	240	656
(WY)	1990	1987	1991	1964	1990	1986	1960	1989	1989	1989	1990	1987
MIN	14.5	16.5	80.5	73.5	106	261	240	124	43.9	20.3	17.2	12.3
(WY)	1965	1965	1965	1961	1963	1965	1988	1965	1962	1965	1964	1964

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1960-1969
1986-1991

ANNUAL TOTAL	133301						106328.6					
ANNUAL MEAN	365				‡368		291	‡292		257		
HIGHEST ANNUAL MEAN										400		1960
LOWEST ANNUAL MEAN										130		1965
HIGHEST DAILY MEAN				3120			3120		Nov 11	6280		Mar 15 1986
LOWEST DAILY MEAN				53			9.6		Sep 17	8.8		Sep 25 1964
ANNUAL SEVEN-DAY MINIMUM				56			11		Sep 12	9.7		Sep 21 1964
INSTANTANEOUS PEAK FLOW							3820		Nov 10	6750		Mar 15 1986
INSTANTANEOUS PEAK STAGE							5.97		Nov 10	8.13		Mar 15 1986
INSTANTANEOUS LOW FLOW							8.8		Sep 18	6.2		Sep 25 1964
ANNUAL RUNOFF (CFSM)				2.23		‡ 2.24	1.78		‡ 1.78	1.57		
ANNUAL RUNOFF (INCHES)				30.24		‡30.47	24.12		‡24.10	21.33		
10 PERCENT EXCEEDS				790			615			570		
50 PERCENT EXCEEDS				239			203			140		
90 PERCENT EXCEEDS				78			20			29		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1959, BY WATER YEAR (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 1960-1969

ANNUAL TOTAL												
ANNUAL MEAN				302								
HIGHEST ANNUAL MEAN				428								1952
LOWEST ANNUAL MEAN				209								1952
HIGHEST DAILY MEAN				8920								Aug 19 1955
LOWEST DAILY MEAN				12								Aug 29 1953
ANNUAL SEVEN-DAY MINIMUM				12								Aug 29 1953
INSTANTANEOUS PEAK FLOW				‡18600								Aug 18 1955
INSTANTANEOUS PEAK STAGE				15.52								Aug 18 1955
INSTANTANEOUS LOW FLOW												
ANNUAL RUNOFF (CFSM)				1.84								
ANNUAL RUNOFF (INCHES)				25.06								
10 PERCENT EXCEEDS				695								
50 PERCENT EXCEEDS				152								
90 PERCENT EXCEEDS				32								

‡ Adjusted for change in contents of General Edgar Jadwin Reservoir and Prompton Reservoir.

‡ From rating curve extended above 11,000 ft³/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 Church Street Bridge in Hawley, 700 ft upstream from Wallenpaupack Creek, and 3,000 ft downstream from Middle Creek.

DRAINAGE AREA.--290 mi².

PERIOD OF RECORD.--July 1908 to September 1917, August 1938 to current year. Monthly discharge only for some periods, published in WSP 1302. October 1917 to December 1919, gage heights and discharge measurements only, in reports of Water Supply Commission of Pennsylvania.

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

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

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

AVERAGE DISCHARGE.--62 years, (water years 1908-17, 1938-91), 482 ft³/s, 22.59 in/yr, adjusted for storage since October 1959.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	310	292	1830	465	434	512	482	239	53	42	42
2	89	285	286	1130	385	522	529	506	181	51	39	41
3	83	267	284	875	310	875	496	459	147	52	39	39
4	80	247	2640	714	386	2400	438	386	147	53	40	39
5	89	237	3550	576	487	2290	396	338	148	58	40	45
6	90	367	1620	532	655	1380	381	390	127	60	39	39
7	87	436	1020	480	1920	1120	366	929	114	61	36	37
8	83	357	783	●398	2480	918	343	690	109	59	35	34
9	80	312	648	●393	1520	730	320	517	100	56	36	31
10	80	2060	560	●348	1130	627	295	451	96	53	58	30
11	83	5120	480	●311	878	530	268	408	91	52	60	29
12	100	2640	422	●393	655	450	232	371	98	50	50	28
13	191	1330	393	●380	560	418	219	341	117	48	44	26
14	398	938	355	●398	566	406	232	318	98	48	42	25
15	269	766	303	●310	636	424	255	288	93	48	44	24
16	200	673	318	●350	519	424	364	247	87	45	53	24
17	161	630	354	729	536	457	313	223	82	43	43	24
18	165	627	645	810	434	594	285	210	80	40	42	24
19	983	539	1470	609	426	775	263	200	81	37	70	43
20	744	471	1090	●480	968	736	239	187	79	39	66	54
21	479	427	833	●450	1770	607	430	175	73	37	60	44
22	367	395	972	●366	1290	533	1980	166	70	37	63	38
23	445	449	898	●357	●1000	677	1390	153	74	41	61	35
24	2420	511	1570	●323	807	1220	955	141	71	65	54	34
25	1650	459	1490	●295	706	1370	1150	137	68	50	51	48
26	949	411	936	●284	618	1050	917	134	64	47	45	55
27	667	370	684	●277	542	871	730	146	62	53	44	46
28	524	345	597	●250	460	833	620	156	60	53	42	41
29	365	336	616	●230	---	716	526	148	57	48	42	36
30	326	313	836	262	---	624	487	136	55	44	42	33
31	345	---	3040	416	---	562	---	302	---	43	42	---
TOTAL	12682	22628	29985	15556	23109	25573	15931	9735	2968	1524	1464	1088
MEAN	409	754	967	502	825	825	531	314	98.9	49.2	47.2	36.3
MAX	2420	5120	3550	1830	2480	2400	1980	929	239	65	70	55
MIN	80	237	284	230	310	406	219	134	55	37	35	24
MEAN†	416	770	980	472	827	825	526	303	103	50.9	48.1	34.8
CFSM†	1.43	2.66	3.38	1.63	2.85	2.84	1.81	1.04	.36	.18	.17	.12
IN.†	1.65	2.97	3.90	1.88	2.97	3.28	2.02	1.20	.40	.21	.20	.13

† Adjusted for change in contents in Prompton Reservoir and General Jadwin Reservoir.

● Estimated.

LACKAWAXEN RIVER BASIN

01431500 LACKAWAXEN RIVER AT HAWLEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	252	435	532	453	597	1011	976	631	358	185	132	201
MAX	1056	1643	1487	1410	1434	2651	1820	1826	1475	680	347	1368
(WY)	1977	1973	1974	1979	1976	1977	1983	1989	1972	1984	1990	1987
MIN	20.8	25.7	124	92.0	133	280	348	196	63.6	29.7	30.9	20.5
(WY)	1965	1965	1965	1981	1980	1981	1988	1962	1965	1965	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR				FOR 1991 WATER YEAR				WATER YEARS 1960 - 1991			
ANNUAL TOTAL	211741				162243							
ANNUAL MEAN	580				445				1479			
HIGHEST ANNUAL MEAN									761			
LOWEST ANNUAL MEAN									204			
HIGHEST DAILY MEAN	5120				5120				11600			
LOWEST DAILY MEAN	79				24				16			
ANNUAL SEVEN-DAY MINIMUM	84				25				17			
INSTANTANEOUS PEAK FLOW					6200				16400			
INSTANTANEOUS PEAK STAGE					8.05				13.00			
ANNUAL RUNOFF (CFSM)	2.00				1.53				1.65			
ANNUAL RUNOFF (INCHES)	27.16				20.81				22.45			
10 PERCENT EXCEEDS	1290				970				1120			
50 PERCENT EXCEEDS	383				311				246			
90 PERCENT EXCEEDS	103				42				56			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1959, BY WATER YEAR (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)	1856	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 - 1959			
ANNUAL TOTAL				
ANNUAL MEAN	487			
HIGHEST ANNUAL MEAN	748			
LOWEST ANNUAL MEAN	316			
HIGHEST DAILY MEAN	28100			
LOWEST DAILY MEAN	8.0			
ANNUAL SEVEN-DAY MINIMUM	12			
INSTANTANEOUS PEAK FLOW	a51900			
INSTANTANEOUS PEAK STAGE	b24.80			
ANNUAL RUNOFF (CFSM)	1.68			
ANNUAL RUNOFF (INCHES)	22.83			
10 PERCENT EXCEEDS	1110			
50 PERCENT EXCEEDS	242			
90 PERCENT EXCEEDS	49			

‡ Adjusted for change in contents in Prompton Reservoir and General Jadwin Reservoir.

a From rating curve extended above 12,000 ft³/s, on basis of slope-area measurement at gage height 24.2 ft at present site, 20.1 ft at former site.

b From floodmark.

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, 1.2 mi south of Hawley.

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

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

REMARKS.--Records good. No flow over spillway or roller gates.
Flow regulated since 1925, by Lake Wallenpaupack (station 01431700).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	.00	138	468	467	828	226	.00	.00	126	43	.00
2	107	.00	.00	946	230	.00	227	.00	.00	.00	.00	.00
3	116	.00	604	928	.00	.00	.00	.00	.00	.00	.00	53
4	107	.00	942	1040	.00	747	230	.00	.00	.00	.00	.00
5	107	.00	806	906	226	690	228	469	.00	.00	.00	.00
6	109	.00	529	450	222	701	.00	1400	.00	.00	.00	.00
7	106	.00	595	944	223	724	.00	.00	.00	.00	.00	.00
8	374	.00	.00	968	223	710	228	.00	.00	46	230	.00
9	717	304	.00	938	.00	.00	483	.00	.00	.00	.00	173
10	.00	465	497	427	.00	.00	.00	.00	.00	.00	.00	225
11	116	466	570	942	806	692	.00	.00	.00	.00	.00	219
12	117	698	583	456	960	698	305	.00	.00	.00	574	224
13	109	808	568	462	944	698	.00	525	.00	.00	584	229
14	83	563	566	920	946	659	.00	.00	.00	.00	770	.00
15	45	537	134	922	949	702	224	.00	.00	.00	234	411
16	108	746	172	944	951	.00	221	.00	.00	.00	574	967
17	106	456	525	932	341	.00	192	.00	.00	.00	.00	873
18	109	452	563	927	925	698	224	.00	.00	224	.00	803
19	119	696	575	468	943	955	228	.00	.00	506	60	828
20	106	826	569	441	820	943	.00	.00	.00	.00	.00	808
21	108	807	512	1080	937	927	.00	.00	.00	.00	.00	.00
22	54	.00	283	1070	928	950	.00	.00	.00	471	.00	.00
23	.00	232	283	1230	457	460	.00	.00	.00	474	.00	811
24	.00	.00	552	943	459	474	.00	.00	.00	449	.00	816
25	.00	.00	279	939	933	887	.00	.00	.00	424	.00	823
26	.00	457	572	460	867	932	.00	.00	.00	475	.00	802
27	.00	459	284	472	945	701	.00	.00	.00	.00	.00	813
28	.00	456	571	940	926	692	.00	253	.00	218	.00	.00
29	.00	715	284	968	---	.00	.00	.00	.00	460	.00	.00
30	.00	785	276	937	---	.00	.00	552	.00	457	.00	625
31	.00	---	572	947	---	.00	---	263	---	30	.00	---
TOTAL	3032.00	10928.00	13404.00	25415	16628.00	16468.00	3016.00	3462.00	0.00	4594.00	3246.00	10092.00
MEAN	97.8	364	432	820	594	531	101	112	.000	148	105	336
MAX	717	826	942	1230	960	955	483	1400	.00	506	770	967
MIN	.00	.00	.00	427	.00	.00	.00	.00	.00	.00	.00	.00

LACKAWAXEN RIVER BASIN

014320000 WALLENPAUPACK CREEK AT WILSONVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	288	263	335	432	427	391	441	341	375	338	325	337
MAX	750	1012	1036	1070	1112	1029	1500	1231	1573	965	995	1018
(WY)	1956	1956	1984	1978	1978	1986	1958	1989	1972	1928	1969	1987
MIN	3.10	1.50	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1984	1966	1926	1926	1926	1926	1926	1926	1958	1956	1956	1956

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR			FOR 1991 WATER YEAR			WATER YEARS 1926 - 1991		
ANNUAL TOTAL	129255.00			110285.00					
ANNUAL MEAN	354			302			357		
HIGHEST ANNUAL MEAN							607		
LOWEST ANNUAL MEAN							86.9		
HIGHEST DAILY MEAN	1610			May 30			1400		
LOWEST DAILY MEAN	.00			Many days			.00		
ANNUAL SEVEN-DAY MINIMUM	.00			Jan 20			.00		
10 PERCENT EXCEEDS	902			927			904		
50 PERCENT EXCEEDS	226			109			243		
90 PERCENT EXCEEDS	.00			.00			.00		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1925, BY WATER YEAR (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	1025	1922	1921	1912	1910	1910

SUMMARY STATISTICS WATER	YEARS 1910-1925		
ANNUAL MEAN	397		
HIGHEST ANNUAL MEAN	527		
LOWEST ANNUAL MEAN	279		
HIGHEST DAILY MEAN	4840		
LOWEST DAILY MEAN	8.0		
ANNUAL SEVEN-DAY MINIMUM	10		
10 PERCENT EXCEEDS	910		
50 PERCENT EXCEEDS	240		
90 PERCENT EXCEEDS	60		

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 mi². PERIOD OF RECORD, December 1960 to current year. GAGE, data collection platform. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corp of Engineers).

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

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 5,760 acre-ft, Dec. 31, at elevation of, 1,132.06 ft; minimum contents, 2,500 acre-ft, June 5, at elevation, of 1,121.46 ft.

01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15'55", Wayne County, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.45 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, and 2.9 mi upstream from mouth. DRAINAGE AREA, 64.5 mi². PERIOD OF RECORD, October 1959 to current year. GAGE, data collection platform. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corp of Engineers).

Reservoir formed by an earth and rockfill dam with ungated, concrete spillway at elevation, of 1,053.00 ft. Storage began in 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. Records furnished by U.S. Corp of Engineers.

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 26.6 acre-ft, Nov. 12, at elevation of, 979.30 ft; no storage many days.

01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek, at Wilsonville, 1.2 mi south of Hawley and 1.5 mi upstream from mouth. DRAINAGE AREA, 228 mi². PERIOD OF RECORD, January 1926 to current year. GAGE, vertical staff. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Power and Light Co.).

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

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 73,210 acre-ft, July 5-8, at elevation, of 1,183.9 ft; minimum contents, 31,600 acre-ft, March 1, at elevation of, 1,176.4 ft.

LACKAWAXEN RIVER BASIN

LAKES AND RESERVOIRS IN LACKAWAXEN RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>01428900 Prompton Reservoir</u>				<u>01429400 General Edgar Jadwin Reservoir</u>		
Sept. 30	1,124.02	3,220	--	965.64	0	--
Oct. 31	1,125.46	3,630	+ 6.5	966.90	0	0
Nov. 30	1,128.77	4,550	+ 15.6	967.12	0	0
Dec. 31	1,131.16	5,390	+ 13.5	967.46	0	0
CAL YR 1990	--	--	+ 2.9	--	--	0
Jan. 31	1,125.08	3,520	- 30.3	967.90	0	0
Feb. 28	1,125.43	3,620	+ 1.7	968.90	0	0
Mar. 31	1,125.48	3,630	+ 0.2	970.23	0	0
Apr. 30	1,124.42	3,330	- 5.0	967.36	0	0
May 31	1,121.94	2,640	- 11.2	965.83	0	0
June 30	1,122.79	2,880	+ 4.0	965.40	0	0
July 31	1,123.17	2,990	+ 1.7	965.32	0	0
Aug. 31	1,123.88	3,040	+ 0.9	965.28	0	0
Sept. 30	1,123.06	2,960	- 1.5	965.28	0	0
WTR YR 1991	--	--	- 0.4	--	--	0
<u>01431700 Lake Wallenpaupack</u>						
Sept. 30	1,178.9	45,080	--			
Oct. 31	1,180.3	54,050	+ 146			
Nov. 30	1,182.6	65,600	+ 194			
Dec. 31	1,182.4	64,520	- 17.9			
CAL YR 1990	--	--	+ 40.9			
Jan. 31	1,177.5	36,950	- 448			
Feb. 28	1,176.6	32,510	- 80.0			
Mar. 31	1,177.5	36,950	+ 72.2			
Apr. 30	1,181.6	60,320	+ 393			
May 31	1,183.2	69,020	+ 142			
June 30	1,183.8	72,600	+ 60.2			
July 31	1,182.3	63,980	- 140			
Aug. 31	1,181.1	57,830	- 100			
Sept. 30	1,177.4	36,430	- 360			
WTR YR 1991	--	--	- 11.9			

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 Sholola-Barryville, at bridge at Barryville just upstream from Halfway Brook, and 1,000 ft upstream from Shohola Creek.

DRAINAGE AREA.--2,659 mi².

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

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum (water years 1968-73, 1976-78, 1980-82, 1986-88, 1990-91), 32.0°C, July 20, 21, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.0°C, July 23; minimum, 0.0°C on many days during winter period.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01492160 DELAWARE RIVER AT BARRYVILLE, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

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 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1973 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum (water years 1976, 1978, 1980-81, 1983-84, 1986, 1989-90) 31.0°C, July 21, 1980; minimum (water years 1974, 1977-78, 1980, 1983-91), 0.0°C on many days during winter periods, except 1978, 1980, and 1985.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 28.5°C, June 29, Aug. 30, but may have been higher during periods of instrument malfunction; minimum, 0.0°C on many days during winter period.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.0	16.0	17.0	8.0	7.5	8.0	5.0	3.5	4.5	2.0	1.0	1.0
2	17.0	15.0	16.0	9.0	8.0	8.5	4.5	3.5	4.0	1.5	.5	1.0
3	16.5	14.0	15.0	10.5	9.0	9.5	3.5	2.5	3.0	1.5	1.0	1.5
4	15.0	14.5	15.0	10.5	9.5	10.0	5.5	3.0	4.5	1.5	1.0	1.5
5	16.0	13.5	14.5	11.0	10.0	10.5	3.5	3.0	3.5	1.0	.5	1.0
6	17.5	14.0	15.5	11.5	10.0	10.5	3.0	2.0	2.5	1.0	1.0	1.0
7	18.0	15.5	16.5	9.5	9.0	9.5	3.0	2.5	3.0	1.5	1.0	1.5
8	18.5	16.5	17.5	9.0	7.0	8.0	3.0	2.5	3.0	1.0	.0	.5
9	19.0	17.0	18.0	7.0	5.5	6.0	3.0	2.5	3.0	.5	.0	.0
10	20.0	18.0	19.0	7.5	6.0	6.5	3.5	2.5	3.0	1.0	.5	.5
11	20.0	19.0	19.5	6.5	6.0	6.5	3.0	2.0	2.5	.5	.0	.0
12	21.0	19.0	20.0	6.5	5.0	5.5	2.5	2.0	2.0	.0	.0	.0
13	21.0	19.5	20.5	5.0	4.0	4.5	3.0	2.5	2.5	.5	.0	.0
14	20.5	19.5	20.0	4.0	3.0	3.5	3.0	1.5	2.0	.0	.0	.0
15	19.5	17.5	18.5	4.5	3.0	3.5	1.5	.5	1.0	.5	.0	.0
16	17.5	15.0	16.0	6.0	4.5	5.0	1.5	.5	1.0	1.0	.5	.5
17	15.5	14.0	14.5	6.5	6.0	6.0	2.0	1.5	1.5	1.0	1.0	1.0
18	16.0	14.5	15.0	6.0	4.5	5.0	3.0	2.0	2.5	1.0	.5	1.0
19	15.0	13.0	13.5	4.0	3.5	4.0	3.0	3.0	3.0	1.5	.5	1.0
20	12.5	11.0	11.5	4.5	3.5	4.0	3.0	2.5	2.5	1.5	.5	1.0
21	11.0	10.0	11.0	4.5	3.5	4.0	3.0	2.5	3.0	1.5	.5	1.0
22	11.5	10.5	11.0	4.5	4.0	4.5	4.5	3.5	4.0	.5	.0	.0
23	12.0	11.5	12.0	5.5	4.5	5.0	6.5	4.5	6.0	.0	.0	.0
24	12.5	12.0	12.5	5.5	5.0	5.5	6.5	5.0	6.5	.5	.0	.0
25	12.0	11.5	12.0	5.5	4.5	5.0	5.0	2.0	3.5	.0	.0	.0
26	11.5	9.5	10.5	5.0	4.5	5.0	2.0	1.0	1.5	.5	.0	.0
27	9.0	8.0	8.5	5.0	5.0	5.0	1.0	.5	.5	.5	.0	.0
28	8.5	7.5	8.0	7.0	5.5	6.0	.5	.0	.0	.5	.0	.0
29	7.5	7.0	7.5	7.5	6.0	7.0	1.5	.5	1.0	.5	.0	.5
30	7.0	6.0	6.5	6.0	4.5	5.5	3.0	1.5	2.0	1.0	.5	1.0
31	8.0	7.0	7.5	---	---	---	3.0	2.0	2.5	1.0	.0	1.0
MONTH	21.0	6.0	14.0	11.5	3.0	6.0	6.5	0.0	2.5	2.0	0.0	0.5

DELAWARE RIVER BASIN

01432805 DELAWARE RIVER AT POND EDDY, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY

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

DRAINAGE AREA.--3,070 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1904 to current year.

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

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

REMARKS.--Records good. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs (see Reservoirs in Delaware River Basin) and smaller reservoirs. Large diurnal fluctuations at medium and low flows caused by powerplants on tributary streams. Subsequent to September 1954, entire flow from 371 mi² of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi² of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Telephone gage-height telemeter and satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 233,000 ft³/s, Aug. 19, 1955, gage height, 23.91 ft, from floodmarks in gage house, from rating curve extended above 89,000 ft³/s, on basis of slope-area measurement of peak flow; maximum gage height, 26.6 ft, Feb. 12, 1981 (ice jam), from floodmarks; minimum observed discharge, 175 ft³/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 ft³/s, Oct. 10, 1903, gage height, 23.1 ft, from rating curve extended above 70,000 ft³/s, by velocity-area studies; maximum gage height, 25.5 ft, Mar. 8, 1904 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49,800 ft³/s, Nov. 11, gage height, 11.13 ft; minimum, 697 ft³/s, Sept. 27, gage height, 1.65 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	2990	3130	15200	4290	4730	5970	4620	2870	1500	1590	1550
2	1640	2640	2190	12400	3460	4410	6040	4520	2000	1560	1620	1460
3	1780	2340	2720	10300	2950	6220	5590	4500	1880	1940	1490	1580
4	1650	2160	14400	8940	3210	14700	5310	3950	1530	1780	1560	1560
5	1730	2260	22300	7420	3570	18600	4960	3310	1440	1770	1570	1710
6	1590	2280	13300	6430	4260	13900	4310	4410	1440	1800	1570	1600
7	1770	3450	9950	6140	7330	12200	4080	5830	1250	1720	1650	1610
8	1550	3230	7460	5380	14200	11900	4480	5820	1120	1790	1680	1710
9	2120	3070	5810	5120	11200	8990	4180	4940	1390	1580	1600	1730
10	2230	6850	5790	4520	9380	7320	4580	4450	1660	1410	1710	1670
11	1300	40700	5510	4800	8250	6710	4450	4170	1700	1570	1650	1610
12	1460	20800	4900	4060	7640	6240	4710	3790	1720	1820	1410	1650
13	1750	13400	4550	3710	6520	5500	3910	3680	1800	1700	1500	1620
14	2320	9470	4520	4530	6570	5380	3730	3980	1920	1960	1450	1570
15	3900	7650	3670	4100	6870	5290	4240	3280	1860	1940	1750	1600
16	2610	6850	3110	4540	6350	4480	4550	2870	1880	2040	1900	1810
17	1990	6290	4190	6230	4720	4150	4040	2780	1600	2070	1960	2000
18	1880	5600	4960	7860	4550	4780	3710	2220	1540	1780	1600	1800
19	4980	5320	9580	6380	4770	6640	3210	2020	1570	2000	1830	1940
20	7010	5280	9440	5040	5350	7010	2960	1860	1590	2100	1550	2110
21	4370	4690	7980	5860	9310	6550	3210	1800	1660	1830	1080	2100
22	3290	3960	8800	5440	8180	5820	8720	1810	1710	1870	1790	1270
23	2990	3680	9220	4700	7640	5930	10600	1440	1670	1780	1990	1200
24	12000	3800	13600	4070	6040	7440	9080	1470	1640	1900	1050	1830
25	15300	3420	15500	4620	6300	8990	8660	1520	1460	1630	888	1680
26	9350	3710	12600	3660	5940	9170	7660	1420	1600	1590	1330	1750
27	6550	3550	9860	2890	5550	7850	6340	1480	1470	1730	1460	1440
28	5100	3300	8530	3730	5150	8070	5560	1930	1660	1770	1600	1390
29	4400	3260	8120	4360	---	7860	5270	2240	1890	1470	1650	1160
30	3660	3390	7190	4080	---	7190	4800	1900	1630	1530	1670	1220
31	3510	---	17600	4430	---	6520	---	2980	---	1660	1540	---
TOTAL	117330	189390	260480	180940	179550	240540	158910	96990	50150	54590	48688	48930
MEAN	3785	6313	8403	5837	6412	7759	5297	3129	1672	1571	1631	1631
MAX	15300	40700	22300	15200	14200	18600	10600	5830	2870	2100	1990	2110
MIN	1300	2160	2190	2890	2950	4150	2960	1420	1120	1410	888	1160

CAL YR 1990 TOTAL 2033850 MEAN 5572 MAX 40700 MIN 1140
WTR YR 1991 TOTAL 1626488 MEAN 4456 MAX 40700 MIN 888

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-60, 1964 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).

MINOR ELEMENTS DATA: 1970 (a), 1972-73 (a), 1974-76 (c), 1987 (b), 1988-89 (c), 1990-91 (b).

PESTICIDE DATA: 1974 (a), 1987 (b), 1988-89 (c), 1990 (b).

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

NUTRIENT DATA: 1968 (a), 1969-76 (d), 1987 (b), 1988-89 (c), 1990 (b).

BIOLOGICAL DATA:

Bacteria--1973-76 (d).

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

Periphyton--1976 (a).

SEDIMENT DATA: 1959 (c), 1976 (c), 1988 (b), 1989 (c), 1990-91 (b).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1973 to September 1973.

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

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

INSTRUMENTATION.--Water-temperature digital recorder since January 1973, provides one-hour-interval data.**REMARKS.**--Water-quality samples were collected by personnel of the New York State Department of Environmental Conservation, and were analyzed by USGS laboratories.**EXTREMES FOR PERIOD OF DAILY RECORD.**--

WATER TEMPERATURE: Maximum (water years 1957-59, 1973-81, 1983-84, 1988-91), 30.0°C, July 13, 1981; minimum (water years 1958-60, 1973, 1975-91), 0.0°C, on many days during winter periods, except 1984.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.5°C, July 23; minimum, 0.0°C, Jan. 8, 9, 10, 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (μS/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)
NOV 08...	1200	3480	72	7.5	8.5	756	11.7	100	30
APR 25...	1100	8670	83	7.4	10.0	755	10.3	92	130
MAY 22...	1100	1510	93	7.8	20.5	754	8.3	93	210
JUN 25...	1300	1420	96	8.4	23.0	756	9.1	107	50
AUG 29...	1100	1360	87	7.6	24.5	755	8.4	102	30

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 08...	<1	3	110	<1	10	<0.10	1	<10
APR 25...	<1	2	270	2	60	<0.10	1	<10
MAY 22...	<1	5	350	6	40	<0.10	4	10
JUN 25...	<1	4	140	18	40	<0.10	32	<10
AUG 29...	<1	9	1300	2	60	<0.10	1	20

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 08...	1200	3480	2	19
APR 25...	1100	8670	10	234
MAY 22...	1100	1510	<1	--
JUN 25...	1300	1420	<1	--
AUG 29...	1100	1360	3	11

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.0	16.5	17.0	9.0	8.0	8.5	5.0	4.0	4.5	2.0	1.0	1.5
2	16.5	15.5	16.0	9.5	8.5	9.0	4.5	4.0	4.5	1.0	1.0	1.0
3	15.5	14.0	15.0	10.5	8.5	9.5	4.0	3.0	3.5	1.5	1.0	1.0
4	15.5	14.5	15.0	11.0	9.5	10.0	5.5	3.5	4.5	1.5	1.5	1.5
5	15.5	14.0	15.0	11.5	10.0	10.5	4.0	3.5	4.0	1.5	1.0	1.0
6	16.5	14.5	15.5	11.5	10.0	11.0	3.5	3.0	3.0	1.5	1.0	1.0
7	17.5	15.5	16.5	10.0	9.0	9.5	3.0	3.0	3.0	1.5	1.0	1.5
8	18.0	16.5	17.5	9.0	7.0	8.5	3.0	3.0	3.0	1.0	.0	.5
9	18.5	17.5	18.0	7.0	6.5	7.0	3.5	3.0	3.0	.0	.0	.0
10	19.0	17.5	18.5	7.5	6.5	7.0	3.5	3.0	3.5	1.0	.0	1.0
11	19.5	18.5	19.0	7.5	6.5	6.5	3.0	2.0	2.5	.5	.5	.5
12	20.5	19.0	20.0	6.5	5.5	6.0	2.5	2.0	2.5	.5	.0	.5
13	20.5	19.5	20.0	5.5	4.0	5.0	3.0	2.0	2.5	.5	.5	.5
14	21.0	20.0	20.5	4.0	3.5	4.0	2.5	1.5	2.5	.5	.5	.5
15	20.0	17.5	19.0	4.5	3.5	4.0	1.5	1.0	1.0	.5	.5	.5
16	17.5	15.5	16.5	6.0	4.0	5.0	2.0	1.0	1.5	1.0	.5	.5
17	15.5	14.0	15.0	6.5	5.5	6.5	2.5	1.5	2.0	1.5	1.0	1.0
18	16.0	14.5	15.5	6.0	4.5	5.5	2.5	2.0	2.5	1.0	1.0	1.0
19	15.5	13.0	14.0	4.5	4.0	4.5	3.0	2.5	3.0	1.0	1.0	1.0
20	12.5	11.5	12.0	4.5	3.5	4.0	3.0	2.5	3.0	1.5	1.0	1.5
21	11.5	10.5	11.0	5.0	4.0	4.5	3.0	2.5	3.0	1.5	1.0	1.5
22	12.0	11.0	11.5	5.5	4.0	5.0	4.5	3.0	4.0	.5	.5	.5
23	12.5	11.5	12.0	5.5	5.0	5.5	6.5	4.5	5.5	.5	.5	.5
24	12.5	12.5	12.5	6.0	5.0	5.5	6.5	5.5	6.5	.5	.5	.5
25	12.5	12.0	12.0	5.5	5.0	5.0	5.5	2.5	4.0	.5	.5	.5
26	12.0	10.0	11.0	5.5	5.0	5.5	2.5	1.5	2.0	.5	.5	.5
27	10.0	8.5	9.0	6.0	5.0	5.5	1.5	.5	1.0	.5	.5	.5
28	9.0	8.0	8.5	7.5	5.5	6.5	.5	.5	.5	.5	.5	.5
29	8.5	7.5	8.0	7.5	6.5	7.0	1.0	.5	1.0	1.0	.5	.5
30	8.0	6.5	7.5	6.5	5.0	6.0	2.5	1.0	2.0	1.5	1.0	1.0
31	9.0	7.5	8.5	---	---	---	3.0	2.0	2.5	1.5	.5	1.0
MONTH	21.0	6.5	14.5	11.5	3.5	6.5	6.5	0.5	3.0	2.0	0.0	1.0

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ

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

DRAINAGE AREA.--3,480 mi².

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

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

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

REMARKS.--Records good except for periods of ice effect, Jan. 27-28, and periods of shifting control, Oct. 1-24, and June 4 to Sept. 30, which are fair. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	3490	3710	17300	5170	5420	6780	5420	3820	1680	1750	1640
2	1960	3140	2820	13500	4310	5240	6820	5260	2570	1680	1770	1560
3	1980	2760	2810	11400	3660	6810	6440	5200	2240	1940	1660	1600
4	1990	2560	14600	10100	3830	15700	6050	4620	2060	1920	1710	1640
5	2070	2560	26300	8640	4250	21200	5660	3980	1820	1840	1780	1770
6	1940	2740	15500	7510	4930	15500	5010	4860	1790	1900	1780	1720
7	2020	3970	11500	7110	7760	13400	4780	6620	1600	1840	1790	1690
8	1910	3890	9240	6420	15000	13000	4990	6660	1370	1800	1770	1780
9	2260	3510	7280	5910	12200	10400	4650	5710	1580	1750	1810	1710
10	2640	6380	6820	5480	10400	8600	5330	5120	1760	1510	1850	1840
11	1570	42700	6640	5410	9220	7740	4930	4780	1980	1570	1810	1730
12	1750	23900	5850	4890	8610	7280	4990	4390	1890	1810	1670	1680
13	2060	14700	5440	4610	7410	6460	4630	4240	2130	1740	1700	1700
14	2470	10700	5340	5130	7500	6260	4210	4530	2100	1920	1570	1680
15	4200	8810	4630	4940	7790	6170	4560	3780	2010	1970	1880	1650
16	3060	7930	3960	5230	7210	5600	5120	3320	2070	2080	2000	1770
17	2350	7250	4660	7010	5790	4930	4600	3190	1860	2110	2180	2220
18	2130	6530	5540	8870	5080	5480	4220	2680	1720	1900	1780	1920
19	4770	6260	10000	7350	5450	7680	3750	2370	1810	2020	2100	2160
20	7950	5960	10700	6050	6050	8080	3440	2220	1740	2200	1960	2270
21	4990	5410	9100	6600	9940	7580	3760	2060	1850	1840	1490	2390
22	3780	4890	9660	6240	9210	6740	9870	2100	2000	1930	1670	1480
23	3490	4230	10100	5370	8600	6850	11800	1850	1910	1970	2400	1380
24	11500	4580	13800	4840	7040	8380	10300	1740	1870	1950	1490	1970
25	16400	4140	17200	5200	7050	9890	9840	1820	1690	1900	1060	1980
26	10200	4090	13700	4400	6740	10200	8930	1700	1670	1650	1360	2130
27	7500	4140	11100	●3700	6340	8860	7460	1720	1690	1790	1640	1750
28	5880	3860	9500	●4100	5890	9020	6550	2240	1680	1810	1750	1600
29	5080	3780	9320	4720	---	8890	6060	2630	2050	1670	1820	1240
30	4270	3910	8200	4690	---	8130	5600	2190	1810	1650	1810	1450
31	4070	---	17100	5140	---	7500	---	3330	---	1620	1770	---
TOTAL	130160	212770	292120	207860	202430	272990	181130	112330	58140	56960	54580	53100
MEAN	4199	7092	9423	6705	7230	8806	6038	3624	1938	1837	1761	1770
MAX	16400	42700	26300	17300	15000	21200	11800	6660	3820	2200	2400	2390
MIN	1570	2560	2810	3700	3660	4930	3440	1700	1370	1510	1060	1240

● Estimated.

DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3402	5095	6134	5684	6112	10110	11800	7584	4446	3044	2599	2695
MAX	15690	11760	14050	15050	15120	24480	31560	16090	15200	11220	14230	9167
(WY)	1956	1952	1974	1949	1976	1945	1940	1943	1972	1945	1955	1960
MIN	807	995	1968	1318	1748	3191	3322	2215	1214	864	715	892
(WY)	1942	1965	1965	1981	1980	1981	1985	1965	1965	1954	1954	1941
SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR					FOR 1991 WATER YEAR				WATER YEARS 1940 - 1991		
ANNUAL TOTAL	2286620					1834570						
ANNUAL MEAN	6265					5026				5720		
HIGHEST ANNUAL MEAN										8621		
LOWEST ANNUAL MEAN										2309		
HIGHEST DAILY MEAN	42700					Nov 11				187000		
LOWEST DAILY MEAN	1440					Sep 9				412		
ANNUAL SEVEN-DAY MINIMUM	1710					Sep 21				565		
INSTANTANEOUS PEAK FLOW						51000				Nov 11		
INSTANTANEOUS PEAK STAGE						16.01				Nov 11		
INSTANTANEOUS LOW FLOW						936				Sep 29		
10 PERCENT EXCEEDS	13100					9910				12100		
50 PERCENT EXCEEDS	4390					4090				3440		
90 PERCENT EXCEEDS	2040					1690				1560		

a From rating curve extended above 90,000 ft³/s on basis of flood-routing study.

DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

WATER-QUALITY RECORDS

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

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (μ S/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, EC BROTH (MPN)	ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML)
JUL 1991 30...	1145	1810	94	7.4	22.5	9.8	114	2.9	50	8
DATE		HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JUL 1991 30...	27	7.8	1.9	5.7	1.1	18	9.7	9.7	0.10	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)
JUL 1991 30...	1.3	50	<0.003	0.004	0.390	0.380	<0.030	0.040	0.40	
DATE		NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEDED TOTAL (MG/L AS C)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
JUL 1991 30...	0.35	0.79	0.73	<0.020	<0.020	2.7	0.3	4	20	

BUSH KILL BASIN

01439500 BUSH KILL AT SHOEMAKERS, PA

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

DRAINAGE AREA.--117 mi².

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, Data Collection Platform at site 50 ft upstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	189	156	528	218	204	285	283	107	39	12	12
2	72	177	146	469	211	222	276	266	87	29	11	10
3	64	165	190	430	183	275	261	244	76	27	10	9.0
4	62	153	1760	393	192	598	246	223	79	29	11	8.4
5	72	142	1620	358	215	591	234	209	80	30	10	9.8
6	70	242	1180	341	258	493	226	279	71	31	9.7	14
7	63	247	874	324	412	531	217	399	65	31	9.7	14
8	60	212	693	289	439	464	207	330	57	29	9.1	12
9	59	187	581	279	395	408	197	282	50	25	10	10
10	58	671	497	262	365	373	187	257	46	21	35	9.8
11	62	1160	428	238	331	326	170	239	43	18	32	9.1
12	79	873	386	●282	285	286	156	225	47	17	19	8.8
13	94	714	359	248	273	271	155	207	51	16	15	8.4
14	120	594	328	●220	284	269	162	190	46	16	13	8.2
15	104	504	301	●200	311	277	168	224	37	14	12	7.8
16	86	441	326	282	270	276	192	189	34	13	11	7.6
17	76	413	328	423	●235	284	182	167	●32	13	12	7.3
18	102	381	339	389	●220	326	188	185	●36	12	13	7.3
19	240	336	423	335	229	397	174	165	●140	12	28	37
20	177	300	375	311	●309	357	159	150	96	11	66	102
21	133	275	376	315	311	318	235	143	59	11	60	67
22	120	252	449	291	292	296	533	140	56	15	41	43
23	218	265	456	●285	276	333	456	134	105	16	31	36
24	583	266	896	●280	244	420	410	128	94	19	27	35
25	465	239	813	●254	242	412	465	122	68	27	120	98
26	382	217	660	●227	235	372	408	113	51	23	56	122
27	315	197	551	●216	228	363	367	109	41	27	27	94
28	269	187	497	●214	212	368	332	105	35	24	20	72
29	237	180	477	●212	---	341	299	96	31	19	16	58
30	211	169	477	225	---	323	290	91	36	16	14	49
31	199	---	615	●272	---	302	---	98	---	14	13	---
TOTAL	4926	10348	17557	9392	7675	11076	7837	5992	1856	644	773.5	986.5
MEAN	159	345	566	303	274	357	261	193	61.9	20.8	25.0	32.9
MAX	583	1160	1760	528	439	598	533	399	140	39	120	122
MIN	58	142	146	200	183	204	155	91	31	11	9.1	7.3
CFSM	1.36	2.95	4.84	2.59	2.34	3.05	2.23	1.65	.53	.18	.21	.28
IN.	1.57	3.29	5.58	2.99	2.44	3.52	2.49	1.91	.59	.20	.25	.31

● Estimated.

BUSH KILL BASIN

01439500 BUSH KILL AT SHOEMAKERS, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	122	209	259	254	276	435	429	310	197	134	99.9	95.1
MAX	773	643	769	807	706	1119	962	773	919	747	864	569
(WY)	1956	1933	1974	1979	1909	1936	1983	1989	1972	1945	1955	1933
MIN	7.74	13.6	28.3	44.2	39.7	156	141	90.7	32.8	14.7	8.33	4.39
(WY)	1965	1965	1923	1981	1934	1981	1985	1941	1962	1965	1964	1964

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1909 - 1991	
ANNUAL TOTAL	105115		79063.0			
ANNUAL MEAN	288		217		235	
HIGHEST ANNUAL MEAN					419	
LOWEST ANNUAL MEAN					95.4	
HIGHEST DAILY MEAN	1760		Dec 4		11800	
LOWEST DAILY MEAN	58		Oct 10		2.6	
ANNUAL SEVEN-DAY MINIMUM	63		Oct 4		2.7	
INSTANTANEOUS PEAK FLOW			2470		a23400	
INSTANTANEOUS PEAK STAGE			4.38		b13.95	
INSTANTANEOUS LOW FLOW			7.1		2.6	
ANNUAL RUNOFF (CFSM)	2.46		1.85		2.01	
ANNUAL RUNOFF (INCHES)	33.42		25.14		27.26	
10 PERCENT EXCEEDS	579		440		522	
50 PERCENT EXCEEDS	227		190		160	
90 PERCENT EXCEEDS	88		13		27	

a From rating curve extended above 2,600 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmarks.

DELAWARE RIVER BASIN

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

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

DRAINAGE AREA.--3,850 mi², approximately.

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2230	4450	4190	23000	6300	6340	7810	6630	4380	2120	1860	1700
2	2050	3950	3530	16600	5170	6210	7820	6430	3490	1980	1850	1650
3	2060	3450	2960	13900	4650	6680	7700	6260	2730	2000	1850	1570
4	2260	3170	14100	12100	4340	14400	7000	5860	2620	2450	1780	1670
5	2140	2970	37000	10700	4850	26300	6650	5220	2260	2290	1780	1700
6	2200	3240	22400	9250	5380	19600	6230	5300	2170	2260	1830	1780
7	2020	4120	15000	8280	7330	16300	5710	7440	2070	2260	1830	1690
8	2210	4780	12000	7910	15500	15300	5430	●8040	1830	2200	1970	1660
9	2030	4050	9260	7090	14900	12900	5740	●6700	1680	2240	2030	1800
10	2870	5670	8060	6920	12200	10300	5890	●6360	1820	2000	1890	1880
11	2110	46400	7900	6360	10600	8990	5580	●5950	2220	1810	1970	1750
12	1850	36300	7120	6270	9900	8580	5410	●5440	2200	1890	1940	1680
13	2060	19600	6690	5800	8640	7760	5670	●5000	2460	2160	1750	1710
14	2470	13900	6360	6060	8410	7240	4910	●5150	2510	2130	1690	1690
15	4040	10900	6010	6170	8710	7280	4830	4750	2480	2380	1730	1580
16	3940	9190	5150	6130	8430	7110	5730	4140	2370	2420	2100	1660
17	2860	8490	5280	7530	7970	5960	5690	3770	2380	●2080	2170	2210
18	2420	7770	6230	10000	5730	6190	5100	3590	2140	●2140	1920	1980
19	3350	7330	9230	9220	6280	8300	4630	2990	2350	●1970	1940	2060
20	8830	6830	12400	7670	6720	9220	4130	2850	2370	●2130	2350	2280
21	6440	6380	10600	7350	9440	8890	4210	2560	2250	●2220	1910	2390
22	4770	5960	10600	7610	10800	8030	9660	2450	2310	●2000	1410	1900
23	4160	4740	11700	6620	9760	7880	14400	2480	2430	●2160	2310	1440
24	8550	5430	14600	6590	8620	9190	12500	2060	2410	●2170	2020	1610
25	20900	5070	21300	6320	7690	10600	11800	2080	2260	●2160	1340	2200
26	13300	4470	17100	5820	7770	11800	10800	2080	1990	●1930	1210	2140
27	9550	4890	13700	4830	7320	10700	9360	2000	2050	●1890	1560	2010
28	7330	4390	11300	4490	7010	9930	8130	2150	1940	●1900	1640	1680
29	6280	4240	10900	5460	---	10400	7290	2800	2210	●1860	1780	1480
30	5490	4410	9940	5660	---	9480	6970	2760	2390	1850	1800	1410
31	4860	---	14900	5800	---	8900	---	3040	---	1770	1810	---
TOTAL	147630	256540	347510	253510	230420	316760	212780	134330	70770	64820	57020	53960
MEAN	4762	8551	11210	8178	8229	10220	7093	4333	2359	2091	1839	1799
MAX	20900	46400	37000	23000	15500	26300	14400	8040	4380	2450	2350	2390
MIN	1850	2970	2960	4490	4340	5960	4130	2000	1680	1770	1210	1410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1991, BY WATER YEAR

MEAN	4107	5274	6730	6028	7435	10400	11800	8603	5358	3484	2788	3109
MAX	13030	12870	16730	17960	17320	21490	24100	17970	18150	9455	6242	10310
(WY)	1978	1973	1974	1979	1976	1977	1983	1989	1972	1973	1969	1987
MIN	1193	992	1914	1437	1936	3873	3796	2746	1397	950	1101	1283
(WY)	1965	1965	1965	1981	1980	1981	1985	1965	1965	1965	1965	1965

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1964 - 1991
ANNUAL TOTAL	2652660	2146050	
ANNUAL MEAN	7268	5880	6272
HIGHEST ANNUAL MEAN			9418
LOWEST ANNUAL MEAN			2572
HIGHEST DAILY MEAN	46400	Nov 11	96000
LOWEST DAILY MEAN	1560	Jul 9	580
ANNUAL SEVEN-DAY MINIMUM	2130	Oct 3	620
INSTANTANEOUS PEAK FLOW			110000
INSTANTANEOUS PEAK STAGE			24.00
INSTANTANEOUS LOW FLOW			1170
10 PERCENT EXCEEDS	14900	11100	13100
50 PERCENT EXCEEDS	5300	4780	3780
90 PERCENT EXCEEDS	2390	1820	1850

● Minimum daily.
● Estimated.

BRODHEAD CREEK BASIN

01440400 BRODHEAD CREEK NEAR ANALOMINK, PA

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

DRAINAGE AREA.--65.9 mi².

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	109	92	299	110	121	160	140	53	21	9.6	10
2	38	102	88	261	101	158	155	140	42	20	9.2	9.7
3	36	96	105	234	99	174	143	133	38	22	8.5	9.3
4	36	91	2070	209	113	623	136	119	40	22	10	9.8
5	41	86	931	186	130	473	129	106	39	21	9.5	13
6	38	177	649	177	167	353	124	163	36	22	8.4	11
7	35	143	463	164	307	385	118	195	34	21	7.8	9.7
8	34	125	322	145	295	300	110	159	32	21	7.0	8.8
9	37	111	267	140	249	254	106	136	30	18	21	8.2
10	36	668	232	135	220	225	101	123	28	17	32	8.5
11	40	820	201	125	196	196	92	115	28	15	16	8.8
12	47	497	180	141	170	180	88	108	32	15	13	7.6
13	58	356	169	126	159	168	91	102	31	15	11	7.9
14	62	289	152	114	181	165	92	95	28	15	9.9	7.9
15	53	244	142	105	181	170	98	95	26	14	9.4	8.2
16	46	216	172	189	150	162	108	86	25	13	10	7.9
17	42	208	159	268	141	162	105	81	24	12	9.2	8.4
18	64	188	194	221	128	204	104	99	26	11	8.2	8.3
19	165	169	239	187	129	233	93	83	55	11	26	114
20	110	152	188	178	187	204	87	78	42	10	26	53
21	92	140	232	186	205	183	162	67	31	9.3	24	32
22	85	130	284	●154	193	174	326	61	39	11	18	24
23	200	147	307	●150	180	209	244	57	56	16	15	20
24	436	140	620	●136	159	247	232	55	43	15	13	23
25	289	125	461	●127	154	241	261	52	34	13	86	40
26	221	116	359	●120	146	210	213	50	29	14	29	40
27	180	108	293	●115	138	218	194	49	26	14	20	32
28	156	104	272	112	127	215	179	46	24	12	17	26
29	142	103	253	107	---	189	166	43	23	11	15	23
30	129	98	274	106	---	182	155	41	23	11	13	20
31	118	---	383	131	---	167	---	49	---	10	12	---
TOTAL	3106	6058	10753	5048	4715	7145	4372	2926	1017	472.3	523.7	610.0
MEAN	100	202	347	163	168	230	146	94.4	33.9	15.2	16.9	20.3
MAX	436	820	2070	299	307	623	326	195	56	22	86	114
MIN	34	86	88	105	99	121	87	41	23	9.3	7.0	7.6
CFSM	1.52	3.06	5.26	2.47	2.56	3.50	2.21	1.43	.51	.23	.26	.31
IN.	1.75	3.42	6.07	2.85	2.66	4.03	2.47	1.65	.57	.27	.30	.34

● Estimated.

BRODHEAD CREEK BASIN

01440400 BRODHEAD CREEK NEAR ANALOMINK, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.3	121	169	144	165	249	252	190	108	62.6	42.3	54.5
MAX	237	336	489	459	371	537	596	440	474	380	159	464
(WY)	1977	1973	1974	1978	1981	1977	1983	1989	1972	1969	1973	1987
MIN	8.36	10.2	21.3	15.1	41.8	92.7	84.0	62.3	23.2	10.7	8.30	7.56
(WY)	1964	1965	1981	1981	1980	1989	1985	1962	1962	1965	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1958 - 1991	
ANNUAL TOTAL	61756		46746.0			
ANNUAL MEAN	169		128		136	
HIGHEST ANNUAL MEAN					213	
LOWEST ANNUAL MEAN					59.6	
HIGHEST DAILY MEAN	2070	Dec 4	2070	Dec 4	6070	Jul 28 1969
LOWEST DAILY MEAN	34	Oct 8	7.0	Aug 8	5.4	Sep 12 1980
ANNUAL SEVEN-DAY MINIMUM	37	Oct 3	8.0	Sep 12	5.9	Sep 8 1980
INSTANTANEOUS PEAK FLOW			3830	Dec 4	a12900	Jul 28 1969
INSTANTANEOUS PEAK STAGE			7.27	Dec 4	11.82	Jul 28 1969
INSTANTANEOUS LOW FLOW			6.4	Aug 9	5.4	Sep 11 1980b
ANNUAL RUNOFF (CFSM)	2.57		1.94		2.06	
ANNUAL RUNOFF (INCHES)	34.86		26.39		27.97	
10 PERCENT EXCEEDS	326		251		293	
50 PERCENT EXCEEDS	126		105		293	
90 PERCENT EXCEEDS	47		11		16	

a From rating curve extended above 1,400 ft³/s on basis of slope-area measurement of peak flow.

b Also Sep. 14, 1980.

BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA

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

DRAINAGE AREA.--259 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	440	392	1200	516	473	593	535	257	124	67	74
2	202	417	379	1070	476	548	572	518	209	115	64	73
3	190	395	459	960	470	593	526	487	195	119	58	74
4	194	378	6440	852	515	2330	503	452	193	122	61	76
5	223	366	3130	756	555	1810	486	424	185	126	63	85
6	200	559	2130	731	673	1380	486	619	176	126	59	78
7	182	474	1630	677	1240	1570	459	761	174	125	58	75
8	176	419	1270	597	1160	1160	436	563	164	123	60	71
9	178	387	1060	585	987	994	422	497	152	110	105	69
10	178	2500	917	574	880	885	402	470	147	103	218	69
11	182	3130	787	540	768	782	377	439	144	101	115	72
12	202	1840	712	587	659	715	359	419	171	95	94	63
13	268	1350	668	557	623	670	360	401	171	97	89	60
14	318	1070	612	490	724	663	391	380	151	97	86	65
15	240	919	572	468	744	693	394	419	139	93	90	58
16	207	822	684	805	596	658	439	363	130	89	87	63
17	191	785	652	1190	544	634	417	339	129	89	83	57
18	247	714	698	978	516	771	420	357	124	85	79	46
19	821	644	856	832	549	858	383	326	330	84	192	140
20	448	596	687	802	719	738	357	313	255	85	173	114
21	376	556	844	845	732	671	570	293	176	84	135	85
22	344	523	1100	687	663	646	1040	279	171	87	107	71
23	709	590	1170	666	620	770	778	263	261	102	107	66
24	1830	568	2690	635	563	917	770	256	206	105	102	66
25	1070	509	2000	566	560	859	931	255	171	97	236	188
26	835	473	1520	534	539	771	742	248	151	104	140	145
27	696	451	1220	535	513	779	682	243	140	102	105	104
28	615	437	1130	522	484	777	635	236	134	86	93	86
29	558	427	1040	492	---	688	587	218	127	75	87	76
30	503	407	1100	499	---	679	573	211	125	70	87	72
31	472	---	1580	643	---	629	---	224	---	69	82	---
TOTAL	13059	23146	40129	21875	18588	27111	16090	11808	5258	3089	3182	2441
MEAN	421	772	1294	706	664	875	536	381	175	99.6	103	81.4
MAX	1830	3130	6440	1200	1240	2330	1040	761	330	126	236	188
MIN	176	366	379	468	470	473	357	211	124	69	58	46
CFSM	1.63	2.98	5.00	2.72	2.56	3.38	2.07	1.47	.68	.38	.40	.31
IN.	1.88	3.32	5.76	3.14	2.67	3.89	2.31	1.70	.76	.44	.46	.35

BRODHEAD CREEK BASIN

01442500 BRODHEAD AT MINISINK HILLS PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	312	543	729	602	688	987	1001	733	420	261	255	238
MAX	1560	1634	1913	1811	1498	2108	2293	1619	1876	923	2505	1649
(WY)	1956	1973	1974	1979	1951	1977	1983	1989	1972	1969	1955	1987
MIN	54.4	68.1	83.4	50.6	196	387	312	268	119	65.4	46.4	40.8
(WY)	1964	1965	1981	1981	1980	1985	1985	1962	1962	1965	1957	1964

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR				FOR 1991 WATER YEAR				WATER YEARS 1951 - 1991			
ANNUAL TOTAL	250821				185776							
ANNUAL MEAN	687				509				563			
HIGHEST ANNUAL MEAN									957			
LOWEST ANNUAL MEAN									238			
HIGHEST DAILY MEAN	6440				Dec 4				30500			
LOWEST DAILY MEAN	176				Oct 8				30			
ANNUAL SEVEN-DAY MINIMUM	185				Oct 6				33			
INSTANTANEOUS PEAK FLOW					11200				Dec 4			
INSTANTANEOUS PEAK STAGE					8.86				Dec 4			
INSTANTANEOUS LOW FLOW					45				Sep 18			
ANNUAL RUNOFF (CFSM)	2.65				1.97				2.17			
ANNUAL RUNOFF (INCHES)	36.03				26.68				29.55			
10 PERCENT EXCEEDS	1310				982				1220			
50 PERCENT EXCEEDS	515				424				350			
90 PERCENT EXCEEDS	240				84				93			

^a From rating curve extended above 4,600 ft³/s, on basis of computation of flow over dam at gage height 14.43 ft and slope-area measurement of peak flow.

^b From floodmarks.

DELAWARE RIVER BASIN

01446500 DELAWARE RIVER AT BELVIDERE, NJ

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

DRAINAGE AREA.--4,535 mi².

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 is 226.43 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark, discharge, 220,000 ft³/s, from rating curve extended above 170,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2690	5630	5370	25900	7840	7790	9740	8390	4790	2230	1930	1910
2	2540	5010	4960	19500	6870	7630	9530	8100	4350	2040	1980	1810
3	2550	4490	4250	16800	6260	7870	9360	7770	●3330	2070	1970	1730
4	2690	4140	20000	14700	5900	16400	8570	7380	3190	2370	1860	1810
5	2720	3870	40100	13100	6400	29500	8160	6580	2670	2360	1900	1930
6	2740	4290	28000	11500	7110	23600	7730	6680	2550	2300	1930	2010
7	2570	4890	19400	10400	9690	20200	7040	9680	2500	2380	1930	1930
8	2670	5740	15800	9830	16900	18700	6720	10000	●2240	2300	1950	1890
9	2480	5090	12600	8920	17900	16200	6990	8950	●2080	2240	2120	1990
10	3080	8200	10900	8630	14900	13300	6920	8010	2200	2090	2310	1990
11	3060	41800	10500	7950	13200	11600	6660	7300	2410	1840	2230	2000
12	2290	41200	9490	7740	12200	11000	6520	6800	2600	1890	2110	1900
13	2570	23500	8770	7280	10800	9930	6780	6270	2610	2200	1900	1870
14	3250	17200	8170	6690	10400	9310	6080	6420	2670	2130	2440	1880
15	4070	13700	7830	7130	10900	9530	5990	6190	2680	2320	1770	1850
16	4900	11700	7280	7920	10400	9330	6860	5470	2580	2350	2170	1840
17	3640	10800	7080	10300	9050	7960	7030	4880	2590	2370	2300	2110
18	3140	9910	8170	12600	7300	8320	6580	4720	2380	2420	2330	2330
19	4740	9270	10700	12000	7870	10600	5970	4000	2400	2210	2250	2360
20	9050	8570	14700	10200	8480	11500	5320	3700	2910	2400	2750	2640
21	8060	8110	13400	9860	10700	11100	5640	3410	2580	2490	2430	2680
22	5990	7470	13300	9850	13200	10200	11600	3260	2520	2250	1820	2580
23	5470	6450	14400	7930	11800	9900	17100	3190	2800	2480	2110	1720
24	10200	6840	18900	7860	10600	11300	15400	2780	2670	2460	2640	1600
25	22100	6590	25200	7130	9440	12900	15000	2730	2490	2450	1920	2910
26	16100	6020	21300	6490	9490	14100	13800	2770	2230	2240	1440	2870
27	11800	6260	17500	6080	8970	13100	12000	2700	2180	2180	1580	2660
28	9110	5890	14800	5920	8540	12000	10500	2810	2100	2250	1840	2200
29	7720	5570	14100	6610	---	12400	9340	3260	2140	2240	1950	1960
30	6730	5510	13200	7260	---	11500	8910	3400	2470	2020	2020	1540
31	5970	---	16400	7750	---	10800	---	3260	---	1970	2010	---
TOTAL	176690	303710	436570	311830	283110	389570	263840	170860	79910	69540	63890	62500
MEAN	5700	10120	14080	10060	10110	12570	8795	5512	2664	2243	2061	2083
MAX	22100	41800	40100	25900	17900	29500	17100	10000	4790	2490	2750	2910
MIN	2290	3870	4250	5920	5900	7630	5320	2700	2080	1840	1440	1540

● Estimated.

DELAWARE RIVER BASIN

01446500 DELAWARE RIVER AT BELVIDERE, NJ--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4678	7168	8325	7857	8459	14050	15680	10020	5966	4339	3670	3830
MAX	19570	21140	20590	20890	19930	42520	40720	21470	22280	16840	19260	13940
(WY)	1956	1928	1974	1949	1976	1936	1940	1989	1972	1928	1955	1938
MIN	1055	1226	1481	1683	2452	5243	4512	3261	1590	1017	881	1199
(WY)	1942	1965	1923	1981	1980	1981	1985	1965	1965	1965	1954	1941

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1923 - 1991	
ANNUAL TOTAL	3311720		2612020			
ANNUAL MEAN	9073		7156		7829	
HIGHEST ANNUAL MEAN					14130	
LOWEST ANNUAL MEAN					2990	
HIGHEST DAILY MEAN	41800		Nov 11		184000	
LOWEST DAILY MEAN	2290		Oct 12		610	
ANNUAL SEVEN-DAY MINIMUM	2630		Oct 3		782	
INSTANTANEOUS PEAK FLOW			61500		Nov 11	
INSTANTANEOUS PEAK STAGE			13.95		Nov 11	
INSTANTANEOUS LOW FLOW			1340		Sep 30	
10 PERCENT EXCEEDS	18000		14100		16600	
50 PERCENT EXCEEDS	6800		6080		5000	
90 PERCENT EXCEEDS	3070		1990		1900	

- a From rating curve extended above 170,000 ft³/s on basis of flood-routing study.
b From high-water mark in gage house.

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA

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

DRAINAGE AREA.--91.7 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good except for period of estimated record, which are poor. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF PERIOD.--Flood of May 22, 1942, reached a stage of 12.03 ft, from floodmark, present site and datum, discharge, 15,700 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	156	123	470	178	154	256	222	89	40	18	14
2	78	144	120	386	151	205	257	233	68	34	17	14
3	70	134	134	338	143	248	236	210	60	38	16	14
4	87	126	835	298	151	521	215	190	69	38	20	15
5	116	121	721	267	160	478	203	173	69	35	23	43
6	101	221	496	252	189	363	199	238	61	35	19	28
7	90	195	385	238	338	362	188	359	57	35	17	20
8	83	175	310	214	346	306	177	280	53	34	16	17
9	80	155	267	206	282	262	169	233	52	30	23	16
10	78	591	240	200	247	234	161	210	47	26	36	16
11	92	1180	213	189	221	205	144	193	45	24	30	16
12	143	720	195	205	193	195	133	176	61	23	23	15
13	278	499	188	191	187	184	129	164	65	23	20	14
14	321	370	174	179	205	185	151	154	52	23	23	13
15	211	308	163	169	223	198	158	149	45	22	33	13
16	165	269	204	222	186	191	186	133	43	20	37	14
17	140	277	203	342	186	197	193	119	47	19	25	14
18	187	266	241	292	170	264	198	143	43	18	20	13
19	516	226	363	241	169	381	175	125	58	17	66	102
20	328	204	284	219	276	376	155	113	59	17	66	55
21	249	189	264	219	291	320	243	104	47	17	46	34
22	207	176	288	187	248	294	542	97	95	19	34	24
23	343	214	324	●170	219	337	466	90	154	24	30	21
24	739	213	592	●158	194	395	398	84	112	30	26	22
25	474	186	516	●146	183	405	479	81	79	27	23	47
26	345	169	397	●140	177	361	375	82	62	25	20	57
27	270	154	329	●135	168	352	321	77	51	29	19	39
28	230	147	319	●130	159	350	283	73	45	25	18	37
29	205	142	308	●125	---	304	248	66	41	22	17	34
30	185	132	374	●122	---	286	237	61	40	21	15	26
31	169	---	627	193	---	268	---	69	---	20	14	---
TOTAL	6667	8059	10197	6843	5840	9181	7275	4701	1869	810	810	807
MEAN	215	269	329	221	209	296	242	152	62.3	26.1	26.1	26.9
MAX	739	1180	835	470	346	521	542	359	154	40	66	102
MIN	70	121	120	122	143	154	129	61	40	17	14	13
CFSM	2.35	2.93	3.59	2.41	2.27	3.23	2.64	1.65	.68	.28	.28	.29
IN.	2.70	3.27	4.14	2.78	2.37	3.72	2.95	1.91	.76	.33	.33	.33

● Estimated.

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	118	176	211	183	202	304	350	261	161	112	92.5	87.5
MAX	613	439	561	581	709	577	765	604	655	528	1101	511
(WY)	1956	1973	1974	1979	1981	1977	1983	1989	1972	1947	1955	1987
MIN	14.1	17.1	35.5	18.3	62.2	131	144	95.9	43.0	19.8	14.2	9.18
(WY)	1964	1965	1981	1981	1980	1989	1946	1955	1962	1965	1964	1964

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1944 - 1991	
ANNUAL TOTAL	81697		63059			
ANNUAL MEAN	224		173		188	
HIGHEST ANNUAL MEAN					268	
LOWEST ANNUAL MEAN					86.2	
HIGHEST DAILY MEAN	1180	Nov 11	1180	Nov 11	18900	Aug 19 1955
LOWEST DAILY MEAN	53	Aug 4	13	Sep 14,15,18	7.0	Sep 26 1964
ANNUAL SEVEN-DAY MINIMUM	61	Jul 29	14	Sep 12	7.4	Sep 21 1964
INSTANTANEOUS PEAK FLOW			1610	Nov 11	a31900	Aug 19 1955
INSTANTANEOUS PEAK STAGE			3.95	Nov 11	b16.37	Aug 19 1955
INSTANTANEOUS LOW FLOW			13	Sep 14,15	7.0	Sep 26 1964*
ANNUAL RUNOFF (CFSM)	2.44		1.88		2.05	
ANNUAL RUNOFF (INCHES)	33.14		25.58		27.87	
10 PERCENT EXCEEDS	406		351		389	
50 PERCENT EXCEEDS	181		158		127	
90 PERCENT EXCEEDS	88		20		33	

a From rating curve extended above 1,700 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmark.

* Also for Sept. 27, 1964.

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.5°C, August 5, 1990, July 20, 21, 1991; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.5°C, July 20, 21; minimum, 0.0°C on many days during winter period.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	11.0	12.0	---	---	---	5.5	4.0	4.5	1.0	.0	.5
2	14.5	9.5	11.5	---	---	---	6.5	4.5	5.5	2.0	1.0	1.5
3	14.0	8.0	10.5	---	---	---	5.0	3.0	4.0	2.0	1.0	1.5
4	13.0	10.0	11.5	---	---	---	5.5	3.5	4.5	1.5	.5	1.0
5	15.0	8.5	11.0	---	---	---	3.5	1.5	2.5	2.0	.5	1.0
6	16.0	10.0	12.5	---	---	---	2.5	1.0	2.0	2.5	1.5	2.0
7	15.0	10.5	12.5	---	---	---	3.0	2.0	2.5	2.5	.5	2.0
8	15.0	11.5	13.0	---	---	---	3.0	2.0	2.5	2.0	.5	1.0
9	16.0	13.0	14.5	---	---	---	3.0	2.5	3.0	1.5	.0	1.0
10	15.5	13.5	14.5	---	---	---	4.0	2.5	3.0	2.0	1.0	1.5
11	15.5	14.5	15.0	---	---	---	2.5	1.5	2.0	1.5	.5	.5
12	16.5	14.5	15.5	---	---	---	2.5	1.0	2.0	1.0	.0	.5
13	18.0	15.0	16.5	3.0	2.5	2.5	4.0	2.5	3.0	3.0	.5	1.0
14	17.0	16.0	17.0	3.0	2.0	2.5	2.5	.5	1.5	3.0	.5	1.5
15	16.0	13.5	15.0	4.5	2.5	4.0	2.0	.5	1.0	3.0	1.5	2.0
16	14.0	11.5	12.5	---	---	---	2.5	1.5	2.5	3.0	1.5	2.0
17	13.0	10.0	11.5	---	---	---	3.0	2.0	2.5	2.5	2.0	2.0
18	14.0	11.5	12.5	---	---	---	3.5	2.5	3.0	2.0	1.0	1.5
19	---	---	---	2.5	2.5	2.5	3.5	2.5	3.5	2.5	1.0	1.5
20	---	---	---	3.5	2.0	3.0	2.5	1.5	2.0	3.5	2.0	2.5
21	---	---	---	4.5	3.0	3.5	5.0	2.5	3.5	3.0	.0	2.0
22	---	---	---	5.5	3.5	4.5	6.5	5.0	6.0	3.0	.0	2.0
23	---	---	---	6.0	5.5	5.5	8.5	6.5	7.5	3.0	.5	1.5
24	---	---	---	5.5	3.5	4.5	8.0	3.5	6.0	2.5	.5	1.0
25	---	---	---	5.5	3.5	4.5	3.5	1.0	2.0	3.0	.5	2.0
26	---	---	---	5.5	4.0	5.0	1.5	.5	1.0	3.0	.5	1.5
27	---	---	---	6.5	5.0	5.5	1.0	.0	.5	2.5	.5	2.0
28	---	---	---	9.0	5.5	7.0	1.0	.0	.5	3.0	2.5	3.0
29	---	---	---	9.0	6.0	7.5	2.5	1.0	2.0	3.5	.5	2.5
30	---	---	---	6.0	4.5	5.5	3.5	2.5	3.0	3.5	1.0	3.0
31	---	---	---	---	---	---	3.5	1.0	2.0	2.0	.5	1.0
MONTH	18.0	8.0	13.3	9.0	2.0	4.5	8.5	.0	2.9	3.5	.0	1.6

LEHIGH RIVER BASIN

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.5	.5	1.5	6.5	2.5	4.5	5.0	4.0	4.5	17.0	11.5	14.0
2	3.5	2.0	3.0	7.5	4.5	6.0	5.5	4.0	4.5	14.5	11.0	13.0
3	4.5	2.5	3.5	7.5	5.5	6.5	8.5	3.5	5.5	14.0	10.0	12.0
4	4.5	2.5	3.5	7.0	3.5	5.5	9.5	4.0	7.0	15.5	9.5	12.0
5	5.5	3.0	4.0	4.5	3.0	3.5	8.0	7.0	7.5	16.0	10.0	13.0
6	4.0	3.0	3.5	5.0	2.0	4.0	13.0	7.5	10.0	13.5	12.0	12.5
7	3.5	3.0	3.0	5.5	3.0	4.5	15.5	10.0	12.5	13.5	11.0	12.5
8	3.5	2.0	3.0	3.5	1.0	2.0	15.5	11.5	13.5	16.0	10.5	13.0
9	3.5	1.5	2.5	3.5	.5	2.0	15.5	13.0	14.0	13.5	12.0	12.5
10	3.5	2.0	2.5	4.0	1.0	2.0	16.0	11.0	13.5	16.5	12.0	14.0
11	2.5	.0	1.5	3.0	.5	1.5	13.0	8.5	10.5	18.0	12.0	14.5
12	2.0	.0	1.0	3.0	.0	1.5	12.5	6.0	9.0	18.0	13.5	15.5
13	2.0	.5	1.0	2.5	.5	1.5	8.0	6.0	7.0	18.5	13.5	16.0
14	1.5	.5	1.0	2.0	1.5	1.5	11.0	6.0	8.0	19.0	14.5	16.5
15	2.0	.0	1.0	3.0	1.0	2.0	8.5	7.0	8.0	20.5	15.0	17.0
16	2.0	.0	1.5	5.5	.5	2.5	12.0	6.5	9.5	20.0	14.0	16.5
17	2.0	.5	1.0	6.0	1.5	3.5	10.5	9.0	10.0	19.5	13.5	16.0
18	2.5	.5	1.5	4.0	3.0	3.5	9.5	8.0	9.0	18.5	14.0	16.0
19	3.5	2.0	2.5	4.5	3.0	4.0	12.0	7.5	9.5	19.0	12.0	15.0
20	4.0	2.0	3.0	6.0	3.0	4.5	9.0	7.5	8.5	19.5	10.0	14.0
21	3.0	1.0	2.0	4.5	3.5	4.0	7.5	5.0	7.0	20.0	10.0	14.0
22	4.0	2.0	3.0	4.5	3.0	4.0	6.0	5.0	5.5	21.0	11.5	15.5
23	2.5	.5	1.5	4.5	3.0	3.5	10.0	5.0	7.5	20.0	12.0	15.5
24	2.5	.5	2.0	4.5	3.0	4.0	9.0	8.0	8.5	19.5	13.0	16.0
25	3.5	1.5	2.5	4.0	3.5	4.0	12.5	7.5	9.5	22.5	13.5	17.0
26	4.0	2.0	3.0	6.5	3.5	5.0	12.5	9.0	10.5	20.0	14.5	17.0
27	4.0	2.5	3.0	6.5	5.5	6.0	15.5	11.0	13.5	23.0	15.0	18.5
28	4.0	2.5	3.0	11.0	6.5	8.5	14.5	12.0	13.5	24.0	16.0	19.5
29	---	---	---	8.5	6.5	7.5	13.0	11.0	11.5	22.5	14.5	18.0
30	---	---	---	7.0	4.5	5.5	15.0	11.0	12.5	22.5	16.0	18.5
31	---	---	---	7.0	3.0	5.0	---	---	---	22.0	17.0	19.0
MONTH	5.5	.0	2.3	11.0	.0	4.0	16.0	3.5	9.4	24.0	9.5	15.3
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	23.0	15.5	18.5	24.5	15.5	19.5	25.0	17.0	21.0	22.0	15.5	18.5
2	21.5	13.5	17.5	18.0	15.0	16.5	25.5	18.5	22.0	20.0	12.5	16.5
3	21.5	13.5	17.5	17.5	15.5	16.5	23.0	20.0	22.0	20.0	12.5	16.5
4	21.0	14.0	17.5	22.0	14.5	17.5	22.5	18.0	21.0	18.5	15.0	17.0
5	17.5	13.0	15.0	18.5	15.5	17.0	22.5	17.0	19.5	20.0	15.5	17.5
6	17.5	11.5	14.0	---	---	---	23.5	15.0	19.0	20.5	14.5	17.5
7	18.0	11.5	14.5	---	---	---	22.5	15.5	19.0	21.0	14.0	17.5
8	21.0	11.5	15.5	---	---	---	22.5	16.5	20.0	21.5	14.5	18.0
9	22.0	13.5	17.0	---	---	---	20.5	18.5	19.5	21.0	15.5	18.5
10	23.0	14.0	18.0	---	---	---	23.0	17.5	19.5	18.5	17.0	18.0
11	19.5	15.0	17.5	---	---	---	20.0	17.0	18.0	22.0	16.0	19.0
12	22.5	15.0	18.5	---	---	---	20.5	15.5	18.0	20.0	13.5	17.0
13	22.0	13.0	17.0	---	---	---	24.0	16.0	19.5	20.0	12.5	16.5
14	22.0	12.0	16.5	---	---	---	24.0	17.5	20.5	21.5	16.5	19.0
15	22.5	13.5	17.5	---	---	---	20.0	18.0	19.0	19.5	18.0	18.5
16	21.0	15.5	18.5	---	---	---	23.0	16.5	19.5	23.5	17.5	20.5
17	23.0	16.0	18.5	26.0	19.5	23.5	22.5	18.0	20.0	23.5	19.5	21.5
18	18.0	15.5	17.0	26.0	18.5	22.5	23.5	19.5	21.5	22.0	17.5	20.0
19	19.0	15.5	17.0	26.0	19.5	23.0	21.0	17.5	19.0	22.0	15.0	16.5
20	25.0	16.0	20.0	26.5	20.0	23.5	19.0	17.5	18.0	16.0	13.0	14.5
21	23.5	16.0	19.5	26.5	21.0	23.5	21.5	17.5	19.0	14.0	10.5	12.0
22	18.0	16.5	17.5	26.0	21.0	23.5	23.0	17.0	19.5	15.5	8.5	11.5
23	19.0	16.0	17.0	25.5	21.5	23.0	22.5	17.5	19.5	12.0	10.5	11.5
24	21.0	14.5	17.0	25.0	20.0	22.5	22.5	18.0	20.0	16.0	11.5	13.5
25	22.5	15.0	18.0	22.5	19.5	21.0	23.0	19.0	20.5	14.0	13.0	13.5
26	23.0	15.0	19.0	21.0	19.0	20.0	24.0	17.5	20.5	15.5	12.5	13.5
27	23.0	15.0	19.0	23.5	18.0	20.0	23.5	17.0	20.5	13.0	10.0	11.5
28	25.5	15.5	20.0	23.0	16.0	20.0	24.5	18.0	21.0	12.5	7.5	10.0
29	25.0	17.5	21.0	22.0	18.0	19.5	25.0	19.0	22.0	11.0	7.0	9.0
30	24.5	18.0	20.5	22.5	17.0	19.5	25.5	20.0	22.5	12.5	6.5	9.5
31	---	---	---	25.0	19.0	21.5	24.5	19.5	22.0	---	---	---
MONTH	25.5	11.5	17.7	26.5	14.5	20.7	25.5	15.0	20.1	23.5	6.5	15.8

LEHIGH RIVER BASIN

01447680 TUNKHANNOCK CREEK NEAR LONG POND, PA

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

DRAINAGE AREA.--18.0 mi². At site used prior to July 7, 1966, 16.8 mi².

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

REVISED RECORD.--WDR PA-90-1: 1990 (monthly runoff).

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	59	41	132	102	35	54	41	20	10	6.9	5.7
2	30	55	38	117	46	51	54	39	22	10	6.4	5.4
3	29	52	44	94	41	78	50	38	21	9.8	6.0	5.2
4	30	50	219	73	44	154	47	38	18	9.9	6.8	5.0
5	30	50	319	69	50	179	45	36	18	9.9	6.1	5.0
6	31	59	267	66	60	159	44	45	18	9.9	6.0	4.8
7	31	66	184	62	81	129	44	85	17	10	5.8	4.8
8	30	64	129	●59	89	100	43	69	16	10	5.7	4.8
9	28	59	96	55	77	81	40	47	16	9.9	9.9	4.8
10	27	101	78	54	61	66	37	38	15	9.5	26	4.7
11	28	173	65	50	49	59	35	37	14	9.0	43	4.6
12	43	189	70	42	●44	●57	35	33	15	8.5	42	4.4
13	62	158	64	●40	41	55	35	33	16	8.3	30	4.4
14	74	110	57	●38	41	52	40	31	17	8.0	19	4.3
15	71	101	56	●36	50	52	44	31	15	7.7	14	4.4
16	61	81	61	60	●43	52	50	32	14	7.6	11	4.3
17	49	69	68	100	●41	55	54	29	13	7.4	9.3	4.2
18	56	66	75	107	37	64	51	30	13	7.0	8.1	4.9
19	110	62	89	86	39	83	43	32	19	6.7	13	7.8
20	138	59	91	77	65	94	37	28	30	6.4	21	6.9
21	135	56	89	67	75	82	50	25	34	6.2	26	6.7
22	103	54	102	●60	63	67	102	24	27	6.5	26	6.3
23	100	56	112	●50	51	71	100	23	26	7.7	22	6.0
24	141	58	154	●45	●45	82	72	23	27	8.7	18	5.7
25	156	58	170	●43	38	90	71	22	23	10	14	8.8
26	138	53	134	●41	37	81	61	23	18	11	11	13
27	116	49	117	39	37	72	48	23	15	10	9.7	14
28	92	46	81	39	36	69	45	22	13	9.4	8.5	12
29	74	41	81	40	---	64	41	23	12	8.8	7.6	9.6
30	69	41	110	40	---	57	40	21	11	8.0	7.0	7.9
31	63	---	140	59	---	58	---	20	---	7.3	6.3	---
TOTAL	2176	2195	3401	1940	1483	2448	1512	1041	553	269.1	452.1	190.4
MEAN	70.2	73.2	110	62.6	53.0	79.0	50.4	33.6	18.4	8.68	14.6	6.35
MAX	156	189	319	132	102	179	102	85	34	11	43	14
MIN	27	41	38	36	36	35	35	20	11	6.2	5.7	4.2
†	.33	.37	.45	.41	.43	.49	.51	.47	.41	.38	.33	.32
MEAN†	70.5	73.6	110	63.0	53.4	79.5	50.9	34.1	18.8	9.06	14.9	6.67
CFSM†	3.92	4.09	6.09	3.50	2.97	4.42	2.83	1.89	1.04	.50	.83	.37
IN.†	4.52	4.56	7.03	4.04	3.09	5.09	3.16	2.18	1.16	.58	.96	.41

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

‡ Adjusted for diversion.

● Estimated.

LEHIGH RIVER BASIN

01447680 TUNKHANNOCK CREEK NEAR LONG POND. PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.4	46.9	54.8	44.4	47.8	68.6	81.0	64.4	45.2	31.2	22.0	29.2
MAX	93.2	90.1	114	108	83.6	148	188	115	116	89.5	63.6	142
(WY)	1978	1971	1974	1979	1970	1977	1983	1990	1972	1984	1990	1987
MIN	7.35	9.39	7.07	3.85	13.2	21.1	20.5	29.6	15.9	8.68	9.27	5.63
(WY)	1981	1981	1981	1981	1980	1989	1985	1985	1987	1991	1980	1980

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1970 - 1991
ANNUAL TOTAL	23654	17660.6	
ANNUAL MEAN	64.8	48.4	47.6
HIGHEST ANNUAL MEAN		48.7	65.9
LOWEST ANNUAL MEAN			23.7
HIGHEST DAILY MEAN	319	319	643
LOWEST DAILY MEAN	16	4.2	3.3
ANNUAL SEVEN-DAY MINIMUM	19	4.4	3.4
INSTANTANEOUS PEAK FLOW		332	679
INSTANTANEOUS PEAK STAGE		3.53	4.76
INSTANTANEOUS LOW FLOW		4.1	3.3
ANNUAL RUNOFF (CFSM)	3.60	2.69	2.65
ANNUAL RUNOFF (INCHES)	48.88	36.50	35.96
10 PERCENT EXCEEDS	115	100	96
50 PERCENT EXCEEDS	53	41	35
90 PERCENT EXCEEDS	27	7.0	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1969, BY WATER YEAR (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
LOWEST ANNUAL MEAN	24.7
HIGHEST DAILY MEAN	448
LOWEST DAILY MEAN	4.0
ANNUAL SEVEN-DAY MINIMUM	4.7
INSTANTANEOUS PEAK FLOW	480
INSTANTANEOUS PEAK STAGE	4.34
INSTANTANEOUS LOW FLOW	3.0
ANNUAL RUNOFF (CFSM)	1.88
ANNUAL RUNOFF (INCHES)	25.53
10 PERCENT EXCEEDS	60
50 PERCENT EXCEEDS	24
90 PERCENT EXCEEDS	8.6

* Adjusted for diversion.

LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA

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

DRAINAGE AREA.--118 mi².

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 periods of estimated daily discharges which are poor. Power generation by Pocono Lake about 5.0 mi upstream since 1985 and minor diversion from Tunkhannock Creek basin into Wild Creek basin. Satellite 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 ft³/s, by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	265	218	622	243	209	308	239	112	61	27	47
2	110	260	213	522	230	314	307	246	102	61	25	46
3	102	247	302	454	214	400	284	227	97	61	23	43
4	110	239	2290	397	220	854	258	209	92	61	29	43
5	132	237	1800	362	247	806	251	187	89	61	26	44
6	122	377	1080	346	311	609	249	262	85	55	23	42
7	115	368	717	330	417	595	243	408	69	50	23	42
8	105	329	561	289	457	506	230	359	65	55	22	42
9	110	279	479	285	397	430	220	278	70	55	79	41
10	118	795	400	281	337	385	195	231	69	52	87	41
11	149	1390	386	277	286	336	188	212	69	49	84	42
12	297	903	359	276	242	311	170	201	115	47	79	41
13	372	675	335	279	245	284	175	180	92	47	65	40
14	360	515	310	258	285	263	197	148	86	47	52	40
15	277	439	298	250	299	270	230	166	81	45	51	39
16	231	378	327	352	254	258	256	148	73	43	54	36
17	202	369	363	520	243	272	295	145	69	41	47	35
18	333	376	396	483	230	336	288	165	65	41	41	38
19	766	339	500	401	242	414	243	153	139	40	147	58
20	572	317	457	359	352	438	218	134	122	39	95	44
21	441	296	445	337	392	391	309	121	109	38	81	41
22	355	281	487	279	356	352	561	120	121	42	70	40
23	508	320	507	258	308	382	561	112	215	48	65	40
24	850	331	828	240	255	437	471	103	145	68	61	40
25	668	306	736	231	242	485	468	101	107	69	57	58
26	545	283	563	●222	235	454	400	104	88	62	53	61
27	441	259	478	●219	225	421	340	101	84	58	51	87
28	374	252	437	●215	217	416	290	101	79	43	50	92
29	327	252	422	●213	---	377	257	99	73	37	49	52
30	296	236	507	●210	---	355	246	92	62	35	48	51
31	280	---	740	266	---	330	---	109	---	28	48	---
TOTAL	9788	11913	17941	10033	7981	12690	8708	5461	2844	1539	1712	1406
MEAN	316	397	579	324	285	409	290	176	94.8	49.6	55.2	46.9
MAX	850	1390	2290	622	457	854	561	408	215	69	147	92
MIN	102	236	213	210	214	209	170	92	62	28	22	35
CFSM	2.68	3.37	4.90	2.74	2.42	3.47	2.46	1.49	.80	.42	.47	.40
IN.	3.09	3.76	5.66	3.16	2.52	4.00	2.75	1.72	.90	.49	.54	.44

● Estimated.

LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	190	262	295	250	284	423	458	342	226	154	119	165
MAX	598	644	821	764	768	948	1225	784	777	481	372	785
(WY)	1977	1973	1974	1979	1981	1977	1983	1989	1972	1969	1969	1987
MIN	31.2	48.1	58.0	40.6	100	172	162	141	66.6	42.8	34.3	28.0
(WY)	1964	1965	1981	1981	1980	1989	1985	1962	1962	1965	1964	1964

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1962 - 1991	
ANNUAL TOTAL	121163		92016			
ANNUAL MEAN	332		252		264	
HIGHEST ANNUAL MEAN					395	1973
LOWEST ANNUAL MEAN					129	1965
HIGHEST DAILY MEAN	2290	Dec 4	2290	Dec 4	5540	Apr 6 1984
LOWEST DAILY MEAN	899	Aug 4	22	Aug 8	22	Sep 25 1964
ANNUAL SEVEN-DAY MINIMUM	96	Jul 29	24	Aug 2	23	Sep 21 1964
INSTANTANEOUS PEAK FLOW			2700	Dec 4	9190	Sep 27 1985
INSTANTANEOUS PEAK STAGE			7.19	Dec 4	12.33	Sep 27 1985
INSTANTANEOUS LOW FLOW			16	Aug 8	16	Aug 8 1991
ANNUAL RUNOFF (CFSM)	2.81		2.14		2.23	
ANNUAL RUNOFF (INCHES)	38.20		29.01		30.36	
10 PERCENT EXCEEDS	575		481		531	
50 PERCENT EXCEEDS	277		231		180	
90 PERCENT EXCEEDS	123		43		58	

LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--Maximum, 26.5°C, July 20-23; minimum, 0.5°C, Dec. 28, Jan. 11, 14, 21-23, 25, 26, 31, Feb. 1, 12.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	12.0	13.5	10.0	7.5	8.5	4.5	3.0	3.5	2.0	1.5	1.5
2	14.0	11.5	13.0	10.0	7.5	8.5	5.0	3.5	4.0	2.5	1.5	2.0
3	14.0	10.0	12.0	---	---	---	4.0	2.5	3.5	2.5	1.5	2.0
4	14.0	12.5	13.0	---	---	---	6.0	4.0	5.0	2.0	1.5	1.5
5	15.0	11.5	13.0	10.5	8.5	10.0	4.0	2.5	3.0	2.5	1.5	2.0
6	16.0	12.5	14.0	10.5	8.0	9.5	3.0	2.5	2.5	3.0	2.5	2.5
7	17.0	13.0	15.0	8.5	7.5	8.0	3.0	2.5	2.5	2.5	1.5	2.0
8	16.5	14.0	15.5	7.5	6.5	7.0	3.0	2.0	2.5	2.0	1.0	1.5
9	17.5	15.0	16.5	6.5	5.5	6.0	3.0	2.5	2.5	3.0	1.5	2.5
10	18.0	16.0	17.0	---	---	---	3.5	2.5	3.0	3.0	2.0	2.5
11	17.5	17.0	17.0	6.5	5.5	6.0	2.5	1.5	2.0	2.0	.5	1.0
12	18.5	17.0	17.5	4.5	4.0	4.0	3.0	1.5	2.0	2.5	1.0	2.0
13	18.0	17.5	18.0	3.5	3.0	3.5	3.5	2.5	3.0	2.5	1.0	2.0
14	18.0	16.5	17.5	3.5	2.5	3.0	2.5	1.0	1.5	2.0	.5	1.5
15	17.0	15.0	16.0	4.5	2.5	3.5	2.5	1.0	1.5	3.0	1.5	2.0
16	15.5	13.0	14.0	5.5	3.5	4.5	2.5	2.5	2.5	3.0	2.0	2.5
17	15.0	12.5	13.5	5.5	4.0	5.0	2.5	2.0	2.5	2.5	2.0	2.5
18	16.0	13.5	15.0	3.5	2.5	3.0	3.5	2.5	3.0	2.0	1.5	2.0
19	13.5	12.0	13.0	3.0	2.0	2.5	3.5	2.5	3.0	2.5	1.5	2.0
20	12.5	11.0	11.5	3.5	2.5	3.0	2.5	2.0	2.5	3.5	2.0	2.5
21	12.0	10.0	11.0	4.0	3.0	3.5	4.5	2.5	3.5	2.5	.5	1.5
22	12.5	11.0	11.5	---	---	---	5.0	4.5	4.5	1.0	.5	.5
23	13.0	12.0	12.5	5.0	4.5	4.5	7.0	5.0	6.0	2.0	.5	1.0
24	12.5	11.5	12.0	4.5	3.5	4.0	7.0	4.0	5.5	2.0	1.0	1.5
25	12.0	10.5	11.0	5.0	3.5	4.5	4.0	2.5	3.0	1.5	.5	1.0
26	11.0	8.5	10.0	5.0	4.0	4.5	3.0	2.0	2.5	2.0	.5	1.0
27	9.0	7.5	8.0	6.0	4.0	5.0	2.5	1.0	2.0	2.0	1.0	1.5
28	9.0	7.5	8.0	7.5	5.0	6.0	2.5	.5	1.5	2.5	1.5	2.0
29	7.5	6.5	7.0	7.5	4.5	6.0	3.0	2.5	2.5	2.5	1.0	1.5
30	7.5	6.0	7.0	4.5	3.5	4.0	3.5	3.0	3.5	3.5	2.0	2.5
31	9.0	7.0	8.0	---	---	---	3.5	1.5	2.5	2.5	.5	2.0
MONTH	18.5	6.0	13.0	10.5	2.0	5.3	7.0	.5	3.0	3.5	.5	1.8

LEHIGH RIVER BASIN

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.0	.5	1.0	5.5	2.5	3.5	6.5	5.0	5.5	16.5	11.0	13.5
2	3.0	1.0	2.0	6.5	4.0	5.0	6.5	4.5	5.5	13.5	11.0	12.0
3	4.0	2.0	2.5	6.5	4.5	5.5	8.0	4.0	6.0	13.5	10.5	11.5
4	4.0	2.0	3.0	6.0	3.5	4.5	9.5	4.5	7.0	15.5	9.5	12.0
5	4.5	2.0	3.0	4.5	3.0	3.5	8.5	6.5	7.5	17.0	10.0	13.0
6	3.5	3.0	3.0	5.0	3.0	4.0	12.0	7.5	9.5	14.5	12.5	13.5
7	3.0	3.0	3.0	4.5	3.0	4.0	14.0	8.5	10.5	13.5	12.0	12.5
8	3.5	2.5	3.0	3.5	2.0	2.5	14.0	10.0	11.5	15.5	11.5	13.0
9	3.5	2.0	3.0	3.5	1.5	2.5	14.5	11.5	12.5	14.5	12.0	13.0
10	3.5	2.5	3.0	4.0	2.0	2.5	14.0	9.5	12.5	17.0	12.5	14.0
11	2.5	1.0	2.0	3.0	1.0	2.0	12.0	8.0	9.5	18.5	12.5	15.0
12	2.0	.5	1.5	3.5	1.0	2.0	11.5	7.0	9.0	19.0	13.5	16.0
13	3.0	1.5	2.0	2.5	1.0	2.0	8.5	7.5	8.0	20.5	15.0	17.5
14	3.0	2.0	2.5	2.0	1.0	1.5	11.0	7.0	8.5	20.5	15.5	17.5
15	3.0	1.0	2.5	2.5	1.0	2.0	9.0	8.0	8.5	22.0	16.0	18.5
16	2.0	1.0	1.5	4.5	1.0	2.5	12.5	8.0	10.0	22.0	16.0	18.5
17	2.5	1.0	2.0	5.5	1.5	3.5	10.5	9.5	10.0	21.0	16.5	18.5
18	2.5	1.5	2.0	3.5	3.0	3.5	10.0	9.0	9.5	19.0	15.5	17.0
19	3.5	2.5	3.0	4.5	3.0	3.5	12.0	8.5	9.5	20.5	15.5	17.5
20	4.0	2.5	3.5	5.5	3.0	4.0	9.5	8.5	9.0	20.0	14.0	17.0
21	3.5	2.0	2.5	4.5	3.5	4.0	8.5	6.5	7.5	21.0	13.5	17.0
22	4.5	2.5	3.5	4.5	3.5	4.0	7.5	6.5	7.0	22.0	15.5	18.5
23	3.0	1.5	2.0	4.5	3.5	4.0	10.0	6.5	8.0	21.0	16.0	18.5
24	3.5	1.5	2.5	4.5	3.5	4.0	9.0	8.0	8.5	22.0	17.0	19.5
25	4.0	2.5	3.0	4.5	4.0	4.0	11.5	8.0	9.5	24.0	17.5	20.5
26	3.5	2.5	3.0	6.0	3.5	5.0	12.0	8.5	10.0	22.0	18.5	20.5
27	3.0	1.5	2.5	6.0	5.0	5.5	13.5	10.0	11.5	24.5	19.5	21.0
28	3.5	1.5	2.5	9.0	6.0	7.0	14.5	10.5	12.0	24.0	19.5	21.5
29	---	---	---	7.0	6.0	6.5	12.0	11.0	11.5	23.5	17.5	20.5
30	---	---	---	6.5	4.5	5.5	15.0	11.0	12.5	22.5	19.0	21.0
31	---	---	---	7.0	4.0	5.5	---	---	---	24.0	19.5	21.5
MONTH	4.5	.5	2.5	9.0	1.0	3.8	15.0	4.0	9.2	24.5	9.5	16.8
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	24.0	19.5	21.0	24.0	19.0	21.5	24.0	18.0	21.0	20.5	17.0	19.0
2	23.5	17.0	20.5	21.0	18.0	19.5	24.5	19.0	21.5	19.0	14.5	17.0
3	23.0	17.0	20.0	21.0	19.0	19.5	22.5	19.5	21.0	19.0	14.5	17.0
4	21.0	18.0	19.5	23.0	18.5	20.0	21.5	19.0	20.0	19.0	17.0	18.0
5	22.5	16.0	18.0	20.5	18.0	19.0	21.5	18.0	20.0	21.5	17.5	19.5
6	19.5	15.0	18.0	23.5	18.0	20.5	22.0	16.0	19.0	20.0	16.0	18.5
7	21.0	14.0	16.5	23.5	19.5	21.0	21.5	16.0	18.5	20.0	15.5	18.0
8	21.0	14.0	17.5	24.5	19.5	22.0	21.5	16.5	19.0	20.5	16.0	18.5
9	22.5	16.0	19.5	24.0	18.5	21.5	19.5	18.0	19.0	20.0	16.5	18.5
10	23.0	17.0	20.0	23.0	17.5	20.5	22.5	19.0	20.0	19.5	18.0	18.5
11	22.0	18.0	20.0	21.5	17.5	20.0	20.0	18.0	19.0	21.5	18.0	19.0
12	23.0	18.0	20.0	22.0	17.0	19.5	20.0	17.0	18.5	19.0	15.0	17.0
13	21.5	15.5	18.0	20.5	19.5	20.0	21.0	17.5	19.5	18.5	14.0	16.5
14	22.0	14.5	18.0	23.0	19.0	21.0	22.5	18.0	20.5	23.0	17.5	19.0
15	23.5	16.0	20.0	23.5	17.0	20.5	20.5	19.5	20.0	19.0	18.0	18.5
16	23.5	19.0	21.5	24.5	17.5	21.0	23.5	17.5	20.5	22.5	18.0	20.0
17	24.0	19.5	21.5	24.5	19.0	22.0	24.0	19.0	21.5	23.0	20.0	21.5
18	22.0	19.5	20.5	25.0	19.5	22.5	22.5	20.0	21.5	21.0	18.0	20.0
19	21.5	17.5	19.5	25.5	20.5	23.0	21.5	18.5	20.5	20.0	15.0	18.0
20	25.0	19.5	22.0	26.5	20.5	23.5	20.0	19.0	19.5	15.5	13.0	14.5
21	25.0	18.5	22.0	25.5	21.5	23.5	22.0	19.0	20.0	13.5	11.0	12.5
22	22.0	18.0	19.5	24.5	21.0	22.5	22.0	18.0	20.0	14.0	9.5	12.0
23	23.0	19.5	19.5	26.5	21.5	23.5	22.5	18.5	20.5	13.5	12.5	13.0
24	23.5	18.0	21.5	25.5	20.5	23.0	22.5	19.5	21.0	16.0	13.0	14.5
25	23.5	17.5	20.0	23.0	20.0	21.5	22.0	19.5	21.0	15.0	13.5	14.5
26	23.5	17.0	20.5	21.5	20.0	21.0	23.0	18.0	20.5	15.5	13.0	14.0
27	24.0	17.5	21.0	23.5	18.5	20.5	23.0	18.0	20.5	13.5	11.0	13.0
28	25.5	18.5	22.5	21.5	17.0	19.5	24.0	19.0	21.5	14.0	10.5	12.0
29	25.0	21.5	23.5	21.0	18.0	19.5	24.5	20.0	22.0	12.0	9.0	10.5
30	24.0	20.5	22.5	21.5	17.0	19.5	25.0	20.0	22.5	12.0	9.0	10.5
31	---	---	---	24.0	18.5	21.0	24.0	21.0	22.5	---	---	---
MONTH	25.5	14.0	20.1	26.5	17.0	21.1	25.0	16.0	20.4	23.0	9.0	16.4

LEHIGH RIVER BASIN

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

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

DRAINAGE AREA.--290 mi².

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 Lake".

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

REMARKS.--Records good, except for estimated daily discharges, which are poor. Flow regulated by Francis E. Walter Lake (station 01447780) 0.7 mi upstream since February 1961. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	698	450	2010	536	476	650	654	151	145	54	72
2	209	619	451	1360	486	476	688	716	151	124	54	72
3	209	499	548	1100	483	637	783	517	162	111	54	72
4	211	499	1090	1050	486	1750	650	422	194	111	54	72
5	430	637	3970	955	534	2390	586	427	204	215	54	73
6	538	846	3840	932	561	1740	586	716	180	321	54	73
7	207	832	1760	625	888	1460	586	907	281	160	53	73
8	270	733	1130	545	1090	1180	586	662	483	137	52	73
9	244	610	1140	684	1090	851	560	1140	333	104	53	73
10	209	941	1190	605	1060	865	481	585	123	97	52	73
11	210	2620	919	625	710	864	462	445	104	102	52	73
12	583	3060	836	615	525	804	418	452	104	102	108	73
13	856	2850	673	615	665	702	372	683	122	102	145	87
14	1120	1850	593	442	596	576	372	545	134	102	145	100
15	1090	1260	601	521	707	694	473	432	134	84	145	100
16	695	1050	607	607	678	761	607	432	135	73	130	100
17	520	762	881	1210	663	612	644	340	137	73	98	91
18	528	881	994	1100	539	581	642	294	137	70	96	75
19	1290	1080	1250	617	352	1060	568	296	137	68	191	119
20	1320	890	1090	715	639	1650	468	348	137	68	250	154
21	1330	733	981	829	954	1070	466	273	242	68	121	151
22	1710	726	1060	628	858	924	1610	251	418	71	104	151
23	1730	722	1070	634	616	890	1910	251	410	80	104	104
24	2260	729	1440	706	622	936	1280	281	232	95	104	76
25	2780	734	1750	478	736	1740	1620	322	179	125	104	94
26	1940	687	1730	415	593	1460	1190	317	194	144	106	93
27	1330	615	1700	419	554	1160	809	217	154	144	107	111
28	1040	531	1240	543	517	1170	823	107	145	143	105	145
29	679	559	1080	552	---	1070	936	126	145	116	104	145
30	693	499	1070	490	---	946	687	166	145	79	94	145
31	698	---	1800	542	---	936	---	154	---	60	73	---
TOTAL	27171	29752	38934	23169	18738	32431	22513	13478	5807	3494	3020	2913
MEAN	876	992	1256	747	669	1046	750	435	194	113	97.4	97.1
MAX	2780	3060	3970	2010	1090	2390	1910	1140	483	321	250	154
MIN	207	499	450	415	352	476	372	107	104	60	52	72
MEAN†	869	989	1269	735	666	1041	755	444	196	98.0	103	99.8
CFSM†	3.00	3.41	4.38	2.53	2.30	3.59	2.60	1.53	.68	.34	.36	.34
IN.†	3.46	3.81	5.05	2.92	2.39	4.14	2.90	1.76	.75	.39	.42	.38

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

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 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	433	626	685	571	676	1037	1074	800	532	362	273	344
MAX	1435	1488	1748	1858	1542	2018	2685	1968	1359	1165	1153	1784
(WY)	1978	1986	1974	1979	1981	1977	1983	1989	1972	1973	1969	1987
MIN	68.5	68.1	156	131	197	326	341	313	135	67.1	62.0	43.2
(WY)	1964	1965	1965	1981	1980	1981	1966	1962	1962	1965	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1961 - 1991
ANNUAL TOTAL	292131	221420	
ANNUAL MEAN	800	607	617
HIGHEST ANNUAL MEAN			895
LOWEST ANNUAL MEAN			289
HIGHEST DAILY MEAN	3970	Dec 5	8390
LOWEST DAILY MEAN	199	Jan 6	22
ANNUAL SEVEN-DAY MINIMUM	212	Jul 30	33
INSTANTANEOUS PEAK FLOW			9140
INSTANTANEOUS PEAK STAGE			8.70
INSTANTANEOUS LOW FLOW			1.3
ANNUAL RUNOFF (CFSM)	2.76	2.76	2.13
ANNUAL RUNOFF (INCHES)	37.47	37.51	28.91
10 PERCENT EXCEEDS	1570	1240	1330
50 PERCENT EXCEEDS	616	528	410
90 PERCENT EXCEEDS	279	82	107

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1960, BY WATER YEAR (PRIOR TO REGULATION)

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
LOWEST ANNUAL MEAN	478
HIGHEST DAILY MEAN	10700
LOWEST DAILY MEAN	50
ANNUAL SEVEN-DAY MINIMUM	63
INSTANTANEOUS PEAK FLOW	b13800
INSTANTANEOUS PEAK STAGE	9.85
INSTANTANEOUS LOW FLOW	
ANNUAL RUNOFF (CFSM)	2.33
ANNUAL RUNOFF (INCHES)	31.69
10 PERCENT EXCEEDS	1390
50 PERCENT EXCEEDS	440
90 PERCENT EXCEEDS	141

‡ Adjusted for change in contents in Francis E. Walter Reservoir.

a Result of shutoff at lake.

b From rating curve extended above 6,100 ft³/s.

LEHIGH RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1987 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.0°C, July 19, 23, 31; 0.0°C, on many days during winter periods.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.5	13.5	13.5	8.5	7.5	7.5	---	---	---	2.5	1.0	1.5
2	14.5	13.5	13.5	8.5	8.0	8.5	---	---	---	1.5	1.0	1.5
3	14.5	13.0	13.5	9.0	8.5	8.5	---	---	---	2.0	1.5	1.5
4	15.0	13.0	13.5	---	---	---	---	---	---	1.5	1.0	1.5
5	14.5	13.5	14.0	9.5	9.0	9.5	---	---	---	1.0	.5	1.0
6	14.5	13.5	14.0	10.0	9.5	10.0	---	---	---	1.5	.5	1.0
7	14.5	13.5	14.0	9.5	8.5	9.0	---	---	---	2.0	1.5	1.5
8	14.5	13.5	14.0	8.5	7.0	8.0	---	---	---	1.5	1.0	1.0
9	15.5	14.5	15.0	7.0	5.5	6.5	2.5	2.5	2.5	1.0	1.0	1.0
10	15.5	14.5	15.0	---	---	---	3.0	2.5	2.5	1.5	1.0	1.0
11	16.5	15.0	15.5	6.0	6.0	6.0	2.5	2.0	2.5	1.5	1.0	1.0
12	18.0	16.5	17.0	5.5	4.5	5.0	2.0	2.0	2.0	1.0	.5	1.0
13	19.0	17.5	18.5	4.5	3.5	4.0	2.5	2.0	2.0	1.0	.5	.5
14	18.5	17.5	18.0	3.5	3.0	3.0	2.5	1.5	2.0	1.0	.5	.5
15	17.5	16.5	17.0	3.5	3.0	3.0	2.0	1.5	1.5	.5	.5	.5
16	16.5	14.5	15.5	4.5	3.0	4.0	2.0	1.5	1.5	1.5	.5	1.0
17	14.5	13.5	14.0	---	---	---	2.0	2.0	2.0	2.0	1.5	1.5
18	14.5	13.5	14.0	5.0	4.5	5.0	3.0	2.0	2.5	2.0	1.5	1.5
19	14.0	12.5	13.5	4.5	2.5	3.5	3.0	3.0	3.0	1.5	1.0	1.5
20	12.5	11.5	12.0	3.0	2.5	2.5	3.0	2.5	3.0	2.0	1.0	1.5
21	11.5	11.0	11.5	---	---	---	3.5	2.5	3.0	2.5	2.0	2.0
22	12.0	11.0	11.5	---	---	---	5.5	3.5	4.5	1.5	1.0	1.5
23	13.5	12.0	12.5	5.0	3.5	4.0	8.0	5.5	6.5	1.0	.5	1.0
24	13.0	12.0	12.5	5.0	4.5	4.5	8.0	6.5	7.0	.5	.5	.5
25	12.0	11.5	11.5	4.5	4.0	4.5	6.0	4.0	5.0	.5	.5	.5
26	11.5	9.5	10.5	5.0	4.0	4.5	3.5	2.0	2.5	.5	.0	.5
27	9.5	7.5	8.5	5.0	4.5	4.5	2.0	1.5	1.5	.5	.0	.5
28	8.0	7.5	7.5	6.5	4.5	5.5	1.5	1.0	1.0	.5	.0	.0
29	7.5	7.0	7.5	7.0	5.5	6.5	2.0	1.0	1.5	.5	.0	.0
30	7.0	6.0	6.5	6.5	5.5	6.0	3.5	2.0	2.5	.5	.0	.0
31	7.5	6.5	7.0	---	---	---	3.5	2.5	3.0	1.0	.5	.5
MONTH	19.0	6.0	13.0	10.0	2.5	5.7	8.0	1.0	2.8	2.5	.0	1.0

LEHIGH RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	.5	.5	.5	2.0	1.5	2.0	6.0	4.5	5.5	14.0	12.0	12.5
2	.5	.5	.5	4.0	2.0	3.0	5.5	5.0	5.0	14.0	13.5	13.5
3	1.0	.5	.5	5.0	3.0	4.0	6.0	5.0	5.5	13.5	12.5	13.0
4	1.5	1.0	1.0	5.5	5.0	5.5	6.0	5.0	5.5	13.0	12.0	12.0
5	2.0	1.5	1.5	5.5	3.5	4.5	7.5	6.0	6.5	12.5	12.0	12.0
6	2.5	2.0	2.5	4.0	3.5	3.5	9.0	7.0	7.5	13.5	12.0	13.0
7	3.0	2.5	3.0	4.5	4.0	4.5	10.0	7.5	9.0	13.5	12.5	13.0
8	3.0	2.5	3.0	4.5	2.5	3.5	12.0	9.5	10.5	13.5	12.0	12.5
9	3.0	2.0	2.5	2.5	2.0	2.5	13.0	11.5	12.5	13.5	13.0	13.0
10	3.0	2.0	2.5	2.5	2.0	2.5	14.0	13.0	13.5	14.0	13.0	13.5
11	3.0	2.0	2.5	2.5	1.5	2.0	14.0	12.5	13.0	14.0	13.0	13.5
12	2.0	1.0	1.5	2.0	1.5	1.5	12.5	10.0	11.5	14.5	13.5	14.0
13	1.0	1.0	1.0	2.0	1.5	1.5	10.5	9.5	10.0	16.5	14.0	15.5
14	1.0	1.0	1.0	2.0	1.5	1.5	9.5	8.0	8.5	17.0	16.5	16.5
15	1.5	1.0	1.0	2.0	1.5	1.5	9.0	8.5	8.5	18.5	17.0	17.5
16	1.5	.5	1.0	2.5	1.5	2.0	9.5	8.5	9.0	19.0	18.0	18.5
17	.5	.5	.5	3.5	2.0	3.0	10.5	9.5	10.0	19.5	18.5	18.5
18	.5	.5	.5	4.0	3.0	3.5	10.0	9.5	10.0	19.0	18.0	18.5
19	1.0	.5	.5	4.0	3.5	3.5	9.5	9.0	9.5	18.5	17.0	17.5
20	2.0	1.5	1.5	4.5	3.5	4.0	9.5	9.5	9.5	18.0	16.5	17.0
21	2.5	2.0	2.0	4.5	4.0	4.5	9.5	8.0	9.0	17.5	16.5	17.0
22	2.5	2.0	2.5	4.0	3.5	4.0	8.0	6.5	7.0	18.0	16.5	17.5
23	3.0	2.0	2.5	4.0	3.5	4.0	8.5	6.5	7.0	18.5	17.5	18.0
24	2.0	1.5	2.0	4.5	4.0	4.0	8.5	8.0	8.5	19.0	18.0	18.5
25	2.0	1.5	2.0	4.5	4.0	4.0	10.0	8.5	9.0	20.0	19.0	19.5
26	2.5	2.0	2.0	4.5	4.0	4.0	10.5	9.0	10.0	20.5	19.5	20.0
27	2.5	1.5	2.0	6.0	5.0	5.5	11.5	11.0	11.0	---	---	---
28	2.0	1.5	1.5	8.5	6.0	7.0	12.5	12.0	12.0	21.5	20.0	20.5
29	---	---	---	8.5	7.0	8.0	12.5	12.0	12.5	23.0	20.0	21.0
30	---	---	---	7.5	6.0	7.0	12.5	11.5	12.0	22.0	21.0	21.5
31	---	---	---	6.0	4.5	5.0	---	---	---	22.5	21.0	21.5
MONTH	3.0	.5	1.6	8.5	1.5	3.8	14.0	4.5	9.3	23.0	12.0	16.3
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	23.0	21.0	21.5	22.5	21.0	21.5	---	---	---	23.0	20.0	21.5
2	23.0	20.5	21.5	22.0	21.0	21.5	---	---	---	22.5	19.5	20.5
3	22.5	20.5	21.0	21.5	21.0	21.5	24.5	21.0	22.5	22.0	19.5	20.0
4	22.0	21.0	21.0	22.0	21.0	21.5	23.5	22.0	22.5	21.0	19.5	20.0
5	21.5	19.5	20.5	22.0	21.0	21.5	24.0	21.5	22.5	22.0	19.5	20.5
6	20.5	18.5	19.5	22.5	21.0	22.0	24.5	21.0	22.0	22.0	19.0	20.0
7	20.0	18.5	19.0	22.5	21.0	21.5	24.0	20.5	22.0	21.5	18.5	20.0
8	20.5	19.5	20.0	23.0	21.5	22.0	23.5	20.5	22.0	21.5	18.5	20.0
9	21.0	19.5	20.0	23.5	21.5	22.0	22.0	21.5	21.5	21.5	19.0	20.0
10	21.5	19.5	20.0	24.5	21.0	22.0	22.5	20.0	21.5	20.0	19.5	20.0
11	21.0	19.5	20.0	23.0	21.0	22.0	21.5	20.0	20.5	21.5	19.5	20.0
12	21.5	20.0	20.5	23.0	21.0	22.0	21.5	20.0	20.5	21.5	19.0	20.0
13	21.5	19.0	20.0	22.5	21.5	21.5	22.0	20.5	21.0	21.0	18.5	19.5
14	21.0	18.5	19.5	23.5	21.5	22.0	22.0	20.5	21.0	21.0	19.0	19.5
15	21.0	18.5	19.5	24.5	20.5	22.0	21.5	21.0	21.0	20.0	19.5	20.0
16	21.0	19.5	20.0	24.0	20.5	22.0	22.5	20.5	21.5	21.5	20.0	20.5
17	21.5	20.0	20.5	24.0	20.5	22.0	22.5	20.5	21.5	21.5	20.0	20.5
18	21.0	20.5	20.5	24.5	21.0	22.5	22.5	21.0	21.5	21.5	19.5	20.5
19	21.0	20.5	21.0	25.0	21.5	22.5	22.5	21.5	22.0	---	---	---
20	22.5	20.5	21.0	24.5	21.5	23.0	22.5	21.0	22.0	---	---	---
21	22.0	20.5	21.0	24.5	22.0	23.0	22.0	20.0	21.0	---	---	---
22	21.5	21.5	21.5	24.0	22.0	23.0	22.0	20.0	21.0	---	---	---
23	21.5	20.0	20.5	25.0	22.5	23.5	22.0	20.5	21.0	---	---	---
24	21.0	19.0	20.0	24.5	22.5	23.5	22.0	20.5	21.0	---	---	---
25	21.0	19.0	19.5	24.0	23.0	23.5	22.0	21.0	21.0	---	---	---
26	22.5	19.5	20.5	24.0	23.5	23.5	22.5	21.0	21.5	---	---	---
27	21.5	19.5	20.5	24.0	22.0	23.0	23.0	20.5	21.5	---	---	---
28	22.0	20.0	21.0	24.5	22.0	23.0	23.0	21.0	21.5	---	---	---
29	22.0	20.5	21.0	23.5	22.0	22.5	23.0	21.0	22.0	---	---	---
30	22.0	21.0	21.5	24.0	21.5	22.5	23.5	21.5	22.0	---	---	---
31	---	---	---	25.0	21.5	22.5	23.5	21.0	22.0	---	---	---
MONTH	23.0	18.5	20.4	25.0	20.5	22.3	24.5	20.0	21.5	23.0	18.5	20.2

LEEIGE RIVER BASIN

01448500 DILLDOWN CREEK NEAR LONG POND, PA

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

DRAINAGE AREA.--2.39 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	5.8	3.3	10	4.1	3.5	5.4	4.0	1.7	.86	.57	.54
2	2.0	5.5	3.3	9.0	3.7	8.1	5.2	4.2	1.5	.84	.58	.54
3	2.1	5.3	6.8	8.2	3.8	6.9	4.5	3.8	1.5	.90	.56	.55
4	2.6	4.9	78	7.4	4.3	24	4.2	3.5	1.5	.85	1.1	.57
5	2.7	4.7	17	6.8	4.9	11	4.3	3.3	1.5	.87	.59	.57
6	2.1	11	12	6.7	6.3	8.8	4.2	8.5	1.5	.81	.54	.53
7	1.9	6.0	11	6.3	9.4	13	3.9	7.4	1.5	.77	.53	.52
8	1.9	4.9	9.4	5.7	6.7	8.2	3.7	4.4	1.4	.72	.51	.50
9	1.9	4.5	8.4	5.6	5.5	7.1	3.7	4.0	1.4	.68	6.9	.50
10	1.9	45	7.8	5.5	4.9	6.7	3.7	3.8	1.3	.63	2.4	.55
11	3.2	20	6.9	5.2	4.3	6.2	3.4	3.5	1.7	.62	.76	.53
12	11	11	6.4	5.3	4.1	5.8	3.1	3.5	2.0	.60	.66	.49
13	10	8.9	6.1	4.9	4.0	5.6	3.4	3.3	1.5	.66	.61	.49
14	6.7	7.8	5.4	4.5	5.1	5.5	3.9	3.2	1.3	.61	.57	.49
15	4.5	7.2	5.4	4.3	4.8	5.2	5.0	3.1	1.2	.54	.61	.52
16	3.8	7.0	7.6	12	3.8	5.3	4.5	2.7	1.2	.55	.57	.49
17	3.5	7.4	6.3	12	3.6	6.3	5.7	3.0	1.2	.56	.53	.46
18	20	6.5	9.7	7.1	3.4	9.2	4.0	3.6	1.2	.63	.57	.55
19	20	5.8	11	5.7	4.1	11	3.5	2.6	4.2	.78	5.9	1.5
20	8.5	5.3	6.4	5.7	8.1	8.0	3.4	2.4	1.5	.77	1.2	.59
21	7.3	5.0	11	5.5	5.3	6.2	8.6	2.3	1.2	.87	.93	.52
22	6.7	4.8	11	4.8	4.6	6.2	9.5	2.2	1.7	1.1	.71	.52
23	24	6.7	12	4.4	4.1	7.8	7.0	2.1	2.3	1.5	.64	.52
24	24	5.4	29	4.3	3.7	9.5	6.1	2.1	1.1	.91	.84	.52
25	12	4.5	14	4.1	3.6	7.6	6.2	2.0	.99	.75	.65	2.0
26	10	4.1	11	3.9	3.5	6.5	4.9	1.9	1.0	.94	.60	.83
27	8.7	3.9	9.8	3.8	3.4	7.0	4.7	1.8	.99	.76	.59	.56
28	8.1	3.9	9.4	3.6	3.3	6.6	4.4	2.1	.92	.65	.57	.53
29	7.2	3.7	9.7	3.4	---	5.7	4.2	1.7	.89	.65	.56	.53
30	6.6	3.4	14	3.9	---	5.7	4.3	1.7	.90	.63	.55	.52
31	6.2	---	19	6.0	---	5.4	---	1.8	---	.60	.55	---
TOTAL	233.3	229.9	378.1	185.6	130.4	239.6	142.6	99.5	43.79	23.61	33.45	18.53
MEAN	7.53	7.66	12.2	5.99	4.66	7.73	4.75	3.21	1.46	.76	1.08	.62
MAX	24	45	78	12	9.4	24	9.5	8.5	4.2	1.5	6.9	2.0
MIN	1.9	3.4	3.3	3.4	3.3	3.5	3.1	1.7	.89	.54	.51	.46
CFSM	3.15	3.21	5.10	2.51	1.95	3.23	1.99	1.34	.61	.32	.45	.26
IN.	3.63	3.58	5.89	2.89	2.03	3.73	2.22	1.55	.68	.37	.52	.29

● Estimated.

LEHIGH RIVER BASIN

01448500 DILLDOWN CREEK NEAR LONG POND, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.97	4.50	6.01	4.97	5.05	7.59	8.79	6.58	4.26	2.83	2.35	2.25
MAX	16.6	11.5	15.1	14.3	11.5	13.8	21.4	17.1	14.6	13.0	15.5	12.9
(WY)	1956	1971	1974	1978	1951	1977	1983	1989	1969	1969	1955	1987
MIN	.35	.51	.64	.42	1.41	2.12	2.75	2.69	1.43	.69	.52	.38
(WY)	1965	1965	1981	1981	1989	1989	1985	1965	1965	1965	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1949 - 1991
ANNUAL TOTAL	2574.3	1758.38	
ANNUAL MEAN	7.05	4.82	4.85
HIGHEST ANNUAL MEAN			8.26 1952
LOWEST ANNUAL MEAN			1.92 1965
HIGHEST DAILY MEAN	133 May 17	78 Dec 4	153 Jun 15 1969
LOWEST DAILY MEAN	1.4 Jan 9	.46 Sep 17	.25 Dec 10 1964
ANNUAL SEVEN-DAY MINIMUM	1.4 Jan 9	.50 Sep 11	.27 Nov 10 1964
INSTANTANEOUS PEAK FLOW		139 Dec 4	a630 Jun 14 1969
INSTANTANEOUS PEAK STAGE		2.62 Dec 4	3.99 Jun 14 1969
INSTANTANEOUS LOW FLOW		.39 Nov 15	.10 Dec 10 1964
ANNUAL RUNOFF (CFSM)	2.95	2.02	2.03
ANNUAL RUNOFF (INCHES)	40.07	27.37	27.56
10 PERCENT EXCEEDS	13	9.5	9.5
50 PERCENT EXCEEDS	4.7	3.8	3.2
90 PERCENT EXCEEDS	2.3	.57	.88

a From rating curve extended above 300 ft³/s, on basis of culvert and flow-over-dam computations of peak flow.

LEHIGH RIVER BASIN

01449000 LEHIGH RIVER AT LEHIGHTON, PA

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

DRAINAGE AREA.--591 mi².

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	658	1570	901	3810	1160	966	●1700	1360	541	313	177	177
2	568	1490	899	3030	1020	1090	1410	1490	459	274	166	168
3	539	1250	1020	2430	1000	1230	1580	1360	433	259	161	167
4	537	1180	6560	2280	997	3450	●1450	1060	436	248	183	173
5	597	1210	6320	2020	1020	4470	1290	1030	460	244	177	193
6	988	1690	7180	1960	1150	3520	1280	1250	440	415	169	179
7	602	1650	3940	1760	1640	3230	1230	2220	407	376	167	170
8	516	1410	2700	1310	2070	2810	1190	1050	606	296	163	168
9	583	1240	2500	1400	1960	2090	1180	1930	676	264	355	168
10	503	2590	2440	1440	1890	2010	1090	1450	445	232	519	178
11	498	5130	2030	1290	1690	1890	1000	1070	340	216	278	186
12	963	4980	1800	1350	1210	1800	949	1050	395	218	221	173
13	2190	4450	1680	1290	1230	1610	840	1100	402	231	246	167
14	2660	3630	1410	1160	1420	1500	869	1350	353	244	289	179
15	2400	2420	1350	969	1390	1440	922	1110	344	225	307	194
16	1740	2290	1440	1460	1320	1560	1160	994	336	201	319	197
17	1370	1790	1510	2280	1250	1530	1220	938	343	189	275	196
18	1610	1710	1900	2550	1210	1460	1210	826	328	187	231	186
19	4380	1890	2310	1590	957	2060	1150	778	419	190	588	315
20	3220	1780	2180	1560	1140	2610	963	759	409	187	649	318
21	2830	1450	1990	1760	1560	2360	1050	757	349	186	410	277
22	2800	1400	2380	1560	1670	1920	2220	659	530	213	289	259
23	3850	1480	2470	1260	1210	2060	3210	636	759	217	256	253
24	5650	1480	3980	1510	1160	2230	2440	621	675	237	●290	218
25	5260	1380	4000	1230	1190	2610	2760	667	376	233	●250	259
26	4210	1320	3540	●980	1260	3030	2560	707	389	267	214	278
27	2900	1160	3260	●960	1030	2360	1820	681	355	296	217	231
28	2630	1120	2860	●950	1060	2370	1770	532	319	276	218	231
29	1890	1020	2420	●1120	---	2190	1740	436	309	265	213	253
30	1740	1040	2430	1060	---	1950	1710	455	305	233	211	253
31	1660	---	3530	1210	---	1880	---	516	---	201	201	---
TOTAL	62542	58200	84930	50539	36864	67286	44963	30842	12938	7633	8409	6364
MEAN	2017	1940	2740	1630	1317	2171	1499	995	431	246	271	212
MAX	5650	5130	7180	3810	2070	4470	3210	2220	759	415	649	318
MIN	498	1020	899	950	957	966	840	436	305	186	161	167

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1991, BY WATER YEAR

	794	1251	1599	947	1458	1810	2328	2101	1205	859	553	871
MEAN	794	1251	1599	947	1458	1810	2328	2101	1205	859	553	871
MAX	2017	2366	3353	1630	2470	3164	5475	4038	1965	1955	1073	3767
(WY) 1991	1991	1986	1984	1991	1984	1986	1983	1989	1989	1984	1990	1987
MIN	238	303	515	532	566	926	899	986	431	246	271	212
(WY) 1983	1983	1985	1990	1989	1987	1989	1985	1985	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1983 - 1991
ANNUAL TOTAL	614073	471510	
ANNUAL MEAN	1682	1292	1312
HIGHEST ANNUAL MEAN			1729
LOWEST ANNUAL MEAN			758
HIGHEST DAILY MEAN	8920	May 17	15100
LOWEST DAILY MEAN	380	Aug 4	142
ANNUAL SEVEN-DAY MINIMUM	421	Jul 30	151
INSTANTANEOUS PEAK FLOW			25500
INSTANTANEOUS PEAK STAGE		7.42	18.22
INSTANTANEOUS LOW FLOW			147
10 PERCENT EXCEEDS	3240	2620	2740
50 PERCENT EXCEEDS	1290	1100	891
90 PERCENT EXCEEDS	567	213	296

▲ From rating curve extended above 16,000 ft³/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 northeast of Lehighton.

DRAINAGE AREA.--49.9 mi².

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. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	112	77	200	110	96	116	101	55	31	20	18
2	53	106	75	192	102	107	112	98	48	31	20	17
3	52	101	110	183	102	112	106	94	46	33	19	17
4	54	97	684	169	110	295	102	89	46	32	21	17
5	58	93	485	157	115	298	100	87	44	32	20	20
6	52	102	329	152	135	249	99	126	42	32	18	18
7	50	91	261	146	207	252	95	127	41	33	18	17
8	49	86	218	132	193	198	92	99	40	31	18	17
9	47	82	189	128	180	178	89	95	38	28	43	16
10	47	261	170	123	166	165	87	93	37	26	49	17
11	48	337	153	117	151	153	82	90	38	26	24	18
12	55	237	142	120	136	142	80	87	51	25	21	16
13	71	197	134	114	129	136	79	84	45	25	19	15
14	72	169	124	104	146	134	82	82	37	25	19	15
15	57	154	118	100	143	136	85	80	35	24	19	15
16	52	142	130	174	120	128	86	76	35	23	19	15
17	50	137	120	235	111	117	83	73	36	22	18	15
18	136	127	133	210	107	139	78	74	33	22	17	15
19	224	118	141	185	112	135	74	69	77	21	24	18
20	142	112	119	174	131	120	72	67	50	21	23	18
21	118	106	148	175	125	116	106	65	39	20	23	17
22	108	102	170	151	117	117	142	63	46	22	20	16
23	191	112	212	140	112	141	110	61	64	23	18	15
24	297	104	498	133	107	151	120	59	46	25	21	16
25	241	96	445	123	107	140	131	57	39	22	40	42
26	201	90	323	117	105	136	116	57	36	25	24	26
27	171	87	259	114	102	142	115	56	34	26	21	20
28	152	85	235	111	98	138	112	57	33	22	20	18
29	139	83	213	106	---	129	107	52	32	22	19	18
30	127	79	204	107	---	127	107	52	31	22	18	18
31	120	---	229	135	---	118	---	60	---	21	19	---
TOTAL	3290	3805	6848	4527	3579	4745	2965	2430	1274	793	692	540
MEAN	106	127	221	146	128	153	98.8	78.4	42.5	25.6	22.3	18.0
MAX	297	337	684	235	207	298	142	127	77	33	49	42
MIN	47	79	75	100	98	96	72	52	31	20	17	15
CFSM	2.13	2.54	4.43	2.93	2.56	3.07	1.98	1.57	.85	.51	.45	.36
IN.	2.45	2.84	5.11	3.37	2.67	3.54	2.21	1.81	.95	.59	.52	.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR

	MEAN	66.7	95.0	129	111	121	155	156	132	98.5	68.6	54.8	58.1
MAX	181	203	271	323	185	330	369	270	248	165	193	264	
(WY)	1977	1973	1974	1979	1975	1977	1983	1989	1972	1969	1969	1987	
MIN	18.9	24.7	22.9	13.9	45.0	60.2	47.9	68.5	36.4	24.4	17.0	15.5	
(WY)	1981	1981	1981	1981	1980	1985	1985	1987	1987	1985	1985	1980	

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1967 - 1991
ANNUAL TOTAL	48032	35488	
ANNUAL MEAN	132	97.2	104
HIGHEST ANNUAL MEAN			149
LOWEST ANNUAL MEAN			46.5
HIGHEST DAILY MEAN	1210	May 17	1550
LOWEST DAILY MEAN	38	Aug 4	12
ANNUAL SEVEN-DAY MINIMUM	44	Jul 29	13
INSTANTANEOUS PEAK FLOW			2080
INSTANTANEOUS PEAK STAGE			6.28
INSTANTANEOUS LOW FLOW			14
ANNUAL RUNOFF (CFSM)	2.64		1.95
ANNUAL RUNOFF (INCHES)	35.81		26.46
10 PERCENT EXCEEDS	229		184
50 PERCENT EXCEEDS	104		90
90 PERCENT EXCEEDS	52		19

a From rating curve extended above 800 ft³/s.

LEHIGH RIVER BASIN

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

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

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.5°C July 25, 1970; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.5°C, July 21; minimum, 0.5°C, Jan. 11, 12, 14, 26, Feb. 16, 17.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	14.5	12.5	13.5	11.0	9.0	10.0	5.0	3.5	4.5	4.0	2.5	3.5
2	13.5	12.0	12.5	11.5	9.0	10.5	6.0	4.5	5.0	5.0	4.0	4.5
3	12.5	10.5	11.5	12.0	10.0	11.0	5.5	4.0	4.5	4.5	3.5	4.0
4	13.5	12.0	12.5	11.5	10.0	11.0	8.0	6.0	7.5	4.0	3.0	3.5
5	14.0	11.5	13.0	12.0	9.5	11.0	6.5	5.5	6.0	3.5	1.5	2.5
6	15.0	12.0	13.5	12.0	9.5	11.0	7.0	5.5	6.5	5.0	3.5	4.5
7	15.5	13.0	14.5	9.5	8.0	8.5	7.5	7.0	7.0	5.0	3.0	4.5
8	16.0	14.5	15.0	9.0	7.0	8.0	7.0	6.5	6.5	3.0	1.5	2.0
9	17.0	15.5	16.0	7.0	5.5	6.0	6.5	6.0	6.5	3.5	2.0	2.5
10	18.0	16.0	17.0	8.5	7.0	8.0	7.0	6.0	6.5	4.5	3.5	4.0
11	17.5	17.0	17.5	8.5	7.5	8.0	6.0	5.0	5.0	3.5	.5	1.5
12	18.5	17.0	17.5	8.0	7.0	7.5	5.0	4.0	5.0	2.0	.5	1.0
13	18.5	17.5	17.5	7.0	6.0	6.5	6.5	5.0	5.5	3.0	2.0	2.5
14	18.5	16.5	17.5	7.0	5.5	6.5	6.0	3.5	4.5	2.0	.5	1.5
15	16.5	14.5	15.5	8.5	6.0	7.0	4.0	2.5	3.5	3.5	1.5	2.5
16	14.0	12.0	13.0	9.5	7.0	8.0	5.5	4.5	5.0	4.0	2.0	3.0
17	13.5	10.5	12.0	9.5	7.0	9.0	5.5	5.0	5.5	4.5	3.0	3.5
18	16.0	13.0	14.5	7.0	5.0	6.0	6.5	5.5	6.0	4.5	4.0	4.5
19	14.5	11.5	12.5	5.5	4.0	5.0	6.5	6.0	6.5	5.0	4.0	4.5
20	11.5	9.5	10.5	6.5	5.0	5.5	5.5	4.5	5.0	6.0	4.5	5.0
21	11.5	8.5	10.0	7.0	5.5	6.5	7.0	5.5	6.0	5.5	2.5	4.5
22	13.0	11.0	12.0	8.0	6.0	7.0	8.5	7.0	8.0	2.5	1.5	2.0
23	14.5	13.0	13.5	8.5	8.0	8.0	10.0	8.5	9.5	2.5	1.0	1.5
24	14.0	12.0	13.0	8.0	6.5	7.0	10.0	5.5	8.5	3.0	2.5	2.5
25	12.0	10.5	11.5	8.0	3.5	6.5	5.5	4.0	4.5	2.5	1.0	1.5
26	11.5	9.5	10.5	8.0	7.0	7.5	5.0	3.5	4.0	2.0	.5	1.0
27	9.5	8.0	9.0	8.5	6.5	7.5	4.0	3.0	3.5	3.0	1.5	2.0
28	9.5	8.0	9.0	10.0	7.0	8.5	4.0	1.5	2.5	4.5	3.0	3.5
29	9.0	7.5	8.5	10.0	7.0	9.0	5.5	4.0	5.0	4.5	2.0	3.0
30	9.0	6.5	7.5	7.0	5.0	6.0	6.0	5.5	5.5	5.5	4.5	5.0
31	10.5	8.5	9.5	---	---	---	6.0	4.0	5.0	4.5	2.5	3.5
MONTH	18.5	6.3	13.0	12.2	3.6	7.9	10.2	1.5	5.6	5.8	.3	3.1

LEHIGH RIVER BASIN

01449360 PONOPOCO CREEK AT KRESGEVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2.5	1.0	2.0	6.5	3.0	4.5	6.5	5.0	6.0	15.5	11.5	13.5
2	3.5	1.5	2.5	9.5	6.0	7.5	7.0	5.0	6.0	14.5	12.0	13.0
3	5.5	2.5	4.0	10.0	7.5	8.5	8.0	4.5	6.5	12.5	10.5	11.5
4	6.0	3.5	5.0	9.5	7.0	8.5	9.5	5.5	7.5	14.0	9.5	12.0
5	6.5	4.0	5.5	7.5	6.5	7.0	9.0	7.5	8.0	14.5	10.0	12.5
6	6.5	5.5	6.0	7.5	5.5	6.5	12.5	8.5	10.5	14.0	12.5	13.0
7	5.5	5.0	5.5	7.5	6.0	7.0	14.5	10.0	12.5	13.5	11.0	12.5
8	6.0	5.5	5.5	6.0	4.0	5.0	14.5	11.5	13.0	14.0	10.0	12.0
9	6.5	4.5	5.5	6.0	3.5	5.0	15.0	12.5	14.0	13.5	11.0	12.0
10	6.0	5.0	5.5	6.0	4.0	5.0	14.5	12.0	13.5	15.0	12.0	13.0
11	5.0	3.0	4.0	4.5	2.5	4.0	12.0	9.0	10.5	15.5	11.5	14.0
12	3.0	1.5	2.5	5.0	2.0	3.5	10.5	7.0	9.0	16.5	13.0	15.0
13	4.0	2.0	3.0	4.5	3.0	4.0	9.0	7.0	7.5	18.0	14.5	16.5
14	4.0	2.5	3.0	4.5	4.0	4.0	10.0	6.5	8.0	18.0	15.5	16.5
15	4.0	2.5	3.5	5.5	4.0	4.5	9.0	8.0	8.5	18.5	15.5	17.0
16	2.0	.5	1.5	6.5	4.0	5.5	12.5	8.5	10.5	18.0	14.5	16.5
17	2.5	.5	1.5	7.0	4.0	6.0	12.0	10.5	11.0	17.5	15.0	16.5
18	3.5	1.5	2.5	7.0	5.5	6.0	10.5	9.5	10.0	17.5	15.0	16.0
19	4.5	3.5	4.0	7.5	6.0	6.5	11.5	8.5	10.0	15.5	13.0	14.5
20	6.0	4.5	5.0	8.0	6.0	7.0	10.5	8.5	9.0	15.0	12.0	13.5
21	5.5	3.5	4.5	7.5	6.0	6.5	8.5	7.5	8.5	16.0	12.0	14.0
22	6.5	4.0	5.5	7.0	5.0	6.0	8.5	7.0	7.5	18.0	14.5	16.0
23	5.5	2.5	3.5	7.0	5.5	6.0	11.5	6.5	9.0	18.5	15.5	17.0
24	4.0	1.0	2.5	7.0	5.5	6.0	10.5	8.5	9.5	18.5	16.0	17.5
25	5.5	3.5	4.5	6.5	6.0	6.0	13.0	8.5	10.5	20.0	17.0	18.5
26	5.0	4.0	4.5	8.0	5.5	7.0	13.0	9.0	11.5	19.0	18.0	18.5
27	4.5	3.0	3.5	8.0	7.0	7.5	14.5	11.0	13.0	20.0	17.5	18.5
28	4.5	2.0	3.5	10.5	7.5	9.0	14.0	12.0	13.0	21.0	18.5	19.5
29	---	---	---	9.5	7.5	8.5	12.5	11.0	11.5	20.5	17.5	19.0
30	---	---	---	8.0	6.0	7.0	13.0	10.5	11.5	19.5	18.0	19.0
31	---	---	---	7.5	4.5	6.0	---	---	---	20.0	18.0	19.0
MONTH	6.5	.5	3.9	10.5	2.0	6.2	15.0	4.5	9.9	21.0	9.5	15.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	20.0	18.5	19.0	21.5	19.0	20.0	21.5	17.5	20.0	20.5	17.0	18.5
2	19.5	16.5	18.0	19.5	17.5	18.0	22.5	18.5	21.0	17.0	14.0	16.0
3	19.0	16.0	18.0	17.5	17.0	17.5	22.0	19.5	21.0	17.0	14.0	15.5
4	18.0	16.5	17.5	19.0	17.0	18.0	21.0	20.0	20.5	17.5	15.0	16.5
5	16.5	15.0	15.5	18.0	17.0	17.5	21.0	18.5	20.0	19.5	17.0	18.0
6	15.5	13.5	14.5	20.5	17.0	18.0	20.0	16.5	18.5	18.5	16.0	17.5
7	15.5	13.0	14.5	20.0	18.0	19.0	20.5	16.5	18.5	18.5	15.5	17.5
8	18.0	13.5	15.5	21.5	18.5	19.5	20.5	17.5	19.5	19.0	16.0	17.5
9	19.5	15.5	17.5	21.5	18.5	20.0	20.0	18.5	19.0	19.0	16.5	18.0
10	20.0	16.5	18.0	20.5	17.0	19.0	20.5	18.5	19.5	19.0	17.5	18.0
11	19.0	17.5	18.0	20.5	17.0	19.0	19.5	17.5	18.5	19.5	17.5	18.5
12	19.5	17.5	18.0	20.0	16.5	18.5	19.5	16.5	18.0	18.0	15.5	17.0
13	18.0	15.0	16.5	19.0	18.5	18.5	20.5	17.0	19.0	17.0	14.0	16.0
14	18.5	14.5	16.5	21.0	18.0	19.5	20.5	17.5	19.5	19.0	16.5	18.0
15	19.5	15.5	17.5	21.0	17.0	19.0	20.0	19.0	19.5	18.5	18.0	18.5
16	21.0	18.0	19.5	21.5	17.0	19.5	21.5	17.5	19.5	21.0	18.0	19.5
17	21.5	19.0	20.0	22.0	17.5	20.0	22.0	18.5	20.5	22.0	19.5	21.0
18	20.5	18.0	19.5	23.0	18.5	21.0	22.0	19.5	21.0	21.0	19.0	20.0
19	18.0	16.5	17.0	23.5	19.5	21.5	21.0	19.5	20.0	21.0	16.5	19.0
20	20.5	17.0	18.5	24.0	20.5	22.5	19.5	18.5	19.0	16.5	14.5	15.5
21	21.5	18.0	19.5	24.5	21.0	23.0	20.5	18.0	19.0	14.5	12.0	13.5
22	19.5	17.0	18.0	23.0	21.0	22.0	20.0	17.5	19.0	13.5	10.5	12.0
23	17.5	16.0	16.5	23.5	20.5	22.0	20.0	17.5	19.0	13.0	12.0	12.5
24	18.5	15.5	17.0	23.0	20.0	21.5	21.0	19.0	20.0	15.5	12.5	14.0
25	18.5	16.0	17.0	21.5	20.0	20.5	20.5	19.0	19.5	16.0	14.5	15.0
26	19.5	16.0	17.5	20.0	19.0	19.5	20.0	17.5	19.0	16.0	14.5	15.0
27	20.0	16.5	18.0	20.5	18.5	19.5	20.5	17.5	19.0	15.0	12.0	13.0
28	21.5	17.5	19.5	20.5	17.0	19.0	21.5	18.5	20.0	12.0	10.0	11.5
29	23.0	19.5	21.0	19.5	18.0	18.5	22.0	19.0	20.5	12.0	9.5	11.0
30	22.0	20.0	21.0	19.5	17.0	18.5	23.0	20.0	21.5	12.0	9.5	11.0
31	---	---	---	21.5	18.5	20.0	22.5	20.5	21.5	---	---	---
MONTH	23.0	13.0	17.8	24.5	16.5	19.7	23.0	16.5	19.7	22.0	9.5	16.1

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, 0.45 mi downstream from Beltzville Dam, 1.3 mi upstream from Bull Run, and 2.3 mi northeast of Parryville.

DRAINAGE AREA.--96.4 mi².

WATER-DISCHARGE RECORDS

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	147	85	271	153	148	201	154	83	46	38	136
2	73	147	85	311	129	134	184	154	83	46	38	136
3	73	147	113	330	129	133	184	117	83	46	38	185
4	74	147	567	310	172	345	184	99	83	46	38	227
5	60	263	1190	310	192	793	149	99	57	46	38	227
6	44	262	1280	310	192	670	133	163	46	46	38	211
7	44	166	926	259	359	450	133	361	42	46	86	188
8	44	135	265	188	375	397	133	222	34	46	140	188
9	44	93	265	166	262	325	133	102	34	36	90	188
10	44	252	371	193	260	324	133	102	34	42	38	188
11	64	736	426	240	379	320	133	102	34	42	38	104
12	126	730	420	255	314	286	133	102	34	51	38	34
13	110	453	311	255	223	241	133	203	34	58	37	24
14	108	314	226	175	177	241	133	147	34	58	36	16
15	107	255	192	133	204	259	133	125	34	50	37	16
16	63	234	192	175	236	274	133	126	34	41	88	40
17	42	196	192	398	236	274	133	83	61	38	133	66
18	60	196	192	431	236	239	133	83	76	38	133	39
19	339	279	192	236	195	218	108	83	113	38	69	16
20	433	203	243	236	151	151	96	83	110	38	33	16
21	218	147	290	236	162	156	96	83	53	38	34	16
22	218	147	290	387	177	199	185	83	42	38	33	16
23	221	236	297	323	177	218	154	83	42	38	33	16
24	607	208	748	229	177	218	120	83	42	38	34	16
25	659	147	998	219	147	358	172	83	71	38	34	17
26	422	147	897	162	157	311	200	83	85	38	146	17
27	331	147	662	162	169	255	200	83	60	38	236	16
28	330	147	553	188	169	225	200	83	46	38	236	16
29	330	105	468	200	---	216	171	83	46	38	194	16
30	245	85	463	200	---	236	154	84	46	38	143	16
31	166	---	335	200	---	236	---	84	---	38	138	---
TOTAL	5772	6871	13734	7688	5909	8850	4487	3625	1676	1316	2485	2407
MEAN	186	229	443	248	211	285	150	117	55.9	42.5	80.2	80.2
MAX	659	736	1280	431	379	793	201	361	113	58	236	227
MIN	42	85	85	133	129	133	96	83	34	36	33	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	124	141	196	175	190	247	255	226	153	117	91.9	100													
MAX	405	302	489	527	459	576	544	538	358	321	491	529													
(WY)	1983	1971	1978	1979	1976	1977	1984	1990	1972	1975	1969	1987													
MIN	36.3	37.7	40.9	33.3	17.0	16.2	32.5	25.2	48.2	32.4	18.0	29.2													
(WY)	1969	1985	1981	1981	1981	1981	1981	1971	1987	1985	1985	1970													

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1967 - 1991
ANNUAL TOTAL	83026	64820	
ANNUAL MEAN	227	178	167
HIGHEST ANNUAL MEAN			251
LOWEST ANNUAL MEAN			60.2
HIGHEST DAILY MEAN	1430	May 18	1450
LOWEST DAILY MEAN	42	Jul 19	11
ANNUAL SEVEN-DAY MINIMUM	49	Oct 5	15
INSTANTANEOUS PEAK FLOW			1740
INSTANTANEOUS PEAK STAGE			5.59
INSTANTANEOUS LOW FLOW			.90
10 PERCENT EXCEEDS	441	333	382
50 PERCENT EXCEEDS	161	147	106
90 PERCENT EXCEEDS	62	38	37

a Also Sept. 19-24, 27-30.

LEHIGH RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1968 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.5°C, on several days during July, August 1970; minimum, 0.0°C December 9, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.0°C, Sept. 9, 10; minimum, 2.5°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	17.0	16.0	16.5	13.5	13.0	13.5	8.5	8.0	8.0	4.5	4.5	4.5
2	16.5	16.0	16.5	13.5	13.0	13.0	8.0	8.0	8.0	4.5	4.5	4.5
3	17.0	16.5	16.5	13.5	13.0	13.0	8.0	8.0	8.0	4.5	4.5	4.5
4	16.5	16.0	16.5	13.5	13.0	13.0	8.0	8.0	8.0	4.5	4.0	4.5
5	16.5	16.0	16.5	13.5	13.0	13.0	8.0	7.5	8.0	4.0	4.0	4.0
6	17.0	16.0	16.5	13.5	12.5	12.5	7.5	7.5	7.5	4.0	4.0	4.0
7	17.0	16.0	16.5	13.0	13.0	13.0	7.5	7.0	7.5	4.0	4.0	4.0
8	16.5	16.0	16.5	12.5	12.5	12.5	7.0	7.0	7.0	4.0	3.5	3.5
9	16.5	16.0	16.5	12.5	12.0	12.5	7.0	6.5	7.0	3.5	3.5	3.5
10	17.0	16.0	16.5	12.5	12.0	12.0	6.5	6.0	6.5	3.5	3.5	3.5
11	16.5	16.5	16.5	12.0	11.5	12.0	6.5	6.5	6.5	3.5	3.0	3.0
12	16.5	16.5	16.5	11.5	11.5	11.5	6.5	6.5	6.5	3.0	3.0	3.0
13	16.5	16.5	16.5	11.5	11.0	11.0	6.5	6.5	6.5	3.0	2.5	3.0
14	17.0	16.5	16.5	11.0	10.5	10.5	6.5	6.0	6.0	3.0	2.5	3.0
15	16.5	16.0	16.5	10.0	10.0	10.0	6.0	6.0	6.0	3.0	3.0	3.0
16	16.5	16.0	16.5	10.0	10.0	10.0	6.0	6.0	6.0	3.0	2.5	3.0
17	16.5	16.0	16.0	10.0	10.0	10.0	6.0	6.0	6.0	3.0	3.0	3.0
18	16.5	15.5	16.5	10.0	9.5	10.0	6.0	6.0	6.0	3.0	3.0	3.0
19	16.5	15.0	16.0	9.5	9.5	9.5	6.0	5.5	5.5	3.0	2.5	2.5
20	16.0	16.0	16.0	9.5	9.0	9.5	5.5	5.5	5.5	3.0	2.5	3.0
21	16.0	15.5	16.0	9.0	9.0	9.0	5.5	5.5	5.5	3.0	2.5	2.5
22	15.5	15.5	15.5	9.0	9.0	9.0	5.5	5.5	5.5	2.5	2.5	2.5
23	16.0	15.5	15.5	9.0	9.0	9.0	5.5	5.5	5.5	3.0	2.5	2.5
24	15.5	13.0	14.5	9.0	8.5	8.5	5.5	5.5	5.5	3.0	2.5	3.0
25	15.5	13.5	14.5	9.0	8.5	8.5	5.5	5.5	5.5	3.0	2.5	2.5
26	15.5	14.5	15.0	9.0	8.5	8.5	5.5	5.0	5.5	3.0	2.5	2.5
27	14.5	14.5	14.5	9.0	8.5	8.5	5.0	5.0	5.0	3.0	2.5	2.5
28	14.5	13.5	14.0	9.0	8.5	8.5	5.0	4.5	4.5	3.0	2.5	2.5
29	14.0	13.5	14.0	8.5	8.5	8.5	4.5	4.5	4.5	3.0	2.5	3.0
30	14.0	13.5	13.5	8.5	8.0	8.5	4.5	4.5	4.5	3.0	3.0	3.0
31	13.5	13.5	13.5	---	---	---	4.5	4.5	4.5	3.0	3.0	3.0
MONTH	17.1	13.2	15.7	13.5	8.2	10.7	8.3	4.5	6.2	4.5	2.5	3.2

LEHIGH RIVER BASIN

01449800 POHOPOCO CREEK BELOW BELTEVILLE LAKE NEAR PARRYVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.0	2.5	3.0	3.0	2.5	3.0	5.5	5.0	5.5	9.5	8.0	8.5
2	3.0	2.5	2.5	3.5	3.0	3.0	5.5	5.0	5.5	9.5	8.5	9.0
3	3.0	2.5	3.0	3.5	3.0	3.5	5.5	5.0	5.5	10.0	9.0	9.5
4	3.0	3.0	3.0	3.5	3.5	3.5	6.0	5.5	5.5	10.0	9.0	9.5
5	3.0	3.0	3.0	3.5	3.5	3.5	5.5	5.5	5.5	10.0	9.0	9.5
6	3.0	3.0	3.0	3.5	3.5	3.5	6.0	5.5	5.5	9.5	9.0	9.0
7	3.0	3.0	3.0	4.0	3.5	3.5	6.5	5.5	5.5	10.0	9.0	9.0
8	3.0	3.0	3.0	4.0	3.5	3.5	6.5	5.5	6.0	10.5	9.0	10.0
9	3.0	3.0	3.0	4.0	3.5	3.5	6.5	5.5	6.0	10.0	9.0	9.5
10	3.5	3.0	3.0	4.0	3.5	3.5	6.0	5.5	6.0	11.0	9.0	10.0
11	3.0	3.0	3.0	4.0	3.5	3.5	6.5	6.0	6.0	10.0	9.5	9.5
12	3.0	3.0	3.0	4.0	3.5	3.5	8.0	6.5	7.0	10.5	9.5	10.0
13	3.0	2.5	3.0	3.5	3.5	3.5	7.5	6.5	6.5	10.5	9.5	10.0
14	3.0	2.5	3.0	3.5	3.5	3.5	8.5	7.5	8.0	11.0	10.0	10.0
15	3.0	2.5	3.0	4.0	3.5	4.0	7.5	7.0	7.5	11.0	9.5	10.0
16	3.0	2.5	2.5	4.0	3.5	4.0	7.5	6.5	7.0	10.5	9.5	10.0
17	2.5	2.5	2.5	4.0	4.0	4.0	8.0	7.5	8.0	10.5	10.0	10.5
18	2.5	2.5	2.5	4.0	4.0	4.0	8.5	7.5	8.0	11.0	9.5	10.5
19	2.5	2.5	2.5	4.5	4.0	4.0	8.5	8.0	8.0	11.0	10.0	10.5
20	3.0	2.5	2.5	4.5	4.0	4.5	8.5	8.0	8.0	11.0	10.0	10.5
21	3.0	2.5	2.5	4.5	4.0	4.5	8.5	7.5	8.0	11.0	10.0	10.5
22	3.0	2.5	3.0	4.5	4.5	4.5	7.5	7.0	7.5	11.0	10.0	10.5
23	3.0	2.5	3.0	4.5	4.5	4.5	8.5	8.0	8.0	11.0	10.0	10.5
24	3.0	2.5	2.5	4.5	4.5	4.5	8.5	8.0	8.5	11.0	10.0	10.5
25	3.0	2.5	3.0	4.5	4.5	4.5	8.5	8.0	8.0	11.0	10.5	10.5
26	3.0	2.5	3.0	5.0	4.5	4.5	8.5	8.0	8.0	11.0	10.5	10.5
27	3.0	3.0	3.0	4.5	4.5	4.5	8.5	8.0	8.5	11.5	10.0	10.5
28	3.0	3.0	3.0	5.0	4.5	5.0	9.0	8.0	8.5	11.5	10.5	11.0
29	---	---	---	5.5	5.0	5.0	8.5	8.0	8.0	11.5	10.5	10.5
30	---	---	---	5.5	5.0	5.5	8.5	8.0	8.0	11.5	10.5	11.0
31	---	---	---	5.5	5.0	5.0	---	---	---	11.5	10.5	11.0
MONTH	3.5	2.5	2.9	5.5	2.5	4.0	9.0	5.0	7.0	11.5	8.0	10.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	11.5	10.5	11.0	15.0	13.0	14.0	15.0	13.0	13.5	18.0	16.5	17.0
2	12.0	10.5	11.0	14.0	13.5	13.5	15.0	13.0	14.0	17.5	17.0	17.0
3	11.5	10.5	11.0	14.0	13.5	13.5	14.5	13.0	13.5	18.0	17.0	17.0
4	11.5	10.5	11.0	15.0	13.5	14.0	15.0	13.0	14.0	18.0	17.5	17.5
5	12.0	10.5	11.0	14.0	13.5	13.5	15.0	13.0	13.5	18.5	17.5	18.0
6	12.0	10.5	11.0	15.5	13.5	14.0	15.0	13.0	14.0	18.5	18.0	18.0
7	12.5	10.5	11.0	14.5	14.0	14.0	15.0	13.0	14.0	18.5	18.0	18.0
8	13.0	10.5	11.5	15.5	14.0	14.5	14.5	13.5	14.0	18.5	18.0	18.5
9	13.5	11.0	11.5	18.5	14.0	15.0	14.5	14.0	14.0	19.0	18.0	18.5
10	13.0	11.0	12.0	16.0	14.0	14.5	15.5	13.5	14.0	19.0	12.5	15.0
11	12.5	11.0	11.5	15.5	14.0	14.5	14.5	13.5	14.0	14.0	12.5	13.0
12	13.0	11.0	12.0	15.5	13.5	14.0	15.5	13.5	14.0	14.0	12.0	13.0
13	13.5	11.0	12.0	13.5	13.0	13.5	15.5	13.5	14.5	15.0	11.5	13.0
14	13.5	11.0	12.0	15.0	13.5	14.0	15.0	14.0	14.0	14.5	11.0	12.0
15	13.5	11.5	12.0	16.5	13.5	14.5	14.5	14.0	14.0	12.5	11.0	11.5
16	13.5	11.5	12.5	16.5	14.0	15.0	15.0	14.0	14.5	14.0	11.5	12.5
17	13.0	11.5	12.0	15.5	11.5	13.5	15.0	14.5	15.0	14.0	13.0	13.5
18	12.5	11.5	12.0	14.0	11.0	12.5	15.5	14.5	15.0	15.0	12.0	13.0
19	12.5	12.0	12.0	14.5	12.5	13.0	15.5	14.5	15.0	12.0	11.5	11.5
20	13.5	12.0	12.5	14.0	12.5	13.0	15.5	14.5	15.0	13.0	11.0	11.5
21	14.5	12.0	13.0	14.5	13.0	13.5	16.0	14.5	15.0	13.5	10.5	11.5
22	13.5	12.0	12.5	13.5	12.0	13.0	16.0	14.5	15.0	14.0	10.5	11.5
23	14.0	12.5	13.0	14.5	12.5	13.0	16.5	14.5	15.0	12.0	11.0	11.5
24	14.5	12.0	13.0	14.5	12.5	13.5	16.5	14.5	15.0	13.5	11.0	12.0
25	13.5	12.5	13.0	13.5	13.0	13.0	16.5	14.5	15.0	12.0	11.0	11.5
26	13.5	13.0	13.0	13.5	13.0	13.0	16.0	14.5	15.0	13.5	11.0	12.0
27	14.5	13.0	13.5	14.5	12.5	13.5	16.5	15.5	16.0	13.0	11.0	11.5
28	15.0	13.0	13.5	15.0	13.0	13.5	16.5	16.0	16.5	13.5	10.5	11.5
29	15.0	13.0	13.5	14.5	13.0	13.5	17.0	16.5	16.5	13.0	11.0	11.5
30	14.5	13.0	13.5	14.5	12.5	13.5	17.0	16.5	16.5	13.0	11.0	11.5
31	---	---	---	15.0	13.0	13.5	17.5	16.5	17.0	---	---	---
MONTH	15.0	10.5	12.2	18.5	11.0	13.7	17.5	13.0	14.7	19.0	10.5	13.8

LEHIGH RIVER BASIN

01450500 AQUASHICOLA CREEK AT PALMERTON, PA

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

DRAINAGE AREA.--76.7 mi².

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

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

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

REMARKS.--Records fair. Occasional diversion from Pohopoco Creek into Aquashicola Creek above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	133	83	343	143	121	158	138	70	37	36	23
2	52	123	89	321	135	132	152	131	56	36	35	24
3	51	115	126	288	133	133	142	121	53	38	36	22
4	54	108	1960	253	135	415	136	113	54	37	34	23
5	61	102	1170	227	135	587	133	107	52	38	35	33
6	53	116	618	216	154	423	130	142	50	37	34	27
7	50	100	440	199	250	417	122	160	48	43	34	24
8	49	93	353	175	277	352	117	127	46	41	35	21
9	48	87	297	168	263	313	112	121	44	35	60	21
10	48	442	257	160	237	280	108	117	44	34	55	22
11	50	861	222	151	209	245	101	112	44	33	28	23
12	55	485	200	154	184	220	96	108	46	32	24	21
13	64	348	176	144	174	202	95	104	47	35	21	20
14	83	286	165	131	201	196	97	101	43	36	19	20
15	68	242	158	123	197	198	101	102	41	33	22	20
16	61	215	178	217	165	182	102	91	39	31	24	20
17	58	202	157	381	156	165	96	89	39	31	21	20
18	138	178	162	387	150	195	92	89	39	30	20	20
19	294	161	175	318	155	213	86	81	75	28	26	22
20	188	149	165	283	169	210	84	79	55	27	35	27
21	149	139	204	268	163	202	119	75	44	25	35	21
22	131	130	254	229	158	197	186	72	49	25	29	20
23	242	141	319	206	148	208	174	70	69	28	26	20
24	503	130	1020	196	145	217	183	65	55	35	37	21
25	364	118	824	173	144	205	189	63	47	28	31	78
26	276	110	511	161	139	200	176	62	43	29	27	56
27	224	105	385	156	131	207	169	62	41	30	25	34
28	195	101	341	150	125	200	160	62	39	29	25	26
29	170	96	299	141	---	184	150	58	38	37	26	22
30	154	91	281	140	---	178	146	57	36	38	26	21
31	143	---	339	172	---	164	---	71	---	36	25	---
TOTAL	4130	5707	11928	6631	4775	7361	3912	2950	1446	1032	946	772
MEAN	133	190	385	214	171	237	130	95.2	48.2	33.3	30.5	25.7
MAX	503	861	1960	387	277	587	189	160	75	43	60	78
MIN	48	87	83	123	125	121	84	57	36	25	19	20
†	4.2	4.6	4.4	3.9	5.1	4.5	5.5	5.1	4.9	4.5	4.5	2.8
MEAN‡	129	185	381	210	166	232	124	90.1	43.3	28.8	26.0	22.9
CFSM‡	1.68	2.41	4.97	2.74	2.16	3.02	1.62	1.18	.56	.38	.34	.32
IN.‡	1.94	2.69	5.73	3.16	2.25	3.48	1.80	1.36	.62	.44	.39	.36

LEHIGH RIVER BASIN

01450500 AQUASHICOLA CREEK AT PALMERTON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	96.6	146	183	163	177	242	234	185	116	104	89.0	92.2
MAX	331	379	467	541	325	534	625	480	412	638	468	417
(WY)	1956	1973	1984	1979	1971	1977	1983	1989	1972	1945	1942	1987
MIN	17.2	21.6	38.3	19.4	38.4	86.5	74.7	55.9	38.8	19.8	13.7	15.2
(WY)	1964	1965	1981	1981	1940	1985	1985	1941	1955	1955	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1940 - 1991	
ANNUAL TOTAL	68893		51590		152	
ANNUAL MEAN	189	#184	141	#137	242	#246 1952
HIGHEST ANNUAL MEAN					69.2	# 67.4 1965
LOWEST ANNUAL MEAN					4680	Jul 10 1945
HIGHEST DAILY MEAN	2000	May 17	1960	Dec 4	9.1	Sep 15 1964
LOWEST DAILY MEAN	47	Aug 4	19	Aug 14	10	Sep 10 1964
ANNUAL SEVEN-DAY MINIMUM	50	Oct 6	20	Sep 12	11700	Jul 10 1945
INSTANTANEOUS PEAK FLOW			2750	Dec 4	13.63	Jul 10 1945
INSTANTANEOUS PEAK STAGE			7.89	Dec 4	2.6	Sep 12 1957
INSTANTANEOUS LOW FLOW			13	Aug 14	2.6	
ANNUAL RUNOFF (CFSM)	2.46	# 2.40	1.84	# 1.78	1.98	
ANNUAL RUNOFF (INCHES)	33.41	#32.59	25.02	#24.31	26.95	
10 PERCENT EXCEEDS	345		280		305	
50 PERCENT EXCEEDS	133		110		101	
90 PERCENT EXCEEDS	61		26		35	

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

† Adjusted for diversion.

LEHIGH RIVER BASIN

01451420 LITTLE LEHIGH CREEK NEAR EAST TEXAS, PA

LOCATION.--Lat 40°31'59", long 75°32'9", Lehigh County, Hydrologic Unit 02040106, on right bank 300 ft, upstream from bridge on Mill Creek Road, on Seem Road, 0.8 mi southeast of East Texas.

DRAINAGE AREA.--51.2 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 360 ft above National Geodetic Vertical, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	15	73	51	36	45	31	33	14	12	7.5
2	16	19	14	61	49	38	43	31	25	14	11	7.3
3	15	19	24	55	49	40	42	29	23	35	11	7.3
4	16	18	228	51	48	88	41	28	22	16	11	8.2
5	16	18	104	48	47	56	41	27	21	19	10	8.7
6	15	23	51	48	49	49	41	48	21	16	10	8.3
7	14	18	42	49	61	67	39	65	20	32	10	8.1
8	14	17	38	46	56	48	38	42	19	24	9.8	7.3
9	15	17	36	46	50	44	38	38	18	17	14	6.3
10	14	114	35	45	47	43	38	37	17	15	19	6.3
11	13	203	34	44	45	42	36	35	17	14	11	6.3
12	13	41	33	67	43	41	35	34	28	14	10	5.9
13	21	33	32	58	43	41	35	33	20	35	9.9	5.7
14	46	29	30	50	56	43	38	31	17	24	9.6	7.5
15	17	27	32	47	56	46	41	45	16	17	11	5.7
16	15	26	42	87	43	45	42	33	15	15	11	5.6
17	14	28	35	132	43	45	36	35	15	14	9.7	5.4
18	22	26	45	87	42	66	35	52	70	13	12	5.4
19	54	24	46	73	44	61	33	34	47	13	30	13
20	21	22	35	70	51	47	32	31	29	14	19	8.1
21	18	21	40	75	46	44	50	29	22	13	19	6.0
22	17	20	44	64	43	44	61	28	20	12	12	5.5
23	45	25	43	59	40	61	41	27	20	19	10	5.4
24	102	23	91	61	39	63	43	25	19	46	9.6	5.5
25	36	20	62	57	39	51	45	25	17	18	9.2	67
26	29	18	50	54	39	47	37	24	16	16	9.0	24
27	25	17	44	54	38	53	35	25	16	17	8.9	11
28	24	17	43	55	36	53	33	55	15	13	8.7	9.2
29	23	17	45	54	---	47	32	29	15	14	8.4	8.4
30	22	16	47	55	---	49	32	27	14	14	8.1	8.0
31	21	---	117	65	---	47	---	35	---	12	7.9	---
MEAN	24.2	31.2	50.9	61.0	46.2	49.8	39.3	34.5	22.2	18.4	11.7	9.80
MAX	102	203	228	132	61	88	61	65	70	46	30	67
MIN	13	16	14	44	36	36	32	24	14	12	7.9	5.4
CFSM	.47	.61	.99	1.19	.90	.97	.77	.67	.43	.36	.23	.19
IN.	.54	.68	1.15	1.37	.94	1.12	.86	.78	.48	.41	.26	.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR

	1987	1988	1989	1990	1991
MEAN	22.2	31.1	37.0	37.4	42.9
MAX	30.5	42.4	51.8	61.0	71.1
(WY)	1988	1988	1987	1991	1988
MIN	11.7	25.2	18.5	16.5	13.5
(WY)	1989	1989	1989	1989	1989

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1987 - 1991
ANNUAL MEAN	34.3	33.2	34.1
HIGHEST ANNUAL MEAN			39.8
LOWEST ANNUAL MEAN			30.9
HIGHEST DAILY MEAN	336	May 30	1760
LOWEST DAILY MEAN	13	Oct 11	4.3
ANNUAL SEVEN-DAY MINIMUM	14	Oct 6	5.4
INSTANTANEOUS PEAK FLOW		422	4330
INSTANTANEOUS PEAK STAGE		3.75	6.97
ANNUAL RUNOFF (CFSM)	.67	.65	.67
ANNUAL RUNOFF (INCHES)	9.10	8.81	9.05
10 PERCENT EXCEEDS	48	56	56
50 PERCENT EXCEEDS	27	31	30
90 PERCENT EXCEEDS	18	9.8	13

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 mi².

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), 1865(M), 1969(M), 1971(M), WDR PA-87-1: 1946 to 1986(P).

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

REMARKS.--Records good, except for periods of estimated record which are fair. Occasional regulation at low flow by fish hatchery above gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	64	69	159	118	●85	121	108	96	57	53	41
2	62	64	69	132	116	107	118	108	77	56	53	41
3	61	62	117	125	115	113	114	104	72	135	51	41
4	61	61	540	118	115	218	111	98	69	66	●50	41
5	61	61	232	109	115	146	111	97	69	75	48	41
6	61	64	129	108	118	130	107	130	69	65	47	41
7	59	65	111	115	144	175	108	157	69	94	46	41
8	58	61	101	108	136	127	101	114	68	80	46	39
9	58	61	96	108	123	118	102	102	66	65	64	39
10	58	320	93	106	118	115	103	98	66	60	82	39
11	58	273	89	105	113	113	98	95	66	58	54	39
12	58	108	86	179	106	109	96	92	83	58	50	39
13	65	88	84	143	106	108	95	87	71	90	50	38
14	84	81	83	122	127	111	100	86	67	76	47	42
15	63	78	85	116	134	121	106	94	65	64	52	40
16	60	77	113	225	106	120	116	90	64	60	52	39
17	59	75	93	261	105	118	106	90	80	58	47	38
18	74	74	112	187	105	171	108	113	135	58	46	38
19	99	73	120	157	110	159	99	93	96	56	56	65
20	68	71	97	150	121	128	95	84	77	63	76	49
21	63	69	99	159	114	120	145	81	70	56	67	42
22	62	69	120	142	108	115	184	81	67	56	53	40
23	131	76	107	132	106	154	129	78	66	89	49	39
24	156	75	195	130	101	159	134	77	66	105	46	40
25	82	72	144	121	●95	136	140	74	64	66	46	201
26	72	71	119	117	●92	126	119	73	62	61	45	94
27	68	71	108	119	●90	133	112	85	60	62	45	61
28	67	71	103	118	●88	135	108	141	59	57	45	55
29	66	71	111	121	---	124	108	80	58	57	45	53
30	65	71	111	121	---	130	108	77	58	57	44	52
31	64	---	236	138	---	124	---	97	---	56	42	---
TOTAL	2185	2597	3972	4251	3145	4048	3402	2984	2155	2116	1597	1508
MEAN	70.5	86.6	128	137	112	131	113	96.3	71.8	68.3	51.5	50.3
MAX	156	320	540	261	144	218	184	157	135	135	82	201
MIN	58	61	69	105	88	85	95	73	58	56	42	38
CFSM	.87	1.07	1.59	1.70	1.39	1.62	1.40	1.19	.89	.84	.64	.62
IN.	1.01	1.20	1.83	1.96	1.45	1.86	1.57	1.37	.99	.97	.74	.69

● Estimated.

LEHIGH RIVER BASIN

01451500 LITTLE LEHIGH CREEK NEAR ALLENTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	66.5	76.2	94.6	105	122	131	139	121	102	86.1	77.2	71.2
MAX	182	177	314	385	325	248	331	315	381	366	192	213
(WY)	1976	1976	1984	1979	1979	1978	1983	1984	1972	1984	1971	1987
MIN	27.3	28.1	25.7	26.6	41.0	43.1	37.1	35.8	29.2	26.5	26.5	28.9
(WY)	1964	1966	1966	1966	1967	1965	1966	1965	1965	1965	1965	1965

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1946 - 1991
ANNUAL TOTAL	37372	33960	
ANNUAL MEAN	102	93.0	99.2
HIGHEST ANNUAL MEAN			203
LOWEST ANNUAL MEAN			33.8
HIGHEST DAILY MEAN	811	May 30	540
LOWEST DAILY MEAN	58	Oct 8	38
ANNUAL SEVEN-DAY MINIMUM	59	Oct 6	39
INSTANTANEOUS PEAK FLOW			780
INSTANTANEOUS PEAK STAGE			3.72
INSTANTANEOUS LOW FLOW			37
ANNUAL RUNOFF (CFSM)	1.27	1.15	1.23
ANNUAL RUNOFF (INCHES)	17.21	15.64	16.69
10 PERCENT EXCEEDS	137	135	170
50 PERCENT EXCEEDS	86	86	78
90 PERCENT EXCEEDS	65	48	39

a From rating curve extended above 980 ft³/s on basis of slope-area measurement of peak flow.

b Result of upstream shutoff.

LEHIGH RIVER BASIN

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

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

DRAINAGE AREA.--98.2 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 245.63 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	66	78	193	139	109	137	114	109	64	54	●43
2	●64	65	71	155	141	116	136	113	85	61	54	●43
3	●64	65	147	146	132	128	131	108	84	220	57	●43
4	65	●64	629	135	135	255	129	110	85	83	55	●42
5	64	●67	258	129	133	169	129	104	84	107	54	●42
6	66	●70	155	137	141	152	127	188	83	82	49	●42
7	●65	●70	131	135	177	198	123	169	81	136	49	●42
8	●64	●66	120	126	160	146	120	121	73	102	46	●41
9	62	●65	113	128	143	143	117	112	83	77	92	●41
10	●62	●350	108	127	143	131	117	110	72	67	110	●41
11	●62	●305	105	126	131	127	109	108	74	64	58	●41
12	●62	●200	103	202	125	125	108	105	106	67	53	●40
13	89	●110	101	170	130	125	112	100	83	144	51	●39
14	118	●95	96	143	158	131	128	101	77	100	48	●44
15	69	●90	112	136	159	146	131	116	71	76	53	41
16	63	●87	138	265	128	144	130	98	67	68	56	39
17	60	●85	109	292	127	136	123	104	85	63	50	35
18	97	●83	146	216	125	199	119	113	158	60	50	32
19	123	●82	145	183	134	185	119	110	118	60	67	93
20	79	●82	113	182	144	147	109	94	86	74	106	52
21	67	81	129	190	132	137	191	93	75	56	75	43
22	63	80	141	168	125	133	205	88	77	61	56	41
23	178	103	138	156	119	186	139	87	79	97	53	40
24	193	87	251	160	123	198	162	86	75	122	49	43
25	97	88	176	146	118	157	156	83	67	76	48	263
26	82	78	136	142	117	144	129	78	●66	67	47	112
27	82	76	126	144	112	162	122	110	●64	70	47	63
28	79	77	132	144	110	166	129	185	●63	63	●46	52
29	70	75	136	143	---	141	116	92	●63	63	●46	57
30	68	72	136	144	---	163	117	88	64	66	●46	48
31	68	---	273	169	---	143	---	120	---	57	●44	---
TOTAL	2510	2984	4752	5032	3761	4742	3920	3408	2457	2573	1769	1638
MEAN	81.0	99.5	153	162	134	153	131	110	81.9	83.0	57.1	54.6
MAX	193	350	629	292	177	255	205	188	158	220	110	263
MIN	60	64	71	126	110	109	108	78	63	56	44	32
†	18.7	18.7	18.2	18.9	15.3	15.1	15.0	17.6	21.1	20.0	19.8	18.8
MEAN‡	99.7	118	171	181	149	168	146	128	103	103	76.9	73.4
CFM‡	1.02	1.20	1.74	1.84	1.52	1.71	1.49	1.30	1.05	1.05	.78	.75
IN.‡	1.18	1.34	2.01	2.12	1.58	1.97	1.66	1.50	1.17	1.21	.90	.84

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR (SINCE REGULATION)

	1987	1988	1989	1990	1991
MEAN	81.1	103	114	118	128
MAX	104	122	163	162	184
(WY)	1990	1987	1987	1991	1988
MIN	59.6	90.9	71.3	72.6	71.4
(WY)	1989	1989	1990	1989	1989

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1987 - 1991
ANNUAL TOTAL	43175	39546	
ANNUAL MEAN	118	108	116
HIGHEST ANNUAL MEAN		126	136
LOWEST ANNUAL MEAN			135
HIGHEST DAILY MEAN	667	629	108
LOWEST DAILY MEAN	60	32	5200
ANNUAL SEVEN-DAY MINIMUM	63	39	32
INSTANTANEOUS PEAK FLOW		890	39
INSTANTANEOUS PEAK STAGE		4.31	7370
ANNUAL RUNOFF (CFM)	1.20	1.10	9.47
ANNUAL RUNOFF (INCHES)	16.36	14.99	1.18
10 PERCENT EXCEEDS	165	167	173
50 PERCENT EXCEEDS	104	105	100
90 PERCENT EXCEEDS	72	50	61

† Diversion for water supply, in cubic feet per second, by City of Allentown.

‡ Adjusted for diversion.

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 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	63	37	292	71	54	99	61	33	8.9	8.7	7.5
2	20	56	37	246	67	68	92	59	23	8.7	8.1	6.9
3	18	52	86	195	63	73	79	52	20	18	7.4	6.8
4	20	49	937	154	62	475	72	47	21	12	7.4	7.2
5	24	46	560	128	61	427	69	44	19	11	7.3	8.9
6	20	60	324	118	75	300	67	112	18	11	6.6	8.5
7	18	46	222	107	156	289	60	118	17	27	6.2	7.3
8	18	41	169	85	146	201	55	76	15	21	6.3	6.7
9	19	38	135	82	138	173	53	70	14	11	20	6.2
10	18	413	114	80	124	148	50	66	13	9.6	36	6.5
11	17	442	94	●70	108	125	44	59	12	9.3	11	7.3
12	20	273	83	●74	95	107	42	55	16	9.2	9.3	6.6
13	32	190	77	●90	87	94	43	50	15	24	8.8	5.9
14	40	144	67	77	131	93	48	47	12	28	8.7	5.6
15	25	117	66	82	128	105	57	134	10	12	8.7	5.9
16	21	99	88	255	95	84	59	69	10	9.8	9.6	6.3
17	20	98	71	452	96	71	47	62	9.9	9.3	8.8	5.9
18	90	81	97	349	84	134	44	67	11	9.2	8.4	5.2
19	178	70	116	249	91	135	40	51	39	9.0	23	8.3
20	79	63	100	198	108	126	38	46	20	9.3	19	9.1
21	65	57	147	180	89	118	79	42	13	8.7	15	7.9
22	58	53	168	138	82	112	115	39	12	9.4	10	7.1
23	261	71	213	127	74	140	83	35	17	13	9.4	7.1
24	512	60	614	110	69	146	99	32	15	15	12	7.5
25	298	52	509	92	69	134	103	30	11	10	10	74
26	197	46	311	87	67	126	87	27	9.8	10	9.2	27
27	143	43	216	82	62	151	83	28	9.3	15	8.7	13
28	115	45	188	73	57	136	76	45	9.3	9.4	8.7	8.2
29	93	44	153	68	---	123	69	27	9.2	9.3	8.9	7.4
30	79	39	147	66	---	124	68	25	8.9	9.3	8.8	7.8
31	71	---	299	110	---	106	---	33	---	9.1	8.3	---
TOTAL	2610	2951	6445	4516	2555	4698	2020	1708	462.4	385.5	338.3	305.6
MEAN	84.2	98.4	208	146	91.2	152	67.3	55.1	15.4	12.4	10.9	10.2
MAX	512	442	937	452	156	475	115	134	39	28	36	74
MIN	17	38	37	66	57	54	38	25	8.9	8.7	6.2	5.2
CFSM	1.59	1.86	3.92	2.75	1.72	2.86	1.27	1.04	.29	.23	.21	.19
IN.	1.83	2.07	4.52	3.17	1.79	3.30	1.42	1.20	.32	.27	.24	.21

● Estimated.

LEHIGH RIVER BASIN

01451800 JORDAN CREEK NEAR SCHNECKSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR

MEAN	57.1	95.6	127	117	135	144	128	106	70.5	42.3	34.1	49.0
MAX	184	270	363	404	295	286	391	353	346	126	110	343
(WY)	1978	1971	1984	1979	1971	1978	1983	1989	1972	1984	1990	1987
MIN	8.37	20.1	18.6	6.85	35.2	41.3	31.0	36.5	9.18	1.68	3.77	3.69
(WY)	1973	1979	1981	1981	1980	1985	1985	1969	1966	1966	1980	1980

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1966 - 1991

ANNUAL TOTAL	40525		28994.8		92.8	
ANNUAL MEAN	111		79.4		148	1978
HIGHEST ANNUAL MEAN					43.9	1985
LOWEST ANNUAL MEAN					2800	Sep 9 1987
HIGHEST DAILY MEAN	1190	Jan 30	937	Dec 4	.60	Jul 26 1966
LOWEST DAILY MEAN	13	Jul 10	5.2	Sep 18	1.0	Jul 13 1966
ANNUAL SEVEN-DAY MINIMUM	16	Jul 5	5.9	Sep 12	7100	Jun 22 1972
INSTANTANEOUS PEAK FLOW			1150	Dec 4	12.32	Jun 22 1972
INSTANTANEOUS PEAK STAGE			5.78	Dec 4	.40	Jul 26 1966
INSTANTANEOUS LOW FLOW			5.2	Sep 18	1.75	
ANNUAL RUNOFF (CFSM)	2.09		1.50		23.79	
ANNUAL RUNOFF (INCHES)	28.44		20.35		204	
10 PERCENT EXCEEDS	241		168		48	
50 PERCENT EXCEEDS	72		55		9.7	
90 PERCENT EXCEEDS	22		8.7			

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 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	68	41	369	90	71	125	84	48	12	10	9.2
2	15	61	39	322	89	75	118	80	34	12	9.6	9.0
3	14	56	53	259	84	90	102	71	28	20	9.1	10
4	15	52	1320	205	81	424	91	65	26	20	9.3	10
5	17	47	796	165	80	513	85	60	26	18	9.5	10
6	18	55	414	148	87	370	83	94	26	15	9.5	10
7	15	53	293	138	179	364	77	180	24	18	9.3	10
8	13	42	219	109	193	260	69	101	23	35	9.4	10
9	13	39	173	106	182	226	69	90	21	22	19	9.8
10	12	444	140	104	163	198	70	86	19	15	24	9.8
11	12	653	115	91	140	165	62	78	18	13	18	9.5
12	12	336	102	120	116	140	57	71	19	11	11	9.5
13	23	227	94	134	110	125	56	68	22	24	9.8	9.5
14	52	167	86	98	133	116	63	65	20	38	9.8	9.1
15	29	132	79	98	183	129	65	135	18	25	10	8.1
16	20	111	100	214	109	117	86	88	16	17	9.9	8.0
17	17	106	93	514	117	96	66	75	15	13	9.8	7.7
18	22	92	104	442	110	143	63	82	14	11	11	7.7
19	193	78	143	339	112	188	57	66	22	12	13	12
20	83	70	122	269	126	172	52	56	39	11	17	8.1
21	67	64	148	●220	118	158	81	52	25	11	15	7.7
22	60	60	209	165	104	147	160	50	20	11	13	7.9
23	127	68	227	143	95	168	120	45	19	14	11	8.2
24	659	70	647	●130	87	203	120	42	19	11	10	8.4
25	348	57	655	104	89	184	151	39	18	15	9.5	55
26	222	53	394	92	86	173	118	36	15	12	9.5	39
27	158	48	280	●85	81	186	112	41	13	12	9.2	17
28	122	48	226	●83	74	197	103	63	13	13	9.1	9.7
29	99	51	204	●75	---	165	92	41	12	12	9.1	8.5
30	84	44	178	●73	---	164	89	34	12	11	9.1	8.3
31	75	---	325	136	---	140	---	36	---	10	9.6	---
TOTAL	2632	3452	8019	5550	3218	5867	2662	2174	644	494	352.1	356.7
MEAN	84.9	115	259	179	115	189	88.7	70.1	21.5	15.9	11.4	11.9
MAX	659	653	1320	514	193	513	160	180	48	38	24	55
MIN	12	39	39	73	74	71	52	34	12	10	9.1	7.7
CFSM	1.12	1.52	3.41	2.36	1.52	2.50	1.17	.93	.28	.21	.15	.16
IN.	1.29	1.69	3.94	2.72	1.58	2.88	1.31	1.07	.32	.24	.17	.18

● Estimated.

LEHIGH RIVER BASIN

01452000 JORDAN CREEK AT ALLENTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.0	108	145	142	168	194	167	125	79.0	55.2	53.6	64.6
MAX	304	321	513	522	354	421	551	438	517	255	326	449
(WY)	1956	1971	1984	1979	1951	1977	1983	1989	1972	1945	1955	1987
MIN	3.93	8.62	20.7	8.45	34.3	55.0	38.0	22.3	5.89	1.21	1.81	2.83
(WY)	1964	1965	1981	1981	1980	1985	1985	1965	1965	1966	1966	1964

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1945 - 1991	
ANNUAL TOTAL	49796		35420.8		113	
ANNUAL MEAN	136		97.0		203	
HIGHEST ANNUAL MEAN					44.9	
LOWEST ANNUAL MEAN					6650	
HIGHEST DAILY MEAN	1690	Jan 30	1320	Dec 4	.00	Sep 9 1987
LOWEST DAILY MEAN	12	Oct 10	7.7	Sep 17,18,21	.06	Jul 7 1966
ANNUAL SEVEN-DAY MINIMUM	14	Oct 6	8.4	Sep 16	.06	Jul 9 1966
INSTANTANEOUS PEAK FLOW			1960	Dec 4	a16200	Jun 23 1972
INSTANTANEOUS PEAK STAGE			5.30	Dec 4	b11.61	Jun 23 1972
INSTANTANEOUS LOW FLOW			7.5	Sep 17,18-21	No flow many days	
ANNUAL RUNOFF (CFSM)	1.80		1.28		1.50	
ANNUAL RUNOFF (INCHES)	24.44		17.38		20.32	
10 PERCENT EXCEEDS	268		204		248	
50 PERCENT EXCEEDS	91		65		61	
90 PERCENT EXCEEDS	22		9.8		11	

a From rating curve extended above 6,100 ft³/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 mi².

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

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

REMARKS.--Records good except. Some regulation at low flow by mill above station since April 1954. 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 5,200 ft³/s, by a slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	36	57	●110	53	55	58	63	45	26	●23	e22
2	33	37	57	●95	52	54	56	57	38	26	●23	e21
3	31	41	65	●90	48	56	55	52	37	33	●23	e21
4	28	43	220	●89	48	107	53	51	37	27	●22	21
5	31	37	●160	●83	51	103	53	47	37	33	●22	21
6	29	38	●120	●80	54	100	53	67	37	28	●22	21
7	32	33	●94	●80	88	104	51	68	35	34	●21	21
8	32	31	●82	80	82	87	52	55	35	30	●21	21
9	29	30	●74	80	71	81	51	52	35	27	●33	21
10	31	139	●70	79	65	78	49	52	34	26	●50	21
11	27	158	●66	●80	62	73	45	48	34	26	●27	21
12	33	●100	●63	●100	63	71	44	47	35	27	●26	20
13	39	●80	●60	●88	65	68	44	47	35	42	●25	20
14	44	●69	●58	●80	73	66	44	48	33	32	●24	21
15	36	●64	●63	●77	75	69	46	47	32	27	●27	21
16	42	58	●80	89	61	59	46	46	29	27	●27	21
17	34	55	●70	110	59	53	45	41	29	26	●26	21
18	46	53	●75	115	60	68	45	43	29	●24	●25	21
19	47	50	●90	102	65	65	44	40	33	●29	●32	27
20	36	51	●77	94	68	59	41	40	33	●27	●49	21
21	30	51	●73	93	67	59	63	42	29	●26	●39	21
22	29	52	●83	82	64	59	74	46	29	●27	●30	21
23	58	53	●82	74	57	65	63	45	33	●34	●28	21
24	75	56	●130	73	54	68	72	42	29	●43	●27	21
25	66	57	●100	63	56	67	78	39	28	●29	●26	71
26	56	57	●95	56	57	62	73	39	27	●28	●25	28
27	58	56	●88	58	57	71	71	41	27	●27	●24	20
28	48	55	●80	54	55	68	63	46	27	●26	●24	20
29	46	56	●82	50	---	67	61	38	26	●25	●23	20
30	46	56	●88	49	---	65	63	41	27	●24	●23	20
31	42	---	●140	64	---	59	---	44	---	●23	●22	---
TOTAL	1247	1752	2742	2517	1730	2186	1656	1474	974	889	839	688
MEAN	40.2	58.4	88.5	81.2	61.8	70.5	55.2	47.5	32.5	28.7	27.1	22.9
MAX	75	158	220	115	88	107	78	68	45	43	50	71
MIN	27	30	57	49	48	53	41	38	26	23	21	20
CFSM	.90	1.31	1.99	1.82	1.39	1.58	1.24	1.07	.73	.64	.61	.52
IN.	1.04	1.46	2.29	2.10	1.45	1.83	1.38	1.23	.81	.74	.70	.58

e. Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR

	MEAN	MAX	(WY)	MIN	(WY)
1949	38.9	93.3	1976	8.90	1966
1950	46.3	110	1973	10.0	1966
1951	54.2	119	1978	6.88	1966
1952	58.6	201	1979	7.14	1967
1953	66.5	163	1979	23.1	1967
1954	71.5	151	1978	21.3	1965
1955	71.1	173	1983	18.6	1966
1956	57.9	129	1984	16.2	1965
1957	50.7	142	1972	15.0	1965
1958	44.2	141	1984	11.6	1966
1959	40.5	88.2	1984	10.6	1965
1960	39.6	106	1987	9.51	1965

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1949 - 1991
ANNUAL TOTAL	22933	18694	
ANNUAL MEAN	62.8	51.2	53.2
HIGHEST ANNUAL MEAN			89.7
LOWEST ANNUAL MEAN			15.5
HIGHEST DAILY MEAN	440	May 30	220
LOWEST DAILY MEAN	27	Oct 11	20
ANNUAL SEVEN-DAY MINIMUM	30	Oct 5	21
INSTANTANEOUS PEAK FLOW			262
INSTANTANEOUS PEAK STAGE			3.32
INSTANTANEOUS LOW FLOW			19
ANNUAL RUNOFF (CFSM)	1.41		1.15
ANNUAL RUNOFF (INCHES)	19.17		15.63
10 PERCENT EXCEEDS	95		82
50 PERCENT EXCEEDS	53		47
90 PERCENT EXCEEDS	38		23

LEHIGH RIVER BASIN

01453000 LEHIGH RIVER AT BETHLEHEM, PA

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

DRAINAGE AREA.--1,279 mi² includes that of Monocacy Creek. At site used prior to Oct. 1, 1928, 1,229 mi².

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

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

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

REMARKS.--Records good. 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. Adjusted for diversion.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	2720	1790	5910	2600	2110	3190	2580	1320	702	484	573
2	1220	2600	1710	5260	2320	2090	2870	2570	1140	693	454	538
3	1110	2380	1940	4520	2180	2420	2790	2500	1040	1150	422	523
4	1120	2180	15100	4080	2180	5130	2750	2140	1020	720	400	591
5	1210	2150	13300	3730	2230	7760	2550	1990	1040	812	404	717
6	1340	2720	12400	3570	2410	6760	2460	2390	1000	704	402	687
7	1430	2770	7840	3450	3310	6100	2380	3650	943	1150	390	624
8	1030	2400	5090	2890	4150	5260	2290	3050	930	932	423	587
9	1070	2150	4330	2740	3860	4390	2230	2560	1200	765	733	574
10	1060	4360	4010	2810	3650	3900	2180	2750	1110	648	1510	570
11	982	10200	3850	2670	3450	3640	2040	2230	832	602	777	597
12	1240	8300	3450	2900	3020	3420	1940	2080	894	583	571	556
13	2350	6690	3240	2880	2710	3160	1850	2060	915	927	510	458
14	3840	5750	2830	2620	2920	3000	1890	2400	842	839	505	404
15	3210	4170	2660	2270	3160	3010	1950	2410	785	704	534	372
16	2710	3810	2850	3030	2850	3060	2220	2080	745	622	620	362
17	2160	3410	2780	5370	2660	2940	2190	1910	772	563	660	361
18	2100	3150	3110	5770	2630	3050	2220	1860	910	531	630	374
19	6240	3080	3670	4350	2530	3530	2110	1680	1060	533	806	594
20	5260	3110	3580	3800	2440	3740	1940	1580	1230	636	1420	621
21	4160	2690	3480	3860	2810	3910	2190	1570	951	511	1050	550
22	3770	2500	4260	3570	2920	3250	3380	1480	834	491	710	497
23	4840	2650	4310	3200	2690	3550	4230	1380	1300	614	594	463
24	9710	2800	7880	3090	2420	3910	3830	1360	1380	684	631	452
25	8370	2490	8970	2910	2380	3800	3870	1340	1050	653	627	1430
26	6660	2360	7120	2430	2420	4570	4010	1390	861	603	564	897
27	4880	2200	5860	2490	2270	3910	3240	1420	898	659	706	615
28	4210	2120	5340	2410	2170	3970	3050	1690	774	636	760	529
29	3600	2010	4500	2490	---	3640	2910	1150	706	619	748	474
30	3170	1910	4300	2440	---	3520	2920	1070	693	579	647	471
31	2910	---	5430	2780	---	3340	---	1300	---	535	610	---
TOTAL	98222	101830	160980	106290	77340	119840	79670	61620	29175	21400	20302	17061
MEAN	3168	3394	5193	3429	2762	3866	2656	1988	972	690	655	569
MAX	9710	10200	15100	5910	4150	7760	4230	3650	1380	1150	1510	1430
MIN	982	1910	1710	2270	2170	2090	1850	1070	693	491	390	361
CFSM	2.48	2.65	4.06	2.68	2.16	3.02	2.08	1.55	.76	.54	.51	.44
IN.	2.86	2.96	4.68	3.09	2.25	3.49	2.32	1.79	.85	.62	.59	.50

LEHIGH RIVER BASIN

01453000 LEHIGH RIVER AT BETHLEHEM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1564	2321	2846	2590	2808	3790	3819	3147	2088	1649	1357	1394
MAX	5778	5294	6991	7898	5820	7708	9038	7041	7272	6362	6192	6907
(WY)	1956	1952	1984	1979	1951	1977	1983	1989	1972	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 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1941 - 1991
ANNUAL TOTAL	1120765	893730	
ANNUAL MEAN	3071	2449	2446
HIGHEST ANNUAL MEAN			3973
LOWEST ANNUAL MEAN			1165
HIGHEST DAILY MEAN	15900	May 17	70400
LOWEST DAILY MEAN	843	Aug 4	210
ANNUAL SEVEN-DAY MINIMUM	963	Jul 29	216
INSTANTANEOUS PEAK FLOW			22100
INSTANTANEOUS PEAK STAGE			9.51
INSTANTANEOUS LOW FLOW			359
ANNUAL RUNOFF (CFSM)	2.40	1.91	1.91
ANNUAL RUNOFF (INCHES)	32.60	25.99	25.98
10 PERCENT EXCEEDS	5380	4350	4850
50 PERCENT EXCEEDS	2480	2220	1760
90 PERCENT EXCEEDS	1250	572	677

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1904, 1909 - 1940, BY WATER YEAR (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 TOTAL		
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
INSTANTANEOUS PEAK FLOW	64800	Aug 24 1933
INSTANTANEOUS 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 From rating curve extended above 48,000 ft³/s.

b From floodmark, present site and datum.

LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA

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

DRAINAGE AREA.--1,359 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1400	2870	1890	6510	2770	2290	3520	2810	1500	766	559	●630	
2	1360	2700	1820	5850	2490	2290	3150	2780	1330	797	529	●610	
3	1260	2520	2060	5040	2370	2630	3050	2690	1210	1410	515	●590	
4	1270	2330	14700	4560	2400	5810	2980	2320	1200	853	537	695	
5	1360	2270	13600	4140	2460	8480	2780	2150	1220	985	547	823	
6	1430	2810	12600	3940	2640	7380	2670	2650	1190	828	526	797	
7	1600	2900	8360	3820	3740	6720	2580	4060	1120	1290	518	727	
8	1220	2520	5620	3150	4600	5700	2490	3370	1070	1100	548	670	
9	1260	2270	4740	3010	4220	4750	2430	2750	1370	886	857	673	
10	1230	5150	4400	3060	3970	4300	2360	2970	1310	765	1740	680	
11	1150	10900	4200	2910	3760	4010	2200	2420	1000	701	954	716	
12	1310	8830	3730	3330	3260	3770	2110	2240	1050	688	671	602	
13	2340	7180	3510	3160	2910	3470	2030	2230	1080	1120	607	512	
14	4100	6260	3050	2810	3220	3330	2090	2560	973	1030	632	496	
15	3370	4560	2860	2460	3470	3350	2140	2640	906	809	664	495	
16	2810	4120	3100	3500	3070	3390	2410	2250	877	711	724	503	
17	2260	3680	3010	6170	2850	3230	2400	2070	886	646	746	517	
18	2260	3360	3390	6420	2810	3480	2420	2030	1060	625	707	522	
19	6660	3270	4060	4820	2730	4000	2290	1840	1200	663	●940	799	
20	5760	3290	3910	4190	2660	4170	2110	1750	1400	888	●1700	711	
21	4540	2800	3800	4310	3040	4330	2540	1740	1100	596	●1300	636	
22	4060	2600	4710	3920	3160	3580	3900	1650	954	595	●880	591	
23	5290	2760	4740	3480	2890	3970	4710	1560	1420	658	●700	565	
24	10300	2920	8480	3370	2590	4390	4380	1520	1460	828	●710	568	
25	8860	2570	9580	3170	2580	4230	4410	1500	1180	740	●700	1980	
26	7140	2440	7640	2630	2620	5080	4480	1540	958	690	●660	1200	
27	5320	2300	6420	2680	2460	4400	3580	1560	996	758	●760	738	
28	4600	2210	5920	2590	2370	4450	3330	2020	877	712	●850	613	
29	3920	2100	5000	2680	---	4030	3170	1360	798	714	●860	605	
30	3390	1990	4770	2630	---	3920	3190	1250	811	683	●780	606	
31	3090	---	6150	3040	---	3690	---	1480	---	605	●690	---	
TOTAL	105920	108480	171820	117350	84110	132620	87900	67760	33506	25140	24111	20870	
MEAN	3417	3616	5543	3785	3004	4278	2930	2186	1117	811	778	696	
MAX	10300	10900	14700	6510	4600	8480	4710	4060	1500	1410	1740	1980	
MIN	1150	1990	1820	2460	2370	2290	2030	1250	798	595	515	495	
● Estimated.													
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR													
MEAN	2018	2721	3412	2923	3382	4177	4310	3628	2684	1951	1566	1790	
MAX	5272	5438	7790	8238	5385	8344	10390	8542	7607	4641	4179	7920	
(WY)	1977	1971	1984	1979	1976	1977	1983	1989	1972	1984	1969	1987	
MIN	771	835	633	405	1278	1805	1639	2001	1104	811	711	660	
(WY)	1981	1985	1981	1981	1980	1981	1985	1987	1987	1991	1980	1983	
SUMMARY STATISTICS													
				FOR 1990 CALENDAR YEAR				FOR 1991 WATER YEAR				WATER YEARS 1967 - 1991	
ANNUAL TOTAL				1253320				979587					
ANNUAL MEAN				3434				2684				2877	
HIGHEST ANNUAL MEAN												3997	
LOWEST ANNUAL MEAN												1594	
HIGHEST DAILY MEAN				16100		May 17		14700		Dec 4		44300	
LOWEST DAILY MEAN				1090		Aug 4		495		Sep 15		330	
ANNUAL SEVEN-DAY MINIMUM				1220		Jul 29		521		Sep 12		349	
INSTANTANEOUS PEAK FLOW								21200		Dec 4		●60600	
INSTANTANEOUS PEAK STAGE								15.88		Dec 4		24.86	
ANNUAL RUNOFF (CFSM)				2.53				1.97				2.12	
ANNUAL RUNOFF (INCHES)				34.31				26.81				28.76	
10 PERCENT EXCEEDS				6100				4790				5700	
50 PERCENT EXCEEDS				2760				2420				2110	
90 PERCENT EXCEEDS				1480				668				906	

a Also Feb. 1, 1981.

b From rating curve extended above 36,000 ft³/s.

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA

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

DRAINAGE AREA.--1,364 mi².

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

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

WATER TEMPERATURES: October 1961 to current year.

DISSOLVED OXYGEN: June 1966 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1961. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Other interruption in the daily record were due to malfunctions of the instrument. Subsequent to water year 1978, station has not been operated October to March..

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, and July 21, 1980; minimum, 0.0°C on many days during winter months.

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

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	177	169	174	209	197	202
2	---	---	---	---	---	---	197	179	186	225	210	219
3	---	---	---	---	---	---	205	193	200	220	210	215
4	---	---	---	---	---	---	199	190	194	224	212	219
5	---	---	---	---	---	---	206	192	198	241	226	235
6	---	---	---	---	---	---	217	208	213	236	221	229
7	---	---	---	---	---	---	219	208	213	230	184	208
8	---	---	---	---	---	---	217	209	213	184	166	175
9	---	---	---	---	---	---	233	213	224	230	185	214
10	---	---	---	---	---	---	233	222	229	223	195	204
11	---	---	---	---	---	---	241	232	238	221	206	215
12	---	---	---	---	---	---	253	240	248	242	223	235
13	---	---	---	---	---	---	258	248	253	238	231	234
14	---	---	---	---	---	---	257	245	252	245	217	235
15	---	---	---	---	---	---	247	238	242	224	214	219
16	---	---	---	---	---	---	251	233	243	235	222	231
17	---	---	---	---	---	---	239	223	233	254	233	246
18	---	---	---	---	---	---	235	224	230	262	253	258
19	---	---	---	---	---	---	240	224	234	268	256	262
20	---	---	---	---	---	---	247	233	241	268	258	264
21	---	---	---	---	---	---	247	230	239	277	264	271
22	---	---	---	---	---	---	234	197	217	284	273	278
23	---	---	---	---	---	---	197	158	178	297	280	289
24	---	---	---	---	---	---	185	157	162	304	292	299
25	---	---	---	---	---	---	187	174	180	309	297	304
26	---	---	---	---	---	---	179	166	174	319	297	306
27	---	---	---	---	---	---	191	173	178	302	274	287
28	---	---	---	---	---	---	198	190	194	275	240	258
29	---	---	---	---	---	---	197	188	192	296	248	270
30	---	---	---	---	---	---	204	193	199	330	296	312
31	---	---	---	---	---	---	---	---	---	342	324	332
MONTH	---	---	---	---	---	---	258	157	212	342	166	249

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	338	313	323	370	363	368	413	403	407	382	360	371
2	317	306	312	367	357	361	437	412	420	387	379	382
3	314	305	308	360	318	351	447	437	444	385	370	375
4	333	313	322	316	291	300	460	448	456	376	362	369
5	337	329	335	348	308	328	470	460	464	398	375	384
6	340	332	336	350	338	345	469	437	455	391	366	382
7	348	339	342	353	338	349	443	429	437	367	360	364
8	354	345	348	350	303	320	470	436	454	372	360	366
9	362	338	354	326	305	311	483	458	472	377	364	369
10	336	300	313	361	329	349	458	320	402	370	356	361
11	307	293	297	380	361	372	314	284	291	378	358	368
12	359	308	333	410	377	393	321	295	308	385	374	378
13	370	360	365	422	396	409	351	321	332	382	372	376
14	374	360	368	401	342	369	412	350	376	407	378	389
15	377	369	373	351	346	348	436	412	423	444	408	434
16	385	377	381	370	350	363	432	418	425	461	439	454
17	385	369	380	398	368	384	423	412	417	466	447	459
18	389	370	380	415	396	407	409	390	399	448	439	444
19	384	369	377	428	416	421	390	359	376	455	438	447
20	370	323	354	447	408	431	357	306	345	444	390	417
21	338	317	329	410	372	392	299	270	280	407	390	400
22	344	333	337	423	407	413	303	278	283	399	385	390
23	356	344	353	425	411	418	340	307	324	407	394	396
24	341	278	303	442	417	427	384	341	363	407	385	398
25	283	262	271	424	395	410	404	384	394	408	292	356
26	313	285	295	405	390	398	393	375	381	301	270	281
27	346	318	335	420	401	411	384	369	376	347	303	333
28	351	338	346	422	408	416	402	380	390	380	349	363
29	368	342	359	406	391	396	380	360	371	401	377	384
30	376	366	371	389	380	384	361	345	356	411	403	406
31	---	---	---	409	378	390	364	348	358	---	---	---
MONTH	389	262	340	447	291	379	483	270	386	466	270	387

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.4	7.3	7.4	8.3	7.5	7.8	8.3	7.6	7.9	8.2	7.5	7.8
2	7.5	7.3	7.4	8.2	7.7	7.9	8.4	7.6	8.0	8.3	7.6	7.9
3	7.6	7.4	7.5	7.7	7.4	7.5	8.4	7.7	8.0	8.3	7.8	8.0
4	7.6	7.4	7.5	7.5	7.3	7.4	8.3	7.6	7.9	8.3	7.7	8.0
5	7.6	7.4	7.5	7.5	7.4	7.5	8.3	7.6	7.9	8.0	7.6	7.8
6	7.6	7.5	7.5	7.6	7.4	7.5	8.5	7.7	8.0	8.0	7.5	7.7
7	7.7	7.5	7.6	7.6	7.4	7.5	8.6	7.8	8.2	8.1	7.5	7.7
8	7.8	7.5	7.7	7.7	7.4	7.5	8.5	7.8	8.2	8.2	7.5	7.8
9	7.8	7.5	7.6	7.9	7.4	7.6	8.4	7.5	7.9	8.1	7.5	7.8
10	7.8	7.5	7.6	8.2	7.5	7.8	7.6	7.4	7.4	8.1	7.6	7.8
11	7.8	7.4	7.6	8.2	7.5	7.8	7.5	7.4	7.4	8.0	7.5	7.7
12	7.6	7.3	7.4	8.4	7.6	7.9	7.8	7.3	7.5	8.0	7.5	7.7
13	7.8	7.4	7.6	8.2	7.7	7.9	8.0	7.4	7.6	8.1	7.5	7.7
14	8.0	7.5	7.7	7.8	7.5	7.6	8.0	7.4	7.7	8.1	7.6	7.8
15	8.1	7.6	7.8	8.2	7.5	7.7	7.9	7.5	7.7	8.1	7.6	7.8
16	8.4	7.5	7.9	8.5	7.6	8.0	8.0	7.5	7.7	7.9	7.6	7.7
17	8.4	7.5	7.9	8.6	7.7	8.1	8.1	7.5	7.8	8.0	7.6	7.7
18	7.9	7.5	7.7	8.7	7.6	8.2	8.1	7.5	7.8	7.9	7.6	7.7
19	7.5	7.4	7.5	8.7	7.8	8.3	8.0	7.5	7.7	7.9	7.5	7.6
20	7.6	7.4	7.5	8.5	8.0	8.2	7.7	7.4	7.5	7.5	7.4	7.4
21	7.8	7.4	7.5	8.2	7.4	7.7	7.5	7.3	7.4	7.8	7.5	7.6
22	7.7	7.4	7.5	8.2	7.5	7.8	7.6	7.3	7.4	7.9	7.6	7.7
23	7.6	7.4	7.4	8.1	7.6	7.9	7.8	7.4	7.5	7.9	7.6	7.7
24	7.7	7.5	7.6	8.2	7.5	7.8	7.9	7.4	7.6	7.8	7.6	7.7
25	7.8	7.4	7.6	8.0	7.5	7.6	8.0	7.4	7.6	7.7	7.3	7.4
26	8.0	7.4	7.6	7.7	7.4	7.5	8.2	7.5	7.8	7.5	7.4	7.4
27	8.1	7.4	7.7	7.7	7.4	7.5	8.2	7.5	7.9	7.7	7.5	7.5
28	8.2	7.5	7.8	8.0	7.4	7.6	8.1	7.6	7.8	7.8	7.5	7.6
29	8.3	7.5	7.8	7.9	7.5	7.7	8.1	7.5	7.7	7.8	7.6	7.7
30	8.2	7.5	7.8	8.0	7.5	7.7	8.2	7.5	7.7	7.9	7.6	7.7
31	---	---	---	8.1	7.5	7.8	8.1	7.4	7.7	---	---	---
MONTH	8.4	7.3	7.6	8.7	7.3	7.8	8.6	7.3	7.7	8.3	7.3	7.7

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	9.0	8.0	8.5	16.5	13.5	15.0
2	---	---	---	---	---	---	8.5	8.0	8.0	17.0	16.0	16.5
3	---	---	---	---	---	---	9.5	7.5	8.5	16.5	15.5	16.0
4	---	---	---	---	---	---	10.5	8.5	9.5	16.0	14.5	15.5
5	---	---	---	---	---	---	10.5	10.0	10.5	17.0	15.5	16.0
6	---	---	---	---	---	---	12.5	10.5	11.5	17.0	16.5	16.5
7	---	---	---	---	---	---	15.0	12.5	13.5	16.0	15.5	15.5
8	---	---	---	---	---	---	16.5	15.0	15.5	16.0	14.5	15.0
9	---	---	---	---	---	---	18.0	16.5	17.0	16.0	15.0	15.5
10	---	---	---	---	---	---	17.5	16.5	17.5	16.5	15.0	15.5
11	---	---	---	---	---	---	16.5	14.5	15.5	18.0	16.0	16.5
12	---	---	---	---	---	---	14.5	13.5	13.5	19.5	17.5	18.5
13	---	---	---	---	---	---	13.5	11.5	12.5	21.0	19.5	20.0
14	---	---	---	---	---	---	11.5	11.0	11.5	22.0	20.5	21.0
15	---	---	---	---	---	---	11.0	11.0	11.0	22.0	20.5	21.5
16	---	---	---	---	---	---	13.0	11.0	12.0	22.5	21.5	22.0
17	---	---	---	---	---	---	14.0	13.0	13.5	22.5	21.5	22.0
18	---	---	---	---	---	---	14.0	13.0	13.5	21.5	20.5	21.0
19	---	---	---	---	---	---	13.0	12.5	13.0	20.5	19.5	20.0
20	---	---	---	---	---	---	13.0	12.0	12.5	19.5	19.0	19.5
21	---	---	---	---	---	---	12.0	10.5	11.0	20.0	19.0	19.5
22	---	---	---	---	---	---	10.5	10.0	10.0	21.5	20.0	20.5
23	---	---	---	---	---	---	11.0	9.5	10.5	23.0	21.5	22.0
24	---	---	---	---	---	---	11.5	11.0	11.5	23.5	22.5	23.0
25	---	---	---	---	---	---	12.5	11.0	11.5	24.5	23.0	23.5
26	---	---	---	---	---	---	14.0	12.5	13.5	24.5	24.0	24.5
27	---	---	---	---	---	---	15.5	13.5	14.5	25.0	24.0	24.5
28	---	---	---	---	---	---	16.0	15.5	16.0	25.5	24.5	25.0
29	---	---	---	---	---	---	15.5	14.0	14.5	26.0	25.0	25.5
30	---	---	---	---	---	---	14.0	13.0	13.5	26.5	25.0	25.5
31	---	---	---	---	---	---	---	---	---	26.0	25.0	25.5
MONTH	---	---	---	---	---	---	18.0	7.5	12.5	26.5	13.5	19.9

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	25.5	24.5	25.0	27.0	26.0	26.5	26.0	24.0	25.0	27.0	25.0	25.5
2	25.5	24.0	24.5	27.0	25.5	25.5	26.5	25.0	26.0	25.0	23.0	24.0
3	25.5	24.0	24.5	25.5	23.0	24.0	26.5	25.5	26.0	23.5	22.5	23.0
4	24.5	23.5	24.0	23.5	22.0	22.5	26.5	25.5	26.0	23.0	22.0	22.5
5	23.0	22.0	22.5	23.0	22.5	22.5	26.5	25.5	26.0	23.5	22.0	22.5
6	22.0	21.0	21.5	23.0	21.5	22.0	26.0	24.5	25.0	24.0	22.5	23.0
7	22.0	20.5	21.0	24.0	22.5	23.0	26.0	24.5	25.0	24.0	22.5	23.5
8	23.0	20.5	21.5	24.5	23.0	23.5	26.0	25.0	25.5	24.5	23.0	23.5
9	23.5	21.5	22.5	25.5	23.5	24.5	26.0	25.0	25.5	24.5	23.5	24.0
10	24.5	22.5	23.5	26.0	24.0	25.0	25.0	23.5	24.0	24.5	23.5	24.0
11	25.0	23.0	24.0	26.0	24.5	25.5	24.5	24.0	24.0	24.0	23.5	24.0
12	25.0	24.0	24.5	26.0	25.0	25.5	24.5	23.0	23.5	24.0	22.5	23.0
13	24.5	23.0	23.5	26.0	24.5	25.0	25.0	23.5	24.0	23.5	22.0	22.5
14	24.0	22.0	23.0	25.0	24.0	24.5	25.5	24.5	25.0	23.5	22.5	23.0
15	24.5	22.5	23.5	25.5	23.5	24.5	25.5	25.0	25.0	23.5	23.0	23.5
16	26.0	23.5	24.5	26.5	24.0	25.0	26.0	24.5	25.0	24.5	23.0	23.5
17	26.5	25.0	25.5	26.5	25.0	26.0	26.0	25.0	25.5	25.0	24.0	24.5
18	26.5	24.5	25.0	27.5	25.5	26.5	26.5	25.0	26.0	25.5	24.5	25.0
19	24.0	22.5	23.0	28.0	26.5	27.0	26.5	25.5	26.0	25.5	23.5	24.5
20	23.5	22.0	23.0	28.5	27.0	27.5	26.0	24.0	25.0	23.5	21.5	22.5
21	25.5	23.0	24.5	28.0	26.5	27.5	24.0	23.0	23.5	21.0	20.0	20.0
22	25.0	24.5	24.5	28.5	27.5	28.0	24.5	23.0	24.0	20.0	19.0	19.0
23	24.0	22.5	23.0	28.5	27.5	28.0	25.0	23.0	24.0	19.5	18.5	18.5
24	22.5	21.5	22.0	28.5	27.0	27.5	25.5	24.0	24.5	19.0	18.0	18.5
25	24.0	22.0	23.0	28.0	26.5	26.5	25.0	24.5	25.0	19.0	18.0	18.5
26	25.0	22.0	23.5	26.5	25.0	26.0	25.0	24.0	24.5	19.0	17.5	18.0
27	25.5	23.5	24.5	25.0	24.5	25.0	25.5	24.0	25.0	18.5	17.5	18.0
28	26.5	24.0	25.0	25.5	23.5	24.5	26.0	24.5	25.5	18.0	17.0	17.5
29	27.0	25.5	26.0	25.0	24.0	24.5	27.0	25.0	26.0	17.5	16.5	17.0
30	27.0	26.0	26.5	24.5	23.5	24.0	27.5	26.0	26.5	17.5	16.5	17.0
31	---	---	---	25.0	23.5	24.0	27.5	26.5	27.0	---	---	---
MONTH	27.0	20.5	23.7	28.5	21.5	25.2	27.5	23.0	25.1	27.0	16.5	21.8

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	12.2	11.8	12.0	10.2	9.4	10.0
2	---	---	---	---	---	---	12.4	11.8	12.1	9.5	8.8	9.2
3	---	---	---	---	---	---	12.6	12.0	12.3	10.1	9.0	9.5
4	---	---	---	---	---	---	12.4	11.3	12.0	10.6	9.5	9.9
5	---	---	---	---	---	---	11.4	10.8	11.1	10.7	9.3	9.8
6	---	---	---	---	---	---	11.4	10.4	10.9	9.2	8.6	8.9
7	---	---	---	---	---	---	10.9	9.6	10.3	10.0	8.6	9.3
8	---	---	---	---	---	---	10.4	9.1	9.7	10.4	9.6	10.0
9	---	---	---	---	---	---	9.9	8.6	9.2	10.0	9.6	9.8
10	---	---	---	---	---	---	10.0	8.3	9.0	10.2	9.7	9.9
11	---	---	---	---	---	---	11.0	8.9	9.8	10.0	9.2	9.7
12	---	---	---	---	---	---	11.8	9.7	10.7	9.4	8.6	9.1
13	---	---	---	---	---	---	11.3	10.5	10.8	9.1	8.3	8.6
14	---	---	---	---	---	---	12.6	10.7	11.5	8.7	8.0	8.3
15	---	---	---	---	---	---	11.4	10.9	11.2	8.3	7.1	7.9
16	---	---	---	---	---	---	11.8	10.6	11.1	7.7	7.1	7.4
17	---	---	---	---	---	---	10.6	9.6	10.1	7.8	7.0	7.3
18	---	---	---	---	---	---	10.0	9.2	9.6	8.0	7.4	7.7
19	---	---	---	---	---	---	11.3	9.8	10.5	8.8	7.8	8.3
20	---	---	---	---	---	---	10.7	10.1	10.3	9.0	8.4	8.6
21	---	---	---	---	---	---	10.6	10.2	10.3	8.8	8.2	8.4
22	---	---	---	---	---	---	11.0	10.4	10.7	8.5	7.8	8.1
23	---	---	---	---	---	---	11.2	10.9	11.0	8.2	7.5	7.7
24	---	---	---	---	---	---	10.9	10.2	10.5	8.2	7.1	7.6
25	---	---	---	---	---	---	10.8	10.1	10.5	8.0	7.1	7.4
26	---	---	---	---	---	---	10.4	10.0	10.2	7.7	6.8	7.2
27	---	---	---	---	---	---	10.0	9.5	9.8	7.8	6.7	7.1
28	---	---	---	---	---	---	9.4	8.8	9.2	7.0	5.8	6.6
29	---	---	---	---	---	---	9.7	9.1	9.4	7.6	5.8	6.6
30	---	---	---	---	---	---	10.6	9.4	9.8	7.6	6.2	6.8
31	---	---	---	---	---	---	---	---	---	7.3	6.4	6.8
MONTH	---	---	---	---	---	---	12.6	8.3	10.5	10.7	5.8	8.4

LEHIGH RIVER BASIN

01454720 LEHIGH RIVER AT EASTON, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.4	6.4	6.8	9.9	5.9	7.6	10.6	7.0	8.7	10.1	6.6	8.0
2	8.1	6.5	7.2	8.5	6.1	7.1	10.5	6.9	8.7	10.3	7.2	8.5
3	8.4	6.8	7.4	7.1	6.1	6.8	10.1	6.7	8.2	10.2	7.5	8.8
4	8.1	6.8	7.3	8.0	6.5	7.1	9.8	6.5	7.9	9.9	7.4	8.7
5	8.4	7.1	7.6	7.4	6.7	7.1	10.5	6.6	8.5	10.2	7.7	8.7
6	8.9	7.5	8.1	8.3	6.9	7.5	10.8	6.8	8.5	10.2	7.7	8.7
7	9.5	8.0	8.6	7.9	6.9	7.4	11.0	7.0	8.8	10.1	7.6	8.6
8	9.7	7.9	8.7	8.5	6.9	7.5	10.4	6.9	8.5	10.4	7.5	8.7
9	9.2	7.5	8.2	9.0	6.6	7.7	9.8	6.4	7.4	10.2	7.3	8.7
10	9.0	7.3	8.0	9.6	6.6	7.9	8.1	6.8	7.3	9.6	7.4	8.4
11	9.1	6.9	7.8	9.7	6.4	7.9	8.5	7.1	7.6	9.8	7.2	8.4
12	8.5	6.0	7.1	10.3	6.5	8.1	9.1	7.0	7.8	10.0	7.4	8.5
13	9.6	6.4	7.8	9.2	6.4	7.7	9.6	6.8	7.9	9.9	7.4	8.5
14	10.0	7.2	8.6	9.0	6.7	7.7	9.9	6.4	8.1	9.8	7.3	8.3
15	10.4	7.1	8.6	9.9	7.0	8.0	9.3	6.6	7.9	9.8	7.1	8.1
16	11.0	6.8	8.8	10.9	6.7	8.5	9.9	6.7	8.2	9.3	7.2	8.1
17	10.9	6.4	8.4	11.4	6.5	8.7	9.8	6.7	8.2	9.2	6.9	8.0
18	8.8	6.2	7.5	11.7	6.1	8.8	9.6	6.7	8.0	9.2	6.8	7.7
19	8.0	6.7	7.2	11.4	6.1	8.4	8.7	6.4	7.4	8.8	6.3	7.3
20	9.0	7.0	7.9	9.3	6.2	7.6	7.6	6.8	7.2	8.5	7.0	7.6
21	9.5	7.1	8.1	9.3	5.2	7.0	8.5	7.1	7.7	9.6	7.7	8.4
22	8.3	6.7	7.4	9.3	5.2	7.2	9.1	7.2	8.0	10.1	8.2	8.9
23	8.7	6.7	7.5	9.3	5.2	7.3	9.5	7.2	8.0	9.9	8.3	8.9
24	9.4	7.6	8.4	10.1	5.7	7.6	9.6	6.9	7.9	10.0	8.5	9.0
25	9.7	7.7	8.5	9.0	5.9	7.0	10.0	6.9	8.2	9.5	8.0	8.5
26	9.8	7.4	8.5	7.7	6.1	6.7	10.6	7.2	8.6	8.9	8.4	8.6
27	9.8	7.0	8.3	8.8	6.4	7.3	10.4	7.2	8.7	9.4	8.3	8.7
28	9.8	6.6	8.1	9.7	6.8	7.9	9.8	7.1	8.2	10.0	8.3	9.0
29	9.8	6.2	7.9	9.3	6.8	7.8	9.6	6.9	8.0	10.2	8.6	9.3
30	8.9	5.8	7.4	10.1	7.1	8.4	9.5	6.6	7.7	10.6	8.7	9.4
31	---	---	---	10.0	7.1	8.3	9.3	6.3	7.5	---	---	---
MONTH	11.0	5.8	7.9	11.7	5.2	7.7	11.0	6.3	8.0	10.6	6.3	8.5

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 mi northeast of White Haven. DRAINAGE AREA, 289 mi². PERIOD OF RECORD, February 1961 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

Reservoir formed by an earthfill embankment covered with a rock shell, with concrete spillway at elevation 1,450.0 ft. Storage began Feb. 17, 1961; water in reservoir first reached conservation pool elevation in June 1961. Total capacity at at elevation of 1,450.0 ft is 110,700 acre-ft of which 108,700 acre-ft is controlled storage above elevation 1,300.0 ft, conservation pool. Dead storage is 2,000 acre-ft. Reservoir is used for flood control and recreation. Flow regulated by three gates and low-flow by-pass system. Records furnished by the Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 8,760 acre-ft, Dec. 5, at elevation of, 1,339.76 ft; minimum contents, 1,570 acre-ft, Feb. 18, at elevation of, 1,295.81 ft.

01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, Hydrologic Unit 02040106, at dam on Wild Creek, 0.7 mi upstream from Hatchery, 2.6 mi upstream from Wild Creek Dam, 4.4 mi upstream from mouth, and 10 mi northeast of Palmerton. DRAINAGE AREA, 16.5 mi². PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

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

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 20,430 acre-ft, Dec. 4, at elevation of, 1,000.77 ft; minimum contents, 13,560 acre-ft, Sept. 30, at elevation of, 984.58 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 mi². PERIOD OF RECORD, January 1941 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

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

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 12,310 acre-ft, Dec. 5, at elevation of, 821.02 ft; minimum contents 11,470 acre-ft, Sept. 30, at elevation of, 817.80 ft.

01449790 BELLEVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.45 mi upstream from gaging station on Pohopoco Creek, 0.55 mi upstream from Sawmill Run and 2.3 mi northeast of Parryville. DRAINAGE AREA, 96.3 mi². PERIOD OF RECORD, February 1971 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

Lake formed by an earth and rockfill dam with ungated, partially lined spillway at elevation of 651.00 ft. Storage began Feb. 8, 1971. Capacity at elevation of 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. Reservoir is used for recreation, flood control, low flow augmentation and water supply. Figures given herein represent total contents. Regulation is accomplished by a multi-level water-quality outlet system, and two flood-control gates. Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 43,260 acre-ft, Dec. 5, at elevation of, 630.06 ft; minimum contents, 33,660 acre-ft, Sept. 22-24, at elevation of 619.32 ft.

LEHIGH RIVER BASIN

LAKES AND RESERVOIRS IN LEHIGH RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>01447780 Francis E. Walter Reservoir</u>				<u>01449400 Penn Forest Reservoir</u>		
Sept. 30	1,306.69	2,690	--	992.27	16,560	--
Oct. 31	1,302.52	2,240	- 7.3	1000.34	20,170	+ 58.7
Nov. 30	1,300.82	2,080	- 2.7	1000.17	20,080	- 1.5
Dec. 31	1,308.22	2,860	+ 12.7	1000.40	20,210	+ 2.1
CAL YR 1990	--	--	+ 0.8	--	--	+ 6.7
Jan. 31	1,301.45	2,140	- 11.7	1,000.28	20,140	- 1.1
Feb. 28	1,300.05	2,000	- 2.5	1,000.08	20,020	- 2.2
Mar. 31	1,297.13	1,700	- 4.9	1,000.16	20,070	+ 0.8
Apr. 30	1,300.09	2,010	+ 5.2	1,000.12	20,050	- 0.3
May 31	1,305.19	2,530	+ 8.5	1,000.07	20,020	- 0.5
June 30	1,306.25	2,640	+ 1.8	997.75	18,930	- 18.3
July 31	1,297.35	1,720	- 15.0	993.35	17,010	- 31.2
Aug. 31	1,300.65	2,060	+ 5.5	989.00	15,240	- 28.8
Sept. 30	1,302.33	2,220	+ 2.7	984.58	13,560	- 28.2
WTR YR 1991	--	--	- 0.6	--	--	- 4.1
<u>01449700 Wild Creek Reservoir</u>				<u>01449790 Beltsville Lake</u>		
Sept. 30	818.48	11,660	--	628.00	41,240	--
Oct. 31	820.30	12,090	+ 7.0	628.01	41,250	+ 0.2
Nov. 30	820.12	12,040	- 0.8	627.95	41,190	- 1.0
Dec. 31	820.44	12,130	+ 1.5	627.67	40,920	- 4.4
CAL YR 1990	--	--	+ 0.6	--	--	- 0.6
Jan. 31	820.19	12,060	- 1.1	628.03	41,270	+ 5.7
Feb. 28	820.00	12,000	- 1.1	627.94	41,180	- 1.6
Mar. 31	820.17	12,050	+ 0.8	627.97	41,210	+ 0.5
Apr. 30	820.16	12,050	0	628.06	41,300	+ 1.5
May 31	819.25	11,850	- 3.3	628.04	41,280	- 0.3
June 30	818.88	11,770	- 1.3	627.99	41,230	- 0.8
July 31	818.96	11,790	+ 0.3	627.82	40,590	- 10.4
Aug. 31	818.90	11,770	- 0.3	623.80	37,390	- 52.1
Sept. 30	817.80	11,470	- 5.0	619.55	33,840	- 59.6
WTR YR 1991	--	--	- 0.3	--	--	- 10.21

COOKS CREEK BASIN

01457790 COOKS CREEK AT DURHAM FURNACE, PA

LOCATION.--Lat 40°34'56", long 75°12'20", Bucks County, Hydrologic Unit 02040105, on left downstream side of bridge, 0.8 mi west of Route 611, off Route 212 at Durham Furnace and 1.0 mi above mouth.

DRAINAGE AREA.--29.4 mi².

PERIOD OF RECORD.--December 1990 to September 1991.

GAGE.--Water-stage recorder. Elevation of gage is 170 ft above National Geodetic Vertical Datum of 1929, from topographic map. Previously a low-flow partial-record station 0.3 mi downstream.

REMARKS.--Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	125	35	28	49	38	27	15	16	7.2
2	---	---	---	83	33	31	44	35	24	15	15	7.7
3	---	---	---	60	32	41	37	33	23	22	14	7.4
4	---	---	---	43	32	284	34	31	23	18	14	8.2
5	---	---	---	35	31	132	34	30	23	18	13	11
6	---	---	---	●33	40	92	33	77	23	18	12	9.0
7	---	---	---	●31	101	184	32	73	22	20	11	8.0
8	---	---	---	●30	78	87	31	35	22	19	11	7.2
10	---	---	---	●29	45	54	30	31	21	15	24	7.2
11	---	---	---	●29	37	42	29	30	21	14	15	7.2
12	---	---	25	265	33	37	28	29	29	14	13	7.1
13	---	---	25	139	31	35	29	28	23	21	12	7.1
14	---	---	23	82	63	40	30	28	21	22	11	7.1
15	---	---	27	63	53	62	36	36	20	16	13	7.2
16	---	---	58	315	35	57	33	28	20	14	12	7.2
17	---	---	31	380	32	44	36	28	20	14	10	7.1
18	---	---	69	186	31	141	39	30	20	13	9.6	7.0
19	---	---	69	123	35	125	31	26	23	13	16	16
20	---	---	38	99	56	81	30	26	21	61	15	15
21	---	---	49	●82	36	62	213	25	19	17	17	9.5
22	---	---	66	69	33	52	260	25	18	15	12	8.5
23	---	---	65	●59	31	102	117	24	20	22	10	8.3
24	---	---	254	51	30	104	181	24	20	29	10	8.7
25	---	---	103	42	30	78	146	24	18	18	9.9	93
26	---	---	61	●38	30	66	92	23	17	85	9.4	27
27	---	---	41	35	29	91	72	23	16	40	9.3	19
28	---	---	●31	36	28	82	58	53	16	23	8.9	15
29	---	---	●27	34	---	64	49	25	15	21	9.0	13
30	---	---	55	36	---	74	45	24	15	20	8.5	11
31	---	---	312	60	---	56	---	27	---	18	7.3	---
TOTAL	---	---	1429	2722	1138	2495	1909	1001	621	686	385.9	381.6
MEAN	---	---	71.4	87.8	40.6	80.5	63.6	32.3	20.7	22.1	12.4	12.7
MAX	---	---	312	380	101	284	260	77	29	85	24	93
MIN	---	---	23	29	28	28	28	23	15	13	7.3	7.0

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1991, BY WATER YEAR

MEAN	---	---	---	87.8	40.6	80.5	63.6	32.3	20.7	22.1	12.4	12.7
MAX	---	---	---	87.8	40.6	80.5	63.6	32.3	20.7	22.1	12.4	12.7
(WY)	---	---	---	1991	1991	1991	1991	1991	1991	1991	1991	1991
MIN	---	---	---	87.8	40.6	80.5	63.6	32.3	20.7	22.1	12.4	12.7
(WY)	---	---	---	1991	1991	1991	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1991 WATER YEAR

HIGHEST DAILY MEAN	380	Jan 17
LOWEST DAILY MEAN	7.0	Sep 18
ANNUAL SEVEN-DAY MINIMUM	7.1	Sep 12
INSTANTANEOUS PEAK FLOW	807	Jan 16
INSTANTANEOUS PEAK STAGE	3.78	Jan 16
INSTANTANEOUS LOW FLOW	7.0	Sep 17

TOHICKON CREEK BASIN

01459500 TOHICKON CREEK NEAR PIPERSVILLE, PA

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

DRAINAGE AREA.--97.4 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	30	29	634	141	51	158	79	48	3.9	20	4.4
2	7.7	28	26	321	105	54	127	72	36	3.5	17	3.6
3	7.3	341	42	205	87	106	101	61	27	4.0	15	2.5
4	6.0	316	1500	147	85	705	86	48	24	4.1	12	2.2
5	6.0	14	913	108	78	574	78	41	20	8.5	11	3.0
6	6.5	8.2	346	97	101	313	78	168	17	7.7	8.3	2.5
7	6.0	7.5	192	●95	309	575	72	385	14	7.3	6.6	2.3
8	6.0	6.9	129	●94	359	370	66	244	13	8.7	5.4	2.2
9	1010	6.3	98	●93	241	210	61	139	11	8.7	6.7	2.2
10	484	193	80	●92	162	145	60	97	9.3	7.6	13	2.0
11	195	421	63	●90	121	109	53	74	8.5	6.4	15	1.7
12	105	299	54	921	91	82	39	62	19	5.5	12	1.6
13	79	155	52	716	72	70	33	52	20	8.8	10	1.6
14	87	93	48	404	124	77	37	46	17	15	8.6	1.7
15	86	68	65	262	200	145	74	123	14	12	8.5	1.7
16	58	57	229	666	148	366	100	72	13	9.2	7.8	1.8
17	41	55	212	1730	93	378	105	54	12	7.7	6.8	1.8
18	67	51	278	650	73	243	146	47	10	6.6	5.8	1.6
19	182	37	371	331	80	543	123	34	14	5.8	7.7	2.4
20	110	34	244	221	195	350	92	29	14	5.5	43	2.9
21	75	30	216	●190	204	210	544	26	12	6.3	28	2.2
22	56	28	350	●170	155	149	1250	24	11	5.9	20	2.0
23	157	35	341	●140	110	228	528	22	9.8	8.9	16	2.1
24	670	51	974	106	83	454	416	19	8.7	14	14	2.2
25	357	48	554	86	74	348	654	18	7.9	10	12	66
26	180	44	273	78	68	244	362	16	6.9	12	9.3	70
27	94	38	160	63	64	253	215	14	6.0	33	7.9	63
28	66	36	●150	62	54	320	145	61	5.3	41	7.2	42
29	54	39	132	65	---	218	123	63	4.7	33	6.2	31
30	39	34	323	73	---	214	84	45	4.2	27	5.6	25
31	34	---	1210	163	---	198	---	40	---	23	5.0	---
TOTAL	4339.2	2603.9	9654	9073	3677	8302	6010	2275	437.3	360.6	371.4	351.2
MEAN	140	86.8	311	293	131	268	200	73.4	14.6	11.6	12.0	11.7
MAX	1010	421	1500	1730	359	705	1250	385	48	41	43	70
MIN	6.0	6.3	26	62	54	51	33	14	4.2	3.5	5.0	1.6
MEAN†	145	88.0	332	277	127	271	198	71.1	7.4	18.6	7.4	12.9
CFSM†	1.49	.90	3.41	2.84	1.30	2.78	2.03	.73	.08	.19	.08	.13
IN.†	1.72	1.01	2.93	3.28	1.36	3.21	2.27	.84	.08	.22	.09	.15

† Adjusted for change in contents in Nockamixon Lake.

● Estimated.

TOHICKON CREEK BASIN

01459500 TOHICKON CREEK NEAR PIPERSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.8	179	214	253	212	264	240	217	87.5	84.4	44.8	86.4
MAX	264	553	566	916	436	651	707	579	314	602	232	430
(WY)	1980	1976	1978	1979	1984	1978	1983	1984	1989	1984	1978	1989
MIN	5.87	24.7	19.5	16.4	28.3	43.1	36.9	29.1	11.4	8.85	4.12	4.03
(WY)	1983	1974	1981	1977	1974	1976	1985	1986	1977	1980	1983	1980

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR				FOR 1991 WATER YEAR				WATER YEARS 1974 - 1991			
ANNUAL TOTAL	64875.6				47454.6							
ANNUAL MEAN	178				130				163			
HIGHEST ANNUAL MEAN									300			
LOWEST ANNUAL MEAN									78.7			
HIGHEST DAILY MEAN	3710				May 30				6750			
LOWEST DAILY MEAN	3.7				Sep 21				1.6			
ANNUAL SEVEN-DAY MINIMUM	4.7				Sep 15				1.7			
INSTANTANEOUS PEAK FLOW					1730				Jan 17			
INSTANTANEOUS PEAK STAGE					1.6				Sep 12			
INSTANTANEOUS LOW FLOW					1.7				Sep 12			
ANNUAL RUNOFF (CFSM)	1.82				1.33				1.67			
ANNUAL RUNOFF (INCHES)	24.78				18.12				22.70			
10 PERCENT EXCEEDS	409				349				407			
50 PERCENT EXCEEDS	69				56				45			
90 PERCENT EXCEEDS	7.7				5.7				6.6			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1973, BY WATER YEAR (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 TOTAL				
ANNUAL MEAN	240			
HIGHEST ANNUAL	240			
LOWEST ANNUAL MEAN	45.8			
HIGHEST DAILY MEAN	6820			
LOWEST DAILY	.10			
ANNUAL SEVEN-DAY MINIMUM	.47			
INSTANTANEOUS PEAK FLOW	16000			
INSTANTANEOUS PEAK STAGE	11.26			
INSTANTANEOUS LOW FLOW	.05			
ANNUAL RUNOFF (CFSM)	1.43			
ANNUAL RUNOFF (INCHES)	19.48			
10 PERCENT EXCEEDS	325			
50 PERCENT EXCEEDS	37			
90 PERCENT EXCEEDS	3.8			

* Adjusted for change in contents in Nockamixon Lake.

a From rating curve extended above 3,600 ft³/s, on basis of slope-area measurement at gage height 10.48 ft.

TOHICKON CREEK BASIN

RESERVOIR IN TOHICKON CREEK BASIN

01459350 NOCKAMIXON RESERVOIR.--Lat 40°28'13", long 75°11'10", Bucks County, Hydrologic Unit 02040105, at dam on Tohickon Creek, 6.2 mi upstream from gaging station on Tohickon Creek, 2.9 mi upstream from Mink Run, 1.3 mi east of Ottsville. DRAINAGE AREA, 73.3 mi². PERIOD OF RECORD, December 1973 to current year. GAGE, water stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Resources).

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

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

EXTREMES FOR CURRENT YEAR: Maximum contents, 41,390 acre-ft, Dec. 31, at elevation of 395.85 ft; minimum contents, 38,800 acre-ft, Nov. 4, at elevation of 394.00 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>01459350 Nockamixon Reservoir</u>						
Sept. 30	394.70	39,780	--			
Oct. 31	394.90	40,060	+	4.6		
Nov. 30	394.95	40,130	+	1.2		
Dec. 31	395.85	41,390	+	20.5		
CAL YR 1990	--	--	+	1.3		
Jan. 31	395.15	40,410	-	15.9		
Feb. 28	395.00	40,200	-	3.8		
Mar. 31	395.15	40,410	+	3.4		
Apr. 30	395.05	40,270	-	2.4		
May 31	394.95	40,130	-	2.3		
June 30	394.65	39,700	-	7.2		
July 31	394.95	40,130	+	7.0		
Aug. 31	394.75	39,850	-	4.6		
Sept. 30	394.80	39,920	+	1.2		
WTR YR 1991	--	--	+	0.2		

DELAWARE RIVER BASIN

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

LOCATION.--Lat 40°13'18", long 74°46'42", Mercer County, N.J., Hydrologic Unit 02040105, on left bank 450 ft upstream from Calhoun Street Bridge at Trenton, 0.5 mi upstream from Assunpink Creek, and at mile 134.5.

DRAINAGE AREA.--6,780 mi².

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 above National geodetic Vertical Datum of 1929. Prior to Sept. 30, 1965, at datum 7.77 ft higher. Feb. 24, 1913 to Oct. 2, 1928, nonrecording gage on downstream side of highway bridge at site 450 ft downstream.

REMARKS.--No estimated daily discharges. Records excellent. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, Neversink, Wild Creek, and Merrill Creek Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs. Diversion to Bradshaw and Merrill Creek Reservoirs and to Delaware and Raritan Canal (see Delaware River basin, diversions). Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply (see Delaware River basin, diversions). Satellite gage height and water-quality parameter telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above National Geodetic Vertical Datum of 1929, discharge estimated, 295,000 ft³/s. Maximum elevation since 1957, 30.6 ft above National Geodetic Vertical Datum of 1929, Mar. 8, 1904, from floodmark, due to ice jam.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	0745	*64,900	*15.50	Dec. 5	2030	56,600	14.81

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4330	9390	8070	32500	11900	11200	14900	12700	5540	3500	2900	2890
2	4330	8790	7650	30100	11200	10500	13700	11800	6760	3270	2720	2830
3	4110	8330	7180	25000	9900	11100	13100	11500	5720	3270	2780	2630
4	4040	7760	23100	21600	9390	18600	12800	10900	4790	3770	2690	2650
5	4250	7110	53800	19300	9250	36400	11900	9930	4630	3510	2610	2840
6	4340	6810	47700	17100	9940	36100	11400	10800	4370	3720	2560	3040
7	4480	7910	34000	15800	12700	31200	10800	14700	4100	3510	2600	3060
8	4300	8350	25400	14400	18100	27000	10100	15200	3900	4120	2600	2920
9	7520	8530	20300	14000	24700	24100	9750	13300	3670	3620	3240	2840
10	5430	10100	17100	14000	21300	20100	9790	12400	3610	3290	4110	2850
11	5110	34300	15700	13300	18700	17300	9670	11200	3630	3140	4250	2840
12	4670	58400	14700	16700	16700	15600	9140	10100	3960	2880	3390	2950
13	4500	36900	13500	14200	15200	14800	8920	9540	4110	3400	3050	2750
14	6790	27100	12600	12100	14300	13700	9240	9100	4050	3780	2850	2610
15	7660	21000	11800	10900	15400	13800	8730	10000	4010	3400	2810	2670
16	8250	17500	12500	13200	14800	14100	9140	9130	3950	3300	2710	2680
17	7630	15800	11800	21600	13200	13500	10000	8080	3850	3270	2980	2630
18	6230	14500	12200	21000	12200	12800	10400	7560	4150	3200	3220	2800
19	8840	13300	14600	20500	10800	15500	9580	7120	4080	3200	3600	3390
20	12900	12800	18200	17100	11900	16700	8740	6230	4480	3210	4530	3740
21	15400	12000	19000	15700	12900	16700	10400	5880	4650	3420	5420	3720
22	11900	11100	19400	15600	16400	15500	16600	5530	3960	3410	4050	3570
23	10800	10700	19800	13800	15900	14700	21900	5230	3930	3110	3130	3510
24	19700	10200	26500	12400	14500	16700	22900	5070	4660	3660	2940	2720
25	27200	10400	36200	12000	13100	17800	23000	4660	4430	3620	3710	4220
26	28400	9630	33900	10700	12500	19100	20900	4610	3920	3760	3100	6640
27	20300	8950	27800	10100	12400	19500	18400	4640	3480	4400	2580	4850
28	15800	9090	23800	9510	11600	18400	15800	5050	3380	3340	2540	4010
29	13400	8630	20800	9570	---	17300	14200	5100	3270	3370	2920	3380
30	11400	8120	20400	10300	---	17200	13200	4990	3150	3240	2950	3030
31	10300	---	24700	11500	---	16100	---	5060	---	3130	2980	---
TOTAL	304310	433500	654200	495580	390880	563100	389100	267110	126190	106820	98520	97260
MEAN	9816	14450	21100	15990	13960	18160	12970	8616	4206	3446	3178	3242
MAX	28400	58400	53800	32500	24700	36400	23000	15200	6760	4400	5420	6640
MIN	4040	6810	7180	9510	9250	10500	8730	4610	3150	2880	2540	2610

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6848	10450	12400	12210	12930	20680	22160	14290	9099	7106	5968	5854
MAX	28710	27340	31070	34950	27550	60840	52680	31690	33460	25720	30290	22490
(WY)	1956	1928	1974	1979	1951	1936	1940	1989	1972	1928	1955	1933
MIN	1632	1868	2037	2539	3500	7715	6828	5209	2572	1548	1808	1762
(WY)	1942	1915	1923	1981	1920	1981	1985	1965	1965	1965	1965	1932

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR			FOR 1991 WATER YEAR			WATER YEARS 1913 - 1991		
ANNUAL TOTAL	4983360			3926570			11660		
ANNUAL MEAN	13650			10760			19810		
HIGHEST ANNUAL MEAN							4708		
LOWEST ANNUAL MEAN							279000		
HIGHEST DAILY MEAN	58400			Nov 12			Aug 20 1955		
LOWEST DAILY MEAN	4040			Oct 4			1240		
ANNUAL SEVEN-DAY MINIMUM	4260			Oct 2			1310		
INSTANTANEOUS PEAK FLOW				64900			Nov 12		
INSTANTANEOUS PEAK STAGE				15.50			Nov 12		
INSTANTANEOUS LOW FLOW				2400			Aug 28		
10 PERCENT EXCEEDS	27000			20600			1180		
50 PERCENT EXCEEDS	10800			9510			24600		
90 PERCENT EXCEEDS	5110			3010			7910		
							2980		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

b From rating curve extended above 230,000 ft³/s, maximum flow since 1692.

c From high-water mark in gage house.

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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

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

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

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

SUSPENDED-SEDIMENT DISCHARGE: Water years 1949 to 1981.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

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

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

EXTREMES FOR CURRENT YEAR.--

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

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

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

DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Mar. 12; minimum, 6.7 mg/L, Aug. 6-8.

COOPERATION.--Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and some water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (µS/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, EC BROTH (MPN)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	
NOV 1990												
20...	1200	12900	135	8.0	5.5	2.0	12.8	101	0.8	--	49	
MAR 1991												
07...	1230	30900	112	7.3	7.0	10	12.3	103	1.0	--	K200	
APR												
22...	1230	16400	157	7.8	10.0	16	10.6	96	--	--	--	
MAY												
16...	1300	9250	164	8.2	24.5	3.1	9.3	111	1.3	--	K12	
AUG												
09...	1035	2540	229	8.2	26.0	1.5	7.6	94	<1.0	22	K19	
DATE		ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE IT-FLD AS HCO3)	ALKA- LINITY, CARBON- ATE (MG/L - CACO3)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV 1990												
20...	--		38	46	12	3.8	6.1	1.2	--	--	--	19
MAR 1991												
07...	--		520	36	9.9	2.8	6.3	1.0	26	21	22	13
APR												
22...	--	--	--	59	15	5.3	7.9	1.3	46	38	36	17
MAY												
16...	--		K71	57	15	4.8	7.5	1.2	--	--	--	15
AUG												
09...	13		K19	86	21	8.0	12	1.9	80	65	64	23

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	213	207	211	141	135	139	165	162	164	146	112	133
2	210	206	208	147	140	144	164	160	162	112	108	110
3	208	206	207	153	146	150	---	---	---	116	111	113
4	214	207	210	159	152	156	168	131	151	124	116	119
5	219	212	215	---	---	---	142	91	107	129	124	126
6	221	218	220	166	162	164	93	89	92	134	128	130
7	220	218	219	169	165	167	---	---	---	141	134	138
8	221	216	219	168	156	162	109	99	104	144	141	143
9	219	123	189	155	147	152	119	109	114	206	143	161
10	188	123	156	154	138	147	---	---	---	176	161	167
11	212	189	200	148	100	132	131	126	129	187	169	179
12	212	203	209	96	76	82	132	129	131	248	162	183
13	205	191	200	86	76	82	138	132	136	192	164	178
14	229	104	192	96	86	91	145	139	143	193	180	189
15	226	177	205	103	96	99	151	143	148	180	174	178
16	175	167	169	116	104	110	155	150	153	182	150	171
17	166	154	161	122	116	119	---	---	---	169	142	153
18	159	153	156	124	121	123	166	159	163	168	159	164
19	180	161	171	---	---	---	159	154	157	160	145	151
20	188	142	168	132	128	130	155	134	147	153	145	148
21	143	119	133	134	130	132	133	123	127	160	154	157
22	122	118	120	137	132	135	134	129	131	170	161	164
23	134	122	126	143	136	140	134	127	131	173	162	168
24	138	123	131	148	139	144	127	121	124	167	163	165
25	134	106	123	151	145	149	127	107	117	---	---	---
26	104	97	99	---	---	---	108	105	106	173	168	171
27	105	98	101	151	144	147	110	107	109	175	170	173
28	113	105	108	154	150	153	120	110	113	184	173	178
29	120	113	116	159	151	154	128	119	122	---	---	---
30	125	120	122	---	---	---	142	128	134	---	---	---
31	135	125	131	---	---	---	---	---	---	---	---	---
MONTH	229	97	168	169	76	135	168	89	131	248	108	156
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	180	171	176	---	---	---	139	137	138	153	148	151
2	177	170	174	157	151	155	143	138	140	156	153	155
3	177	168	172	161	147	157	147	143	145	---	---	---
4	181	174	178	153	137	144	149	146	148	161	159	160
5	184	179	182	151	112	134	---	---	---	160	158	160
6	183	181	183	110	105	108	153	150	152	164	142	158
7	181	174	179	116	106	110	158	152	156	166	136	150
8	---	---	---	---	---	---	162	155	160	167	149	160
9	157	124	135	120	117	118	163	159	161	149	140	144
10	126	123	124	128	120	123	165	161	163	---	---	---
11	128	125	127	133	129	131	167	160	164	158	151	154
12	132	127	129	138	133	135	---	---	---	157	152	156
13	134	130	132	140	138	139	166	163	164	164	155	161
14	145	134	139	146	140	143	167	162	165	167	162	164
15	---	---	---	---	---	---	167	161	163	172	165	168
16	157	149	153	158	153	156	168	165	167	169	161	164
17	151	147	149	165	155	161	169	164	168	---	---	---
18	154	148	152	161	155	159	163	159	161	183	176	179
19	165	151	158	160	152	156	---	---	---	187	183	185
20	168	164	167	162	149	157	172	165	168	190	185	187
21	170	164	167	152	142	147	171	136	164	197	190	194
22	---	---	---	---	---	---	164	125	144	201	197	199
23	144	138	141	151	144	147	165	137	155	209	201	206
24	147	141	144	152	147	150	136	117	125	214	208	211
25	146	142	145	150	140	145	129	117	122	218	213	216
26	150	146	149	140	134	136	---	---	---	227	217	221
27	150	147	150	136	127	130	133	129	131	229	226	228
28	151	148	150	---	---	---	139	132	135	227	219	225
29	---	---	---	139	136	138	144	140	143	225	219	222
30	---	---	---	137	132	135	148	144	147	224	215	218
31	---	---	---	138	134	136	---	---	---	214	210	213
MONTH	184	123	154	165	105	140	172	117	152	229	136	182

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	215	208	210	231	215	226	223	219	221	241	228	234
2	226	207	219	228	216	222	---	---	---	228	224	227
3	207	189	198	219	214	216	233	223	228	224	217	221
4	194	186	190	225	218	221	233	231	232	224	218	220
5	208	194	201	247	226	238	234	229	232	223	219	222
6	217	209	214	237	206	221	237	232	234	223	220	222
7	230	217	223	210	200	206	242	235	238	230	223	226
8	236	229	232	213	211	212	241	237	239	236	227	233
9	237	232	235	228	212	219	237	140	208	---	---	---
10	236	232	234	228	213	222	224	142	192	224	217	220
11	250	237	245	214	211	213	256	225	239	220	216	217
12	248	228	238	---	---	---	266	251	262	217	213	215
13	226	218	220	222	169	195	250	214	230	216	213	215
14	---	---	---	229	190	217	214	209	211	220	216	218
15	230	226	229	244	230	238	213	210	212	219	216	218
16	228	221	224	242	228	238	224	213	220	217	211	215
17	223	213	218	---	---	---	244	225	235	217	212	214
18	213	161	196	---	---	---	253	244	250	227	217	221
19	213	186	206	215	212	213	247	195	219	227	195	223
20	232	213	223	219	215	217	221	130	194	220	203	210
21	236	232	234	221	214	217	214	143	185	224	204	216
22	233	225	229	235	210	227	220	215	218	223	212	216
23	230	224	226	222	204	213	215	207	209	214	207	211
24	233	230	231	208	204	207	210	207	208	208	197	204
25	240	233	236	214	208	211	224	210	218	198	153	176
26	234	223	228	219	200	214	218	205	210	223	165	188
27	223	218	220	220	175	195	222	207	214	227	202	217
28	233	219	226	213	201	207	237	222	230	210	198	202
29	250	233	243	224	213	222	246	237	241	220	211	216
30	249	213	226	225	220	223	249	247	249	222	219	221
31	---	---	---	230	219	227	249	241	246	---	---	---
MONTH	250	161	223	247	169	218	266	130	224	241	153	216

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.8	8.0	8.3	7.9	7.8	7.9	8.1	8.0	8.0	7.7	7.5	7.6
2	8.8	7.8	8.2	7.9	7.8	7.8	8.1	7.9	8.0	7.7	7.4	7.6
3	8.8	7.8	8.2	7.9	7.8	7.8	---	---	---	7.8	7.7	7.7
4	8.5	7.9	8.1	7.9	7.7	7.8	8.1	7.9	8.0	7.9	7.8	7.8
5	8.5	7.8	8.1	---	---	---	8.0	7.6	7.7	7.9	7.8	7.8
6	8.6	7.8	8.1	8.0	7.7	7.9	7.6	7.6	7.6	7.9	7.8	7.9
7	8.5	7.7	8.1	7.9	7.7	7.8	---	---	---	7.9	7.9	7.9
8	8.5	7.7	8.0	7.9	7.7	7.7	7.8	7.6	7.7	8.0	7.9	7.9
9	7.9	7.1	7.6	7.8	7.6	7.7	7.8	7.7	7.7	8.0	7.9	7.9
10	7.7	7.1	7.4	7.6	7.4	7.6	---	---	---	8.0	7.9	7.9
11	8.1	7.6	7.8	7.6	7.2	7.4	7.8	7.8	7.8	8.0	7.9	8.0
12	8.2	7.6	7.8	7.2	7.0	7.1	7.8	7.7	7.8	7.9	7.7	7.8
13	8.3	7.6	7.8	7.2	7.0	7.1	7.7	7.6	7.7	8.0	7.8	7.9
14	7.9	7.1	7.6	7.3	7.2	7.2	7.8	7.7	7.7	8.0	7.9	8.0
15	7.8	7.6	7.7	7.3	7.3	7.3	7.7	7.7	7.7	8.0	7.9	8.0
16	7.7	7.6	7.6	7.8	7.3	7.6	7.7	7.6	7.7	8.0	7.7	7.9
17	7.8	7.6	7.7	7.9	7.8	7.9	---	---	---	7.9	7.7	7.8
18	7.9	7.6	7.7	8.0	7.9	8.0	7.9	7.6	7.8	7.9	7.8	7.9
19	7.7	7.4	7.6	---	---	---	8.0	7.9	8.0	7.9	7.8	7.9
20	7.8	7.5	7.7	8.1	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8
21	7.6	7.5	7.6	8.0	8.0	8.0	7.9	7.6	7.8	7.9	7.8	7.9
22	8.0	7.5	7.7	8.0	8.0	8.0	7.8	7.7	7.7	8.0	7.9	7.9
23	8.0	8.0	8.0	8.0	7.9	8.0	7.8	7.7	7.7	8.0	7.9	7.9
24	8.1	7.9	8.0	8.1	7.9	8.0	7.7	7.6	7.7	8.0	7.9	7.9
25	8.0	7.9	8.0	8.1	8.0	8.0	7.7	7.5	7.6	---	---	---
26	7.9	7.9	7.9	---	---	---	7.6	7.5	7.5	8.0	7.9	8.0
27	8.0	7.9	7.9	8.0	7.9	8.0	7.6	7.5	7.6	8.0	7.9	8.0
28	8.1	8.0	8.0	8.0	7.9	8.0	7.6	7.4	7.5	8.1	7.9	8.0
29	8.2	8.1	8.1	8.0	7.9	7.9	7.7	7.5	7.6	---	---	---
30	8.2	8.1	8.2	---	---	---	7.6	7.6	7.6	---	---	---
31	8.1	7.8	8.0	---	---	---	---	---	---	---	---	---
MONTH	8.8	7.1	7.9	8.1	7.0	7.7	8.1	7.4	7.7	8.1	7.4	7.9

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	8.1	7.8	7.9	---	---	---	8.8	7.9	8.3	8.4	7.7	8.0
2	8.1	7.8	7.9	9.3	8.0	8.7	9.0	7.7	8.4	8.3	7.7	8.0
3	8.2	7.8	8.0	9.2	7.5	8.5	9.2	7.9	8.6	---	---	---
4	8.4	8.0	8.1	7.6	7.2	7.4	9.2	8.0	8.7	8.5	7.7	8.0
5	8.5	8.0	8.2	7.4	6.9	7.3	---	---	---	8.4	7.6	8.0
6	8.1	7.9	8.0	6.8	6.7	6.8	9.2	7.6	8.5	7.8	7.4	7.6
7	7.9	7.8	7.9	6.9	6.6	6.7	9.1	8.2	8.7	7.6	7.4	7.5
8	---	---	---	---	---	---	9.1	8.2	8.7	7.7	7.6	7.6
9	7.9	7.6	7.7	7.7	7.2	7.5	9.0	8.2	8.7	7.6	7.5	7.6
10	7.8	7.5	7.6	7.8	7.3	7.6	9.0	8.0	8.6	---	---	---
11	7.9	7.7	7.8	8.0	7.4	7.7	9.0	8.2	8.6	7.9	7.6	7.7
12	8.1	7.8	7.9	8.2	7.4	7.8	---	---	---	7.9	7.6	7.7
13	8.0	7.8	7.9	8.1	7.5	7.8	8.8	7.8	8.6	7.9	7.6	7.7
14	7.9	7.8	7.9	7.8	7.5	7.6	9.0	7.6	8.2	8.1	7.6	7.8
15	---	---	---	---	---	---	8.4	7.5	8.1	8.6	7.7	8.0
16	8.3	7.9	8.1	8.6	7.7	8.1	9.0	7.3	8.2	8.8	8.1	8.4
17	8.4	7.9	8.1	8.7	7.7	8.2	8.7	7.8	8.4	---	---	---
18	8.3	8.0	8.1	8.1	7.6	7.9	8.3	7.3	7.7	8.6	8.0	8.2
19	8.2	7.9	8.0	8.1	7.5	7.8	---	---	---	8.7	8.0	8.3
20	8.4	7.9	8.1	8.5	7.6	8.1	8.5	7.6	8.2	8.8	8.0	8.4
21	8.7	8.0	8.3	8.5	7.6	8.0	7.9	7.2	7.5	8.8	8.0	8.4
22	---	---	---	---	---	---	7.5	7.1	7.4	8.8	7.9	8.4
23	8.7	7.9	8.3	7.8	7.6	7.7	7.6	7.4	7.5	8.8	7.8	8.3
24	8.7	7.9	8.3	8.1	7.6	7.8	7.4	7.3	7.3	9.0	7.9	8.4
25	8.9	8.0	8.4	8.1	7.6	7.8	7.5	7.3	7.4	8.9	7.9	8.4
26	9.0	8.1	8.5	8.5	7.6	8.0	---	---	---	8.9	7.8	8.4
27	9.0	8.1	8.6	7.9	7.5	7.7	7.9	7.4	7.6	8.8	7.9	8.3
28	9.2	8.2	8.7	---	---	---	7.8	7.5	7.6	8.6	7.6	8.1
29	---	---	---	8.2	7.8	8.0	7.8	7.6	7.7	8.7	7.7	8.1
30	---	---	---	8.7	7.6	8.1	8.1	7.6	7.8	8.6	7.7	8.1
31	---	---	---	9.0	7.8	8.4	---	---	---	8.5	7.6	8.0
MONTH	9.2	7.5	8.1	9.3	6.6	7.8	9.2	7.1	8.1	9.0	7.4	8.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	8.7	7.6	8.1	8.8	7.6	8.2	8.7	7.8	8.2	8.8	7.4	8.1
2	8.5	7.6	8.0	8.4	7.7	8.1	---	---	---	8.8	7.4	8.1
3	8.6	7.5	8.0	8.0	7.5	7.7	8.8	7.8	8.2	8.8	7.4	8.1
4	8.6	7.5	8.0	8.4	7.6	7.9	8.7	7.8	8.2	8.7	7.4	8.0
5	8.4	7.4	7.8	7.9	7.6	7.7	8.8	7.8	8.3	8.7	7.3	7.9
6	8.5	7.5	7.9	8.4	7.6	7.9	8.9	7.9	8.4	8.8	7.3	8.0
7	8.5	7.5	8.0	8.2	7.5	7.8	8.8	8.0	8.4	8.7	7.3	8.0
8	8.5	7.5	8.0	8.5	7.6	8.0	8.9	7.9	8.4	8.8	7.2	8.0
9	8.5	7.5	8.0	8.7	7.7	8.1	8.2	7.4	7.9	---	---	---
10	8.5	7.5	8.0	8.8	7.7	8.2	8.4	7.5	7.9	8.7	7.2	7.9
11	8.5	7.5	8.0	8.9	7.8	8.3	8.5	7.9	8.2	8.6	7.2	7.8
12	8.3	7.5	7.8	---	---	---	8.6	7.9	8.2	8.4	7.2	7.8
13	8.4	7.5	7.9	8.1	7.6	7.8	8.7	7.9	8.2	8.4	7.2	7.8
14	---	---	---	8.8	7.7	8.2	8.8	7.8	8.3	---	---	---
15	8.8	7.7	8.2	8.9	7.9	8.4	8.8	7.8	8.3	---	---	---
16	8.9	7.7	8.3	9.0	7.9	8.5	8.9	7.8	8.4	---	---	---
17	9.2	7.6	8.4	---	---	---	8.9	7.8	8.4	---	---	---
18	8.2	7.5	7.9	---	---	---	8.9	8.0	8.5	---	---	---
19	7.9	7.4	7.6	9.2	8.0	8.6	8.5	7.7	8.1	---	---	---
20	8.2	7.5	7.8	9.2	7.9	8.6	8.0	7.2	7.5	---	---	---
21	8.2	7.5	7.8	9.2	7.9	8.5	7.9	7.2	7.5	---	---	---
22	8.0	7.4	7.6	9.0	7.8	8.3	8.4	7.4	7.9	---	---	---
23	7.9	7.4	7.6	8.8	7.7	8.1	8.6	7.4	8.0	---	---	---
24	8.0	7.6	7.8	8.6	7.5	8.0	8.7	7.4	8.0	---	---	---
25	8.1	7.6	7.8	8.1	7.5	7.8	8.7	7.5	8.1	---	---	---
26	8.2	7.5	7.8	7.9	7.5	7.7	8.8	7.6	8.2	---	---	---
27	8.4	7.5	7.9	7.7	7.5	7.6	8.8	7.5	8.2	---	---	---
28	8.5	7.5	7.9	8.2	7.5	7.8	8.9	7.5	8.2	---	---	---
29	8.6	7.5	8.0	8.1	7.6	7.8	8.9	7.6	8.2	---	---	---
30	8.5	7.5	8.0	8.3	7.7	7.9	8.8	7.6	8.2	---	---	---
31	---	---	---	8.3	7.7	8.0	8.8	7.5	8.1	---	---	---
MONTH	9.2	7.4	7.9	9.2	7.5	8.1	8.9	7.2	8.2	---	---	---

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	29.0	26.5	27.5	30.0	26.5	28.0	29.5	25.0	27.0	28.0	24.5	26.0
2	28.5	25.5	27.0	27.5	26.0	27.0	---	---	---	26.5	22.0	24.0
3	28.5	25.5	27.0	26.0	24.5	25.0	29.5	26.5	28.0	26.0	21.5	23.5
4	26.5	24.0	25.5	27.0	23.5	25.0	29.5	26.0	27.5	24.5	22.5	23.5
5	24.5	22.5	23.5	24.5	23.5	24.0	29.0	25.5	27.0	26.5	23.0	24.5
6	24.0	21.5	22.5	27.0	23.0	24.5	29.0	24.5	26.5	26.0	23.0	24.5
7	25.5	21.0	23.0	26.5	24.5	25.5	29.0	24.5	27.0	27.0	22.5	24.5
8	26.5	22.0	24.0	27.0	24.0	25.5	29.5	25.5	27.5	28.0	23.0	25.0
9	28.0	23.0	25.0	28.5	24.5	26.5	26.5	23.0	25.0	---	---	---
10	28.0	23.5	25.5	29.0	24.5	26.5	27.5	23.5	25.0	26.0	24.0	25.0
11	28.0	24.5	26.0	29.5	25.0	27.0	26.5	24.5	25.5	26.0	23.5	24.5
12	27.0	24.5	25.5	---	---	---	28.0	24.0	25.5	25.5	22.0	23.5
13	26.0	22.5	24.5	26.5	24.5	26.0	29.0	24.0	26.5	25.5	21.0	23.5
14	---	---	---	28.0	25.0	26.0	29.0	25.0	27.0	23.5	22.0	22.5
15	28.0	23.0	25.5	29.5	24.5	27.0	27.0	25.5	26.5	23.5	21.0	22.5
16	29.5	25.0	27.0	30.0	25.0	27.5	29.5	24.0	26.5	26.5	22.0	24.0
17	30.0	26.0	28.0	---	---	---	29.5	25.5	27.5	28.5	24.5	26.0
18	27.0	22.0	24.5	---	---	---	29.0	26.0	27.5	27.5	25.0	26.0
19	23.0	21.5	22.5	32.0	27.5	29.5	27.5	25.0	26.5	25.5	21.5	24.0
20	27.0	22.0	24.5	33.0	28.5	30.5	26.0	23.0	25.0	23.5	20.5	21.5
21	29.5	25.0	27.0	32.5	29.0	30.5	26.5	23.0	24.5	22.5	19.0	20.5
22	27.0	25.0	26.5	32.5	29.0	30.5	28.0	24.0	25.5	22.0	18.0	20.0
23	25.0	23.0	24.0	32.5	28.5	30.0	28.5	24.0	26.0	19.5	18.5	19.0
24	26.0	22.0	24.0	31.5	28.0	29.5	27.5	25.0	26.0	22.0	18.0	19.5
25	27.5	23.0	25.0	29.5	27.0	28.0	27.5	24.0	25.5	20.0	19.0	19.5
26	27.5	23.5	25.0	27.0	26.0	27.0	28.0	23.5	25.5	20.0	18.0	19.0
27	28.5	23.5	26.0	26.0	24.5	25.5	29.0	24.0	26.5	19.5	17.0	18.0
28	29.5	25.0	27.0	28.5	23.5	25.5	30.0	25.5	27.5	19.0	15.5	17.0
29	30.5	26.5	28.5	26.0	25.0	25.5	31.0	26.5	28.5	19.0	15.5	17.0
30	30.0	27.5	28.5	26.0	23.5	25.0	31.0	27.0	29.0	19.0	15.0	17.0
31	---	---	---	27.5	24.0	25.5	30.0	27.0	28.5	---	---	---
MONTH	30.5	21.0	25.5	33.0	23.0	27.0	31.0	23.0	26.5	28.5	15.0	22.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	13.4	12.6	13.0	---	---	---	13.7	11.5	12.5	10.7	9.0	9.8
2	13.9	13.1	13.4	15.7	12.6	13.9	14.0	11.5	12.7	10.0	8.6	9.3
3	13.9	13.0	13.4	15.3	11.1	13.2	15.0	11.8	13.3	---	---	---
4	14.0	12.9	13.3	11.2	10.4	10.7	15.2	12.0	13.5	10.7	8.7	9.7
5	13.9	12.7	13.2	11.3	10.6	10.9	---	---	---	10.5	8.6	9.6
6	12.8	12.1	12.4	11.8	11.3	11.6	15.1	10.9	12.9	9.2	8.4	8.6
7	12.2	11.7	11.9	11.8	11.6	11.7	15.3	11.0	12.9	8.8	8.5	8.6
8	---	---	---	---	---	---	14.8	10.3	12.4	9.3	8.6	8.9
9	12.6	12.0	12.3	13.0	12.2	12.6	14.0	9.7	11.8	9.2	8.7	8.9
10	12.7	12.2	12.5	13.3	12.3	12.8	13.8	9.1	11.1	---	---	---
11	13.0	12.3	12.7	13.6	12.4	13.0	13.4	9.2	11.2	9.6	8.7	9.1
12	13.5	12.5	13.0	13.9	12.6	13.2	---	---	---	9.4	8.4	8.8
13	13.6	12.8	13.2	13.8	12.6	13.2	12.4	10.3	11.3	9.0	7.9	8.4
14	13.1	12.5	12.8	13.3	12.5	12.9	14.4	9.9	11.7	9.1	7.7	8.3
15	---	---	---	---	---	---	11.7	10.2	11.0	8.5	7.4	8.0
16	14.2	12.9	13.5	14.6	12.7	13.5	14.5	9.7	11.9	8.7	7.1	7.8
17	14.5	13.3	13.9	14.6	12.5	13.5	13.1	10.0	11.4	---	---	---
18	14.5	13.7	14.0	13.0	11.9	12.5	11.8	9.1	10.2	8.1	6.9	7.5
19	14.3	13.4	13.8	12.9	11.4	12.0	---	---	---	8.2	7.1	7.7
20	14.1	12.9	13.3	13.6	11.5	12.5	11.7	9.9	10.8	8.9	7.2	7.9
21	14.7	12.9	13.6	13.3	11.5	12.3	10.9	9.4	10.0	8.4	7.1	7.7
22	---	---	---	---	---	---	10.3	9.8	10.0	9.1	7.2	8.0
23	14.5	12.6	13.5	12.4	11.7	11.9	10.7	9.8	10.2	---	---	---
24	14.7	12.9	13.7	13.0	11.5	12.1	10.4	10.0	10.2	---	---	---
25	15.0	13.0	14.0	13.0	11.7	12.3	10.5	10.0	10.2	---	---	---
26	15.0	13.1	13.9	13.7	11.8	12.7	---	---	---	---	---	---
27	15.5	13.0	14.1	12.5	11.7	12.0	10.3	9.4	9.8	---	---	---
28	16.0	13.3	14.5	---	---	---	10.1	8.9	9.4	---	---	---
29	---	---	---	12.0	10.9	11.4	9.6	8.9	9.2	---	---	---
30	---	---	---	12.8	10.5	11.6	10.2	8.9	9.4	---	---	---
31	---	---	---	13.9	11.3	12.5	---	---	---	---	---	---
MONTH	16.0	11.7	13.3	15.7	10.4	12.4	15.3	8.9	11.2	---	---	---
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	9.3	6.5	7.9	9.3	6.8	7.9	11.8	6.6	8.7
2	---	---	---	8.7	6.4	7.5	---	---	---	11.6	7.0	9.1
3	---	---	---	8.3	6.2	7.1	9.3	6.3	7.6	11.6	7.2	9.1
4	---	---	---	9.4	6.6	7.9	9.4	6.3	7.6	10.7	6.6	8.6
5	9.3	6.8	8.0	8.0	6.6	7.2	9.4	6.4	7.8	10.8	6.4	8.3
6	9.9	7.1	8.4	9.5	6.7	7.8	9.8	6.7	8.0	10.9	6.4	8.4
7	10.3	7.4	8.8	8.9	6.6	7.7	9.9	6.8	8.2	10.8	6.4	8.4
8	10.3	7.4	8.8	9.3	6.6	7.9	9.9	6.8	8.2	11.2	6.2	8.3
9	10.5	7.2	8.8	9.9	6.9	8.3	7.7	6.6	7.2	---	---	---
10	10.4	7.0	8.6	10.2	6.8	8.4	8.5	6.5	7.5	10.5	5.8	8.0
11	10.2	7.1	8.5	10.3	6.8	8.5	8.9	6.9	7.8	10.4	5.8	7.9
12	9.4	6.6	7.8	---	---	---	9.6	6.8	8.0	10.7	6.1	8.1
13	9.7	6.9	8.3	8.2	6.7	7.5	10.0	7.0	8.3	10.5	6.2	8.1
14	---	---	---	9.8	6.8	8.2	10.3	7.1	8.4	---	---	---
15	11.2	7.6	9.3	10.4	7.0	8.6	9.9	6.9	8.2	---	---	---
16	11.5	7.7	9.3	10.6	7.1	8.7	10.5	7.0	8.6	---	---	---
17	10.5	7.2	8.7	---	---	---	10.6	7.0	8.6	---	---	---
18	8.0	6.6	7.2	---	---	---	10.6	7.1	8.6	---	---	---
19	8.4	6.5	7.3	10.3	6.4	8.3	9.0	7.0	7.8	---	---	---
20	9.5	6.8	8.1	10.7	6.1	8.1	8.0	6.5	7.1	---	---	---
21	9.4	7.0	8.1	10.5	5.9	8.0	8.5	6.7	7.4	---	---	---
22	8.7	6.5	7.6	9.1	5.7	7.1	9.5	7.0	8.1	---	---	---
23	8.6	6.4	7.4	9.1	5.0	6.6	10.3	6.8	8.4	---	---	---
24	9.1	7.2	8.1	8.6	5.1	6.7	10.5	6.7	8.4	---	---	---
25	9.4	7.3	8.3	7.6	5.5	6.6	10.6	7.2	8.7	---	---	---
26	9.7	7.3	8.4	7.3	5.6	6.5	11.0	7.4	9.0	---	---	---
27	9.7	7.2	8.4	7.5	6.0	6.5	11.4	7.3	9.1	---	---	---
28	9.8	7.0	8.3	8.8	6.0	7.3	11.7	6.8	9.0	---	---	---
29	10.1	6.7	8.2	8.1	6.3	7.0	11.8	6.9	9.0	---	---	---
30	9.4	6.3	7.9	9.1	6.5	7.6	11.7	6.7	8.8	---	---	---
31	---	---	---	9.2	6.9	7.9	11.3	6.4	8.5	---	---	---
MONTH	11.5	6.3	8.3	10.7	5.0	7.6	11.8	6.3	8.2	---	---	---

NESHAMINY CREEK BASIN

01464645 NORTH BRANCH NESHAMINY CREEK BELOW LAKE GALENA NEAR NEW BRITIAN, PA

LOCATION.--Lat 40°18'44", long 75°12'25", Bucks County, Hydrologic Unit 02040201, on left bank, 2.0 miles north of Chalfont on Callowhill Road, and 0.3 mile below Lake Galena (Peace Valley Reservoir).

DRAINAGE AREA.--16.2 mi².

PERIOD OF RECORD.--November 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for periods of estimated discharges, which are poor. Flow regulated by Peace Valley Reservoir (Lake Galena) about 0.3 mile upstream. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	5.4	5.8	107	65	4.1	33	18	7.8	6.8	3.8	4.5
2	8.6	7.4	5.8	64	63	4.1	27	15	7.7	7.1	6.3	5.7
3	8.6	8.7	6.2	44	63	6.0	23	13	7.4	8.2	7.2	6.6
4	8.3	8.5	18	33	62	9.3	20	11	7.4	6.3	6.6	6.6
5	7.7	8.2	24	26	60	6.0	18	9.0	7.9	5.4	6.3	6.6
6	7.7	8.2	23	22	60	6.1	17	37	8.7	5.8	6.6	6.6
7	7.7	7.4	21	22	60	8.1	16	91	9.0	5.9	6.6	6.6
8	7.6	6.6	19	20	27	5.9	14	59	9.0	5.8	6.6	6.2
9	7.8	6.1	17	51	11	5.5	13	40	9.3	6.7	6.2	6.8
10	7.7	8.9	15	87	10	5.3	12	30	9.8	5.1	6.8	7.4
11	8.4	7.2	13	71	9.7	5.1	9.3	23	9.7	5.5	6.3	7.4
12	8.6	6.6	12	194	8.4	11	7.6	19	6.9	6.0	4.9	7.4
13	8.9	6.6	11	156	7.7	4.8	6.9	16	6.3	7.0	4.2	7.4
14	9.1	6.4	9.2	92	6.9	5.0	8.2	13	7.7	4.5	4.5	7.4
15	9.4	6.2	10	84	4.9	5.8	8.5	12	9.2	4.0	4.5	7.2
16	9.6	6.2	22	98	4.3	4.7	10	9.3	9.8	3.8	4.5	6.6
17	8.8	6.2	24	188	4.1	5.1	11	7.7	7.3	4.9	4.5	6.6
18	7.8	6.2	34	112	4.1	20	11	7.3	5.5	5.0	5.0	6.6
19	8.5	6.2	45	59	4.7	46	11	5.7	4.5	6.1	5.9	6.9
20	8.1	6.2	36	42	5.7	40	10	4.9	4.5	5.8	13	6.8
21	7.5	6.2	31	39	4.8	32	63	5.3	4.8	5.8	6.7	6.6
22	6.6	6.2	40	65	4.8	27	158	6.6	5.8	7.3	6.2	6.6
23	7.9	6.6	43	64	4.5	39	90	6.6	5.8	7.6	5.8	6.6
24	7.4	6.3	122	65	4.5	58	67	6.6	5.8	5.0	5.8	6.5
25	6.0	6.2	88	69	4.9	52	72	7.1	5.8	3.8	5.6	19
26	5.8	6.2	55	69	4.5	42	50	8.1	5.8	5.6	5.5	25
27	5.8	6.0	38	69	4.2	44	37	8.2	5.8	5.8	5.5	22
28	5.8	5.8	34	68	4.1	51	30	6.4	5.8	5.8	6.7	17
29	5.7	5.9	29	66	---	40	24	4.5	6.5	4.7	5.9	12
30	5.6	5.8	63	65	---	42	20	6.8	7.0	3.8	4.8	9.8
31	5.3	---	201	66	---	40	---	7.2	---	3.8	4.8	---
TOTAL	236.4	200.6	1115.0	2277	577.8	674.9	897.5	514.3	214.3	175.2	183.6	265.0
MEAN	7.63	6.69	36.0	73.5	20.6	21.8	29.9	16.6	7.14	5.65	5.92	8.83
MAX	9.6	8.9	201	194	65	58	158	91	9.8	8.2	13	25
MIN	5.3	5.4	5.8	20	4.1	4.1	6.9	4.5	4.5	3.8	3.8	4.5
†	0	2.6	16.0	-21.8	-3.6	19.0	-1.3	-2.4	-5.9	4.4	1.2	1.7
MEAN‡	7.63	9.29	52.0	51.7	17.0	40.8	28.6	14.2	1.24	10.0	7.12	10.5
CSFM‡	.47	.57	3.21	3.19	1.05	2.52	1.77	.88	.08	.62	.44	.65
IN.‡	.54	.64	3.70	3.68	1.09	2.91	1.98	1.01	.09	.72	.51	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1991, BY WATER YEAR (SINCE REGULATION)

	1986	1987	1988	1989	1990	1991
MEAN	14.0	17.5	51.0	31.9	29.2	22.0
MAX	48.0	43.3	82.4	73.5	58.8	38.9
(WY)	1990	1989	1987	1991	1988	1986
MIN	3.91	6.53	28.1	6.62	5.36	4.75
(WY)	1989	1988	1990	1986	1989	1988

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1986 - 1991
ANNUAL TOTAL	7684.0	7331.6	
ANNUAL MEAN	21.1	20.1	23.4
HIGHEST ANNUAL MEAN			31.0
LOWEST ANNUAL MEAN			20.1
HIGHEST DAILY MEAN	448	201	700
LOWEST DAILY MEAN	3.6	3.8	3.1
ANNUAL SEVEN-DAY MINIMUM	3.6	4.3	3.1
INSTANTANEOUS PEAK FLOW		234	1280
INSTANTANEOUS PEAK STAGE	2.89	4.35	
ANNUAL RUNOFF (CFSM)	1.30	1.24	1.45
ANNUAL RUNOFF (INCHES)	17.64	16.84	19.66
10 PERCENT EXCEEDS	50	60	66
50 PERCENT EXCEEDS	7.4	7.6	6.2
90 PERCENT EXCEEDS	3.8	4.9	3.9

† Change in contents of Lake Galena, in cubic feet per second.

‡ Adjusted for change in contents in Lake Galena.

NESHAMINY CREEK BASIN

01464710 PINE RUN AT CHALFONT, PA

LOCATION.--Lat 40°17'20", long 75°12'11", Buck County, Hydrologic Unit 02040203 on right bank, 40 ft upstream from abandoned bridge at Forest Park Water Company water intakes, 500 ft upstream from mouth, in Chalfont.

DRAINAGE AREA.--11.60 mi².

PERIOD OF RECORD.--March 1990 to current year..

GAGE.--Water-stage recorder and steel V-notch weir. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Diversion of water just above gage for municipal supply by Forest Park Water Company. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.6	4.1	31	15	9.5	16	8.9	12	1.5	4.2	2.4
2	1.8	3.4	3.9	22	13	9.6	13	7.5	6.0	1.6	3.2	2.2
3	1.2	3.0	5.9	18	12	17	11	7.3	4.9	4.3	2.7	2.1
4	1.2	3.0	101	15	12	72	10	6.4	4.6	3.6	2.4	2.2
5	1.5	2.8	24	14	12	22	10	5.5	4.5	5.5	2.3	4.4
6	1.4	3.0	15	14	14	17	10	68	4.6	4.9	2.0	3.7
7	1.7	3.8	11	15	24	39	8.8	76	4.4	4.0	1.7	2.7
8	1.4	3.4	8.8	13	19	19	8.5	18	4.1	3.0	1.6	2.3
9	6.9	2.8	7.8	58	15	16	8.3	13	3.7	2.2	14	2.0
10	3.2	46	7.4	44	16	15	7.6	11	3.5	1.8	35	1.7
11	2.2	30	6.8	26	14	13	6.0	9.4	4.1	1.4	8.0	1.8
12	1.6	11	6.5	139	12	12	5.3	8.5	13	1.2	4.9	1.6
13	1.7	8.2	6.4	62	11	12	5.5	7.6	7.1	23	3.9	1.6
14	1.3	6.2	6.2	34	17	14	7.8	6.8	5.1	28	3.3	1.7
15	.56	5.4	9.1	26	16	21	9.2	7.5	4.6	5.8	3.4	1.7
16	.57	5.1	18	74	12	18	10	6.0	4.3	3.3	3.6	1.6
17	.64	5.3	11	87	11	14	7.4	5.3	3.7	2.3	2.7	1.6
18	4.1	5.6	24	33	11	40	9.0	5.2	6.0	1.9	2.3	1.5
19	15	5.1	21	26	13	35	6.8	4.3	13	1.8	9.9	2.0
20	6.6	4.9	12	23	22	22	5.9	3.3	6.4	1.6	97	2.9
21	3.4	4.8	13	27	16	17	72	3.1	2.5	1.6	44	2.2
22	2.7	4.6	18	21	13	15	64	3.0	3.9	1.4	10	1.6
23	10	6.6	17	16	12	35	21	2.4	4.1	2.0	7.5	1.5
24	29	7.8	77	16	11	36	28	1.4	4.4	7.0	5.5	1.8
25	10	5.8	27	15	11	24	35	1.1	3.8	3.3	4.5	120
26	5.3	4.9	17	13	11	19	19	.90	3.2	83	4.1	31
27	4.0	4.5	14	13	10	25	13	.55	2.8	99	4.0	9.6
28	3.7	4.5	16	14	9.8	25	11	12	2.3	9.6	3.8	6.0
29	7.2	4.5	16	14	---	19	9.8	3.4	2.0	6.3	3.5	4.2
30	69	4.0	46	14	---	27	9.6	3.0	1.7	5.3	3.2	3.6
31	12	---	117	25	---	22	---	9.4	---	5.1	2.9	---
TOTAL	212.47	213.6	687.9	962	384.8	701.1	458.5	325.75	150.3	326.3	301.1	225.2
MEAN	6.85	7.12	22.2	31.0	13.7	22.6	15.3	10.5	5.01	10.5	9.71	7.51
MAX	69	46	117	139	24	72	72	76	13	99	97	120
MIN	.56	2.8	3.9	13	9.8	9.5	5.3	.55	1.7	1.2	1.6	1.5
†	0.02	0	0	0	0	0.53	4.33	4.08	0.04	0	0	0
MEAN‡	6.87	7.12	22.2	31.0	13.7	23.1	19.6	14.6	5.05	10.5	9.71	7.51
CFM§	.59	.61	1.91	2.68	1.18	1.99	1.69	1.26	.44	.91	.84	.65
IN.‡	.68	.68	2.21	3.09	1.23	2.30	1.89	1.45	.49	1.05	.97	.72

† Diversion from Pine Run by Forest Park Water Company.

‡ Adjusted for diversion and change in contents of Lake Galena.

● Estimated.

NESHAMINY CREEK BASIN

01464710 PINE RUN AT CHALFONT, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.85	7.12	22.2	31.0	13.7	16.8	15.9	20.8	10.2	7.65	9.18	5.22
MAX	6.85	7.12	22.2	31.0	13.7	22.6	16.5	31.0	15.4	10.5	9.71	7.51
(WY)	1991	1991	1991	1991	1991	1991	1990	1990	1990	1991	1991	1991
MIN	6.85	7.12	22.2	31.0	13.7	10.9	15.3	10.5	5.01	4.78	8.64	2.93
(WY)	1991	1991	1991	1991	1991	1990	1991	1991	1991	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1990 - 1991	
ANNUAL TOTAL			4949.02			
ANNUAL MEAN			13.6	\$14.2	13.6	
HIGHEST ANNUAL MEAN					13.6	1991
LOWEST ANNUAL MEAN					13.6	1991
HIGHEST DAILY MEAN	188	May 30	139	Jan 12	188	May 30 1990
LOWEST DAILY MEAN	.56	Oct 15	.55	May 27	.55	May 27 1991
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 11	1.2	Oct 11	1.2	Oct 11 1990
INSTANTANEOUS PEAK FLOW			282	Jul 26	290	May 29 1990
INSTANTANEOUS PEAK STAGE			3.78	Jul 26	3.82	May 29 1990
ANNUAL RUNOFF (CFSM)			1.17	* 1.23	1.17	
ANNUAL RUNOFF (INCHES)			15.87	*16.68	15.88	
10 PERCENT EXCEEDS	24		28		26	
50 PERCENT EXCEEDS	7.8		7.3		8.1	
90 PERCENT EXCEEDS	2.1		1.7		2.0	

* Adjusted for diversion.

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 above Route 202 bridge, 0.6 mi upstream from mouth, in Chalfont.

DRAINAGE AREA.--31.5 mi².

PERIOD OF RECORD.--December 1990 to September 1991.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good, except period of estimated discharge, which are poor. Diversion for water supply by Forest Park Water Company above the gage. Regulated by Lake Galena. Satellite telemetry at station. Pressure sensor interfaced with DCP.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	147	82	12	57	30	17	3.9	4.1	3.2
2	---	---	---	96	79	12	47	26	9.6	4.0	4.8	3.7
3	---	---	---	71	78	31	39	23	8.1	8.8	5.4	4.3
4	---	---	---	54	77	95	34	21	7.9	5.6	4.8	4.2
5	---	---	---	43	75	33	31	17	7.8	7.6	3.9	6.4
6	---	---	---	39	81	28	29	139	8.3	6.3	3.9	5.3
7	---	---	---	39	89	59	26	190	8.2	6.7	3.5	4.5
8	---	---	---	34	46	28	24	●100	7.7	4.5	3.3	3.8
9	---	---	---	131	23	23	23	●65	7.9	7.0	19	3.7
10	---	---	---	145	23	21	21	45	8.3	2.9	43	4.3
11	---	---	---	108	22	19	17	35	12	2.8	9.0	4.1
12	---	---	---	341	19	24	14	29	17	3.2	4.5	3.5
13	---	---	---	216	18	16	●12	24	7.7	43	3.0	3.8
14	---	---	---	134	26	20	●16	47	7.2	34	2.9	4.9
15	---	---	---	117	22	31	19	32	8.7	7.4	3.1	5.2
16	---	---	---	195	17	24	21	16	8.5	3.8	2.9	5.6
17	---	---	---	267	16	20	20	20	6.5	3.4	2.4	5.8
18	---	---	---	153	14	78	22	20	8.8	3.3	2.3	6.9
19	---	---	77	95	19	95	●18	10	15	3.7	11	7.6
20	---	---	56	75	33	74	●16	8.6	7.2	3.4	140	8.3
21	---	---	54	79	22	57	●88	8.4	4.6	3.3	50	6.7
22	---	---	73	91	19	48	●225	9.9	5.1	4.7	15	6.3
23	---	---	76	85	16	96	122	9.6	5.8	6.6	11	6.2
24	---	---	229	87	15	111	116	8.5	5.6	9.9	7.7	6.5
25	---	---	130	88	15	90	123	8.5	4.7	3.5	6.1	161
26	---	---	82	84	14	74	83	9.0	4.1	113	5.7	59
27	---	---	60	84	13	87	62	9.2	3.7	114	5.6	28
28	---	---	58	84	12	91	51	23	3.3	13	6.6	18
29	---	---	50	●82	---	72	40	8.5	3.5	8.2	5.9	12
30	---	---	140	●80	---	87	34	8.6	4.1	5.5	4.2	9.7
31	---	---	301	100	---	74	---	14	---	5.3	3.8	---
TOTAL	---	---	---	3444	985	1630	1450	1014.8	233.9	452.3	398.4	412.5
MEAN	---	---	---	111	35.2	52.6	48.3	32.7	7.80	14.6	12.9	13.7
MAX	---	---	---	341	89	111	225	190	17	114	140	161
MIN	---	---	---	34	12	12	12	8.4	3.3	2.8	2.3	3.2
†	---	---	4.5	4.5	4.5	3.5	4.3	4.4	4.5	4.6	4.6	4.6
MEAN‡	---	---	---	93.7	36.1	75.1	51.3	34.7	6.4	23.6	18.7	20.0
CFSM‡	---	---	---	2.97	1.15	2.38	1.63	1.10	.20	.75	.59	.63
IN.‡	---	---	---	3.43	1.20	2.75	1.82	1.27	.22	.86	.68	.70

● Estimated.

SUMMARY STATISTICS

FOR 1991 WATER YEAR

HIGHEST DAILY MEAN
LOWEST DAILY MEAN
ANNUAL SEVEN-DAY MINIMUM
INSTANTANEOUS PEAK STAGE
INSTANTANEOUS LOW FLOW

341 Jan 12
2.3 Aug 18
3.0 Aug 12
645 Aug 20
2.1 Aug 18

† Diversion from North Branch Neshaminy Creek and Pine Run by Forest Park Water Company.

‡ Adjusted for diversion and change in contents of Lake Galena.

NESHAMINY CREEK BASIN

01464750 NESHAMINY CREEK NEAR RUSHLAND, PA

LOCATION.--Lat 40°15'27", long 75°02'03", Bucks County, Hydrologic Unit 02040201, on left bank at bridge on Rushland Road at Rushland, 2000 ft upstream from confluence with Little Neshaminy Creek.

DRAINAGE AREA.--91.0 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Satellite telemetry at station. Pressure sensor interfaced with DCP.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	26	26	302	158	60	163	91	65	19	26	22
2	21	25	26	203	141	61	140	81	40	22	23	21
3	20	27	31	164	138	102	121	74	31	36	23	22
4	20	27	657	135	135	480	109	67	31	28	24	22
5	20	26	233	111	132	192	101	59	30	23	23	25
6	20	25	129	101	144	136	98	372	29	32	21	29
7	20	24	102	99	229	310	90	667	29	32	19	24
8	20	24	84	95	193	160	82	210	28	51	21	21
9	49	23	71	331	120	126	78	148	26	23	135	20
10	46	220	62	375	106	110	76	122	26	22	274	20
11	26	205	57	226	95	98	66	103	27	18	70	21
12	25	82	51	1230	83	91	61	89	46	16	41	21
13	25	60	45	663	78	93	59	79	34	383	34	19
14	27	48	43	340	106	90	76	70	25	341	30	20
15	25	40	53	245	118	155	80	72	23	54	40	21
16	23	36	194	599	79	150	102	62	25	34	37	20
17	22	36	119	827	73	108	77	53	24	26	30	20
18	24	33	240	391	66	314	79	53	30	23	27	20
19	136	31	225	248	76	339	74	47	79	21	83	24
20	50	30	142	198	139	201	67	41	46	20	778	31
21	33	29	129	220	110	163	520	39	28	20	384	25
22	25	28	186	211	89	143	626	38	24	20	104	21
23	46	28	157	178	78	305	278	37	23	34	64	20
24	204	85	648	162	69	374	265	34	26	62	48	20
25	74	51	266	152	69	231	406	32	22	33	38	618
26	46	39	178	140	68	193	199	31	20	138	33	226
27	36	32	143	143	65	211	155	31	20	374	30	91
28	29	35	126	138	61	245	130	131	19	57	29	61
29	29	34	128	132	---	178	112	54	18	35	30	46
30	29	28	335	124	---	237	101	36	19	34	29	38
31	29	---	905	228	---	215	---	41	---	29	25	---
TOTAL	1221	1437	5791	8711	3018	5871	4591	3064	913	2060	2573	1609
MEAN	39.4	47.9	187	281	108	189	153	98.8	30.4	66.5	83.0	53.6
MAX	204	220	905	1230	229	480	626	667	79	383	778	618
MIN	20	23	26	95	61	60	59	31	18	16	19	19
CFSM	.43	.53	2.05	3.09	1.18	2.08	1.68	1.09	.33	.73	.91	.59
IN.	.50	.59	2.37	3.56	1.23	2.40	1.88	1.25	.37	.84	1.05	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1991, BY WATER YEAR

	MEAN	90.9	135	124	181	177	162	180	219	150	151	75.9	87.2
MAX	211	249	187	311	315	214	321	374	443	315	132	244	
(WY)	1990	1989	1991	1990	1988	1987	1987	1989	1989	1989	1989	1989	1989
MIN	39.4	47.9	78.7	108	108	95.7	61.9	70.0	30.4	36.4	32.2	29.7	
(WY)	1991	1991	1990	1988	1991	1990	1988	1987	1991	1990	1987	1990	

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1986 - 1991
ANNUAL TOTAL	49225	40859	
ANNUAL MEAN	135	112	163
HIGHEST ANNUAL MEAN			214
LOWEST ANNUAL MEAN			128
HIGHEST DAILY MEAN	1940	May 30	1230
LOWEST DAILY MEAN	15	Aug 4	16
ANNUAL SEVEN-DAY MINIMUM	17	Jul 30	20
INSTANTANEOUS PEAK FLOW			2190
INSTANTANEOUS PEAK STAGE			8.02
ANNUAL RUNOFF (CFSM)	1.48		1.23
ANNUAL RUNOFF (INCHES)	20.12		16.70
10 PERCENT EXCEEDS	281		245
50 PERCENT EXCEEDS	79		61
90 PERCENT EXCEEDS	23		21

NESHAMINY CREEK BASIN

01464984 LITTLE NESHAMINY CREEK AT WALTON ROAD NEAR JACKSONVILLE, PA

LOCATION.--Lat 40°14'26", long 75°03'15", Bucks County, Hydrologic Unit 02040203, on right bank, 15 ft downstream from old bridge abutment on Walton Road, 2.0 mi upstream from mouth and 1.0 mi northwest of Jacksonville.

DRAINAGE AREA.--40.06 mi².

PERIOD OF RECORD.--November 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 146.27 ft above Philadelphia Electric Co. datum.

REMARKS.--Records good except for periods of estimated discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	12	100	52	●28	65	42	41	11	12	10
2	11	13	12	74	45	●28	60	38	20	18	10	11
3	11	13	22	63	44	●42	52	34	16	14	9.3	11
4	11	12	702	55	42	●200	49	32	15	11	8.7	11
5	11	12	85	48	42	●80	47	29	14	9.6	8.6	12
6	12	13	42	47	50	●61	47	438	13	10	8.2	12
7	11	14	33	51	89	●120	43	262	13	23	7.6	11
8	12	15	30	46	69	60	41	68	12	23	7.6	10
9	20	13	26	335	53	52	39	53	11	12	379	9.4
10	20	299	24	190	47	47	37	47	11	9.1	233	9.1
11	16	81	23	112	42	43	●35	41	10	8.3	29	8.7
12	15	24	23	1300	38	41	●33	39	13	8.0	17	8.9
13	16	18	21	220	38	40	31	35	12	529	14	7.5
14	19	15	19	110	57	58	44	32	10	250	12	8.5
15	16	14	38	84	56	●69	49	33	9.5	21	23	8.6
16	14	14	160	417	38	●61	62	28	10	16	20	8.7
17	14	14	46	274	34	●53	40	25	13	13	13	8.4
18	42	15	248	108	34	50	44	24	54	12	11	8.3
19	61	12	103	83	●38	318	36	23	53	11	92	8.8
20	20	14	50	76	74	96	32	22	21	9.6	787	13
21	13	14	68	111	53	64	611	20	14	8.4	172	11
22	12	13	104	87	43	55	263	19	12	8.8	35	9.2
23	61	14	73	62	38	53	85	18	12	20	24	8.8
24	69	57	520	59	36	292	149	17	12	24	19	9.0
25	23	22	94	53	36	109	146	16	11	13	16	448
26	17	17	60	48	34	75	69	15	9.6	392	15	118
27	14	15	50	46	33	65	57	14	8.8	77	15	28
28	14	14	55	47	●30	80	51	195	8.5	18	14	18
29	13	14	55	45	---	63	46	29	8.6	14	14	14
30	13	13	475	45	---	122	45	19	9.8	14	13	12
31	13	---	493	102	---	88	---	40	---	12	12	---
TOTAL	625	830	3766	4498	1285	2613	2408	1747	477.8	1619.8	2051.0	871.9
MEAN	20.2	27.7	121	145	45.9	84.3	80.3	56.4	15.9	52.3	66.2	29.1
MAX	69	299	702	1300	89	318	611	438	54	529	787	448
MIN	11	12	12	45	30	28	31	14	8.5	8.0	7.6	7.5
CFSM	.50	.69	3.03	3.62	1.15	2.10	2.00	1.41	.40	1.30	1.65	.73
IN.	.58	.77	3.50	4.18	1.19	2.43	2.24	1.62	.44	1.50	1.90	.81

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1991, BY WATER YEAR

	43.2	93.4	79.8	102	95.7	79.9	88.2	102	66.7	87.0	56.1	46.5
MEAN	43.2	93.4	79.8	102	95.7	79.9	88.2	102	66.7	87.0	56.1	46.5
MAX	103	180	203	146	167	103	141	198	208	188	73.9	129
(WY) 1990	1990	1987	1987	1990	1988	1989	1987	1989	1989	1989	1986	1989
MIN	19.1	27.7	18.5	52.5	45.9	53.7	42.4	34.8	11.5	23.4	30.2	22.9
(WY) 1987	1987	1991	1990	1989	1991	1990	1988	1986	1986	1990	1987	1990

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1986 - 1991
ANNUAL TOTAL	26368.0	22792.5	
ANNUAL MEAN	72.2	62.4	81.0
HIGHEST ANNUAL MEAN			106
LOWEST ANNUAL MEAN			62.4
HIGHEST DAILY MEAN	984	1300	2180
LOWEST DAILY MEAN	5.2	7.5	4.1
ANNUAL SEVEN-DAY MINIMUM	6.8	8.4	6.3
INSTANTANEOUS PEAK FLOW		3160	7970
INSTANTANEOUS PEAK STAGE		6.84	9.99
ANNUAL RUNOFF (CFSM)	1.80	1.56	2.02
ANNUAL RUNOFF (INCHES)	24.49	21.17	27.47
10 PERCENT EXCEEDS	142	110	151
50 PERCENT EXCEEDS	35	28	38
90 PERCENT EXCEEDS	12	10	12

NESHAMINY CREEK BASIN

01465050 MILL CREEK NEAR WYCOMBE, PA

LOCATION.--Lat 40°17'30", long 75°02'19", Bucks County, Hydrologic Unit 02040201, on Creek Road at Briarwood Day Camp about 3 miles southeast of Doylestown.

DRAINAGE AREA.--14.0 mi².

PERIOD OF RECORD.--November 1985 to February 1989, October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 210 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.1	2.9	25	16	11	21	17	9.4	2.7	3.3	2.7
2	2.9	2.8	2.9	22	16	11	20	16	6.8	2.9	3.1	2.4
3	3.1	2.7	5.4	20	15	26	19	15	6.2	3.9	2.7	2.2
4	3.1	2.5	67	18	15	51	18	14	5.7	3.0	2.4	2.2
5	3.5	2.5	16	16	14	21	18	14	5.5	4.3	2.2	3.4
6	3.4	3.3	11	16	17	21	17	54	5.4	3.6	2.0	2.5
7	3.2	3.7	9.6	16	20	32	16	40	5.1	3.5	2.0	2.2
8	3.4	3.6	8.8	14	17	20	16	21	4.8	3.1	1.9	1.8
9	5.2	3.3	8.0	33	16	18	15	19	4.4	2.6	21	1.8
10	4.1	34	7.5	27	15	17	14	17	4.4	2.2	18	1.7
11	4.2	15	6.8	21	14	16	13	16	4.1	2.1	5.0	1.5
12	4.0	7.2	6.6	133	13	16	13	15	10	1.9	3.6	1.3
13	4.6	6.1	6.5	44	13	16	13	15	6.5	18	3.2	1.4
14	4.0	5.2	5.7	29	17	17	14	14	4.6	9.2	2.8	1.5
15	3.4	5.2	9.8	26	15	23	16	15	4.0	3.4	3.5	1.4
16	3.4	4.9	17	76	12	18	15	13	3.8	2.7	2.9	1.4
17	3.4	4.7	9.5	53	12	16	13	12	3.4	2.4	2.5	1.2
18	4.4	4.3	24	31	12	36	14	12	5.7	2.1	2.3	1.0
19	7.8	4.1	17	27	15	27	12	11	9.1	2.1	12	1.8
20	3.0	4.0	12	25	18	21	12	10	5.4	1.9	84	2.8
21	2.6	3.8	14	28	14	19	69	9.9	4.2	1.7	18	1.8
22	2.4	3.8	15	23	14	18	43	9.5	3.8	1.7	7.3	1.4
23	13	5.4	16	20	12	33	24	9.1	4.3	3.2	5.5	1.4
24	14	9.4	60	20	12	28	33	8.6	3.8	4.4	4.8	1.4
25	5.2	5.1	21	18	12	22	29	8.2	3.3	2.2	4.2	50
26	4.1	4.0	17	17	12	20	22	7.6	3.5	58	3.8	18
27	3.6	3.7	15	17	11	28	20	7.3	3.5	30	3.7	6.0
28	3.5	3.7	16	17	11	24	19	13	3.1	5.8	3.5	4.2
29	3.2	3.8	16	17	---	21	18	7.7	2.9	4.8	3.3	3.5
30	2.9	3.2	46	17	---	28	17	7.4	2.7	4.3	3.0	3.0
31	3.1	---	72	23	---	23	---	11	---	3.6	3.0	---
TOTAL	134.7	168.1	562.0	889	400	698	603	459.3	149.4	197.3	240.5	128.9
MEAN	4.35	5.60	18.1	28.7	14.3	22.5	20.1	14.8	4.98	6.36	7.76	4.30
MAX	14	34	72	133	20	51	69	54	10	58	84	50
MIN	2.4	2.5	2.9	14	11	11	12	7.3	2.7	1.7	1.9	1.0
CFSM	.31	.40	1.29	2.05	1.02	1.61	1.44	1.06	.36	.45	.55	.31
IN.	.36	.45	1.49	2.36	1.06	1.85	1.60	1.22	.40	.52	.64	.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1991, BY WATER YEAR

	MEAN	MAX	(WY)	MIN	(WY)
1986	8.61	28.6	1990	1.32	1987
1987	16.3	28.1	1989	5.60	1991
1988	16.6	39.6	1987	7.41	1990
1989	19.9	28.7	1991	9.89	1989
1990	23.2	31.9	1988	14.3	1991
1991	20.2	26.0	1987	14.2	1990
1992	22.4	35.8	1987	9.72	1988
1993	17.9	29.7	1990	10.4	1986
1994	9.15	16.3	1986	3.75	1986
1995	10.6	19.9	1987	3.00	1986
1996	6.59	12.0	1990	3.23	1986
1997	3.65	5.04	1988	1.25	1986

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1986 - 1991
ANNUAL TOTAL	5421.7	4630.2	15.0
ANNUAL MEAN	14.9	12.7	17.8
HIGHEST ANNUAL MEAN			12.7
LOWEST ANNUAL MEAN			1987
HIGHEST DAILY MEAN	161	May 30	268
LOWEST DAILY MEAN	2.1	Aug 4	.66
ANNUAL SEVEN-DAY MINIMUM	2.7	Jul 30	1.3
INSTANTANEOUS PEAK FLOW			267
INSTANTANEOUS PEAK STAGE			4.97
ANNUAL RUNOFF (CFSM)	1.06	.91	6.98
ANNUAL RUNOFF (INCHES)	14.41	12.30	1.07
			14.53

a Associated gage height, 6.76 ft.

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA

LOCATION.--Lat 40°10'26", long 74°57'26", Bucks County, Hydrologic Unit 02040201, on left bank at bridge on State Highway 213, 0.3 mi downstream from Mill Creek, and 1.7 mi west of Langhorne.

DRAINAGE AREA.--210 mi².

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1332: 1949. WSP 1432: 1936-37. WDR PA-83-1: 1982(P)

GAGE.--Water-stage recorder. Datum of gage is 40.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Some regulation at low flow by mills above station. Flow regulated by upstream reservoirs on Little Neshaminy Creek, Robin Run, Pine Run, North Branch Neshaminy Creek, and Core Creek (combined flood control capacity, about 9,560 acre-ft). Occasional regulation by Springfield Lake, capacity, 650 mil gal, completed in 1934; no significant regulation except during period May 1934 to January 1944, when the lake was filling, and in September 1949, July 1954, July through October 1957, September, October 1961. Interceptor sewer installed along left bank in May, June 1966. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23, 1933, reached a stage of 17.3 ft, from floodmark, discharge, 30,000 ft³/s, from rating curve extended as explained in footnotes.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	61	65	677	324	142	334	223	178	56	61	54
2	53	60	64	444	274	141	302	200	116	55	56	50
3	49	61	85	362	266	249	269	181	89	76	51	48
4	51	61	1930	307	260	1250	248	164	79	75	50	49
5	51	59	598	264	252	453	238	152	73	59	48	55
6	49	59	286	249	257	319	233	1060	70	62	45	58
7	49	56	222	253	377	621	221	1580	68	76	43	54
8	49	57	186	245	372	370	206	461	66	122	42	49
9	58	55	159	680	273	288	196	331	64	76	596	46
10	96	587	140	1000	240	260	189	281	61	56	957	45
11	66	632	126	559	223	237	170	247	61	52	229	43
12	56	206	115	3640	202	215	153	221	86	47	110	42
13	117	136	109	1260	188	211	149	201	93	976	82	40
14	183	108	104	657	226	215	182	185	65	925	67	39
15	86	94	123	491	271	326	205	184	59	195	76	42
16	64	85	471	1260	204	352	252	165	57	105	87	42
17	55	85	277	1450	171	256	203	144	64	81	66	40
18	110	82	563	661	173	481	202	136	149	68	56	39
19	295	75	553	483	192	732	191	129	257	62	202	42
20	138	71	307	410	284	389	171	112	152	57	1900	58
21	83	70	274	431	269	315	1210	108	91	54	1460	50
22	68	69	435	445	220	281	1410	104	71	51	262	43
23	115	71	332	345	195	462	556	101	67	59	160	39
24	384	164	1550	339	173	787	483	96	65	108	117	39
25	179	132	644	311	171	430	841	91	65	84	94	1140
26	112	91	380	280	173	361	419	86	57	218	80	614
27	82	79	303	289	158	366	337	82	54	867	74	234
28	71	72	282	281	149	455	291	366	51	165	69	130
29	69	80	297	279	---	346	257	184	50	87	66	96
30	64	73	757	274	---	428	239	109	50	75	65	77
31	64	---	2300	425	---	446	---	114	---	68	61	---
TOTAL	3022	3591	14037	19051	6537	12184	10357	7798	2528	5117	7332	3397
MEAN	97.5	120	453	615	233	393	345	252	84.3	165	237	113
MAX	384	632	2300	3640	377	1250	1410	1580	257	976	1900	1140
MIN	49	55	64	245	149	141	149	82	50	47	42	39

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGEHORNE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	115	241	351	409	476	527	437	291	197	188	163	148
MAX	629	1169	1190	1509	1074	1246	1455	862	882	1161	1694	885
(WY)	1980	1973	1984	1979	1939	1936	1983	1989	1989	1938	1955	1971
MIN	13.8	23.2	34.3	47.2	115	105	89.8	54.5	33.7	21.8	15.1	15.4
(WY)	1958	1937	1966	1981	1947	1985	1985	1963	1965	1957	1966	1951

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1935 - 1991	
ANNUAL TOTAL	107081		94951			
ANNUAL MEAN	293		260		294	
HIGHEST ANNUAL MEAN					565	
LOWEST ANNUAL MEAN					121	
HIGHEST DAILY MEAN	4940	May 30	3640	Jan 12	27300	Aug 19 1955
LOWEST DAILY MEAN	37	Aug 4	39	Sep 14	2.9	Sep 8 1957
ANNUAL SEVEN-DAY MINIMUM	44	Jul 30	41	Sep 12	8.2	Aug 26 1944
INSTANTANEOUS PEAK FLOW			5670	Jan 12	a49300	Aug 19 1955
INSTANTANEOUS PEAK STAGE			7.63	Jan 12	b22.84	Aug 19 1955
INSTANTANEOUS LOW FLOW			37	Sep 19	1.9	Sep 8 1957
10 PERCENT EXCEEDS	568		561		571	
50 PERCENT EXCEEDS	172		152		137	
90 PERCENT EXCEEDS	61		52		30	

a From rating curve extended above 4,700 ft³/s, on basis of contracted-opening measurement at gage height 15.94 ft, and slope-area measurement of peak flow.

b From floodmarks.

POQUESSING CREEK BASIN

01465798 POQUESSING CREEK AT GRANT AVENUE, PHILADELPHIA, PA

LOCATION.--Lat 40°03'25", long 74°59'08", Philadelphia County, Hydrologic Unit 02040202, on right bank 600 ft upstream from Delaware River Expressway and 3,000 ft upstream from mouth in northeast Philadelphia.

DRAINAGE AREA.--21.4 mi².

PERIOD OF RECORD.--July 1965 to current year. Records for 1971-74 published in WDR PA-81-1.

REVISED RECORD.--WDR PA-86-1:1985.

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 2.68 ft, above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.7	3.2	15	13	8.9	17	15	14	4.8	3.7	3.8
2	2.5	3.9	3.1	12	11	9.2	15	14	8.0	4.5	3.5	3.7
3	2.5	4.1	58	10	11	238	14	13	7.4	4.8	3.1	3.7
4	4.1	4.2	231	8.7	11	104	13	12	11	4.8	7.7	3.8
5	7.4	3.7	17	8.1	11	21	13	12	8.2	6.2	3.0	14
6	2.7	4.7	8.7	8.1	22	29	13	342	7.4	5.2	2.5	5.0
7	2.5	3.2	6.5	13	27	52	13	42	7.5	61	2.4	3.9
8	2.6	3.4	5.7	11	18	13	13	18	7.0	11	2.4	3.8
9	8.8	3.7	5.2	105	13	11	12	15	6.7	4.9	1000	3.4
10	2.9	200	5.1	34	11	10	12	14	6.7	4.0	55	3.3
11	6.0	16	4.7	51	11	9.8	12	14	6.5	4.0	12	3.2
12	4.5	5.3	4.7	535	10	9.2	11	13	21	78	7.6	3.0
13	12	4.3	4.7	31	9.8	9.2	14	12	6.7	735	6.1	3.3
14	15	3.8	4.6	22	29	33	31	12	5.9	139	5.4	17
15	3.5	3.9	46	17	14	51	38	15	5.9	9.6	7.6	4.4
16	2.8	3.7	21	148	9.7	18	23	12	5.8	5.9	5.4	3.3
17	3.0	4.4	7.2	45	9.1	12	14	11	7.6	5.0	4.9	3.0
18	134	7.4	49	21	9.7	60	13	10	348	4.5	4.3	2.9
19	40	3.7	16	16	27	23	15	9.9	64	10	166	54
20	5.0	3.3	7.3	15	23	14	11	8.9	12	10	319	40
21	3.8	3.3	27	58	12	12	219	9.3	8.2	3.9	28	4.7
22	3.9	3.2	20	18	10	11	41	9.3	7.1	9.6	11	3.5
23	70	14	20	13	10	88	24	8.4	11	9.5	7.4	3.3
24	23	6.4	104	13	9.4	37	91	8.0	7.9	19	6.3	3.6
25	9.0	3.6	13	12	9.4	24	33	8.3	6.1	11	5.9	284
26	4.9	3.3	8.9	11	9.6	17	18	8.1	5.8	76	5.3	129
27	4.6	3.2	7.5	12	9.7	19	17	7.8	5.4	60	6.0	9.0
28	3.9	3.4	9.6	11	9.0	20	16	190	5.0	5.9	5.3	5.4
29	3.3	3.7	40	11	---	20	16	11	5.2	7.6	4.9	4.6
30	3.4	3.1	111	12	---	59	15	9.1	4.6	12	4.6	4.1
31	3.6	---	57	42	---	23	---	28	---	4.6	4.3	---
TOTAL	398.0	337.6	926.7	1338.9	379.4	1065.3	807	912.1	633.6	1331.3	1710.6	633.7
MEAN	12.8	11.3	29.9	43.2	13.5	34.4	26.9	29.4	21.1	42.9	55.2	21.1
MAX	134	200	231	535	29	238	219	342	348	735	1000	284
MIN	2.5	3.1	3.1	8.1	9.0	8.9	11	7.8	4.6	3.9	2.4	2.9
CFM	.60	.53	1.40	2.02	.63	1.61	1.26	1.37	.99	2.01	2.58	.99
IN.	.69	.59	1.61	2.33	.66	1.85	1.40	1.59	1.10	2.31	2.97	1.10

• Estimated.

POQUESSING CREEK BASIN

01465798 POQUESSING CREEK AT GRANT AVENUE, PHILADELPHIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.0	27.7	31.9	36.1	36.2	37.1	38.3	36.3	29.8	42.0	32.4	25.8
MAX	42.1	112	79.2	136	105	71.3	104	74.2	84.7	112	130	82.4
(WY)	1990	1973	1978	1979	1979	1983	1983	1989	1989	1989	1971	1975
MIN	7.05	5.03	6.73	4.34	10.3	9.17	8.91	10.6	5.94	7.07	5.10	3.93
(WY)	1966	1966	1981	1981	1980	1985	1985	1977	1966	1966	1966	1970

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1966 - 1991	
ANNUAL TOTAL	10308.0		10474			
ANNUAL MEAN	28.2		28.7		33.0	
HIGHEST ANNUAL MEAN					52.3	
LOWEST ANNUAL MEAN					16.7	
HIGHEST DAILY MEAN	446	May 10	1000	Aug 9	2170	Jul 28 1982
LOWEST DAILY MEAN	2.5	Oct 2	2.4	Aug 7,8	1.3	Aug 29 1966
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 27	3.3	Nov 26	1.6	Aug 27 1966
INSTANTANEOUS PEAK FLOW			4330	Aug 9	^a 9400	Jul 28 1982
INSTANTANEOUS PEAK STAGE			10.58	Aug 9	^b 15.35	Jul 28 1982
INSTANTANEOUS LOW FLOW			2.2	Aug 7,8	1.1	Aug 9 1966
ANNUAL RUNOFF (CFSM)	1.32		1.34		1.54	
ANNUAL RUNOFF (INCHES)	17.92		18.21		20.98	
10 PERCENT EXCEEDS	67		53		61	
50 PERCENT EXCEEDS	13		9.8		12	
90 PERCENT EXCEEDS	3.7		3.5		4.5	

^a From rating curve extended above 550 ft³/s, on basis of slope-area measurement of peak flow.^b From floodmark.

PENNYPACK CREEK BASIN

01467048 PENNYPACK CREEK AT LOWER RHAWN STREET BRIDGE, PHILADELPHIA, PA

LOCATION.--Lat 40°03'00", long 75°01'59", Philadelphia County, Hydrologic Unit 02040202, on left bank at downstream side of footbridge pier, 400 ft downstream from Lower Rhawn Street bridge, 0.8 mi upstream from Wooden Bridge Run, in Philadelphia.

DRAINAGE AREA.--49.8 mi².

PERIOD OF RECORD.--June 1965 to current year. Records for 1971-74 published in WDR PA-81-1.

REVISED RECORDS.--WDR PA-81-1: 1974. WDR PA-89-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 21.27 ft, above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	26	25	83	62	49	68	56	75	26	25	26
2	20	25	25	67	59	51	67	53	42	25	24	24
3	19	25	96	62	58	220	63	51	40	25	38	25
4	21	24	815	58	58	400	62	49	42	24	38	26
5	23	25	80	54	57	77	61	48	39	23	22	47
6	20	31	48	54	73	90	61	948	37	23	22	31
7	19	29	41	62	86	211	59	247	36	97	21	26
8	19	26	38	58	64	68	57	84	35	37	21	24
9	35	25	35	352	58	62	57	70	34	29	1290	24
10	23	495	35	158	56	59	55	66	34	27	383	24
11	26	91	33	131	55	58	52	62	33	21	54	22
12	22	36	32	1040	53	56	51	60	63	199	40	22
13	24	34	32	163	53	56	59	58	34	980	36	22
14	25	30	30	103	87	82	78	56	31	346	34	30
15	19	30	105	90	60	139	111	60	30	40	100	25
16	19	29	151	379	52	74	68	53	30	30	46	22
17	19	29	45	215	51	61	54	51	34	26	34	21
18	213	28	209	102	53	218	61	50	559	25	33	21
19	234	28	79	88	87	106	50	47	144	24	●500	104
20	38	27	47	82	84	69	48	46	43	23	●900	85
21	26	27	96	194	59	64	573	46	35	23	●200	26
22	29	26	97	94	55	63	169	44	31	32	●60	23
23	225	43	74	80	52	275	75	43	36	40	33	21
24	129	39	380	72	51	138	259	41	34	88	●33	23
25	35	27	74	67	53	79	140	40	30	35	●33	527
26	28	27	56	64	53	71	69	41	29	284	●33	265
27	25	26	52	63	51	85	62	43	27	186	35	42
28	25	30	57	64	49	75	59	529	26	32	34	30
29	25	27	89	62	---	74	57	54	25	37	33	27
30	25	25	313	66	---	161	57	46	25	34	33	26
31	25	---	303	140	---	76	---	72	---	26	29	---
TOTAL	1455	1390	3592	4367	1689	3367	2762	3214	1713	2867	4217	1661
MEAN	46.9	46.3	116	141	60.3	109	92.1	104	57.1	92.5	136	55.4
MAX	234	495	815	1040	87	400	573	948	559	980	1290	527
MIN	19	24	25	54	49	49	48	40	25	21	21	21
CFSM	.94	.93	2.33	2.83	1.21	2.18	1.85	2.08	1.15	1.86	2.73	1.11
IN.	1.09	1.04	2.68	3.26	1.26	2.52	2.06	2.40	1.28	2.14	3.15	1.24

● Estimated.

PENNYPACK CREEK BASIN

01467048 PENNYPACK CREEK AT LOWER REAWN STREET BRIDGE, PHILADELPHIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.7	79.6	92.4	101	103	114	124	109	86.8	93.3	72.6	68.4
MAX	151	300	213	334	252	204	338	194	245	257	163	176
(WY)	1980	1973	1984	1979	1979	1983	1983	1978	1989	1975	1967	1971
MIN	20.3	17.5	21.1	14.0	35.5	33.5	32.5	43.0	21.8	23.7	15.7	17.4
(WY)	1966	1966	1981	1981	1969	1985	1985	1977	1965	1966	1966	1970

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1965 - 1991	
ANNUAL TOTAL	34093		32294			
ANNUAL MEAN	93.4		88.5		92.5	
HIGHEST ANNUAL MEAN					165	
LOWEST ANNUAL MEAN					43.2	
HIGHEST DAILY MEAN	932	Apr 15	1290	Aug 9	3040	Sep 27 1985
LOWEST DAILY MEAN	19	Oct 3	19	Oct 3	8.4	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	20	Oct 2	20	Oct 2	9.3	Sep 7 1966
INSTANTANEOUS PEAK FLOW			4220	Aug 9	19770	Jul 28 1982
INSTANTANEOUS PEAK STAGE			8.30	Aug 9	13.15	Jul 28 1982
INSTANTANEOUS LOW FLOW			16	Jul 28	6.0	Oct 11 1966
ANNUAL RUNOFF (CFSM)	1.88		1.78		1.86	
ANNUAL RUNOFF (INCHES)	25.47		24.12		25.23	
10 PERCENT EXCEEDS	216		189		175	
50 PERCENT EXCEEDS	54		50		51	
90 PERCENT EXCEEDS	26		24		21	

^a From rating curve extended above 3,900 ft³/s, on basis of slope-area measurement of peak flow.

FRANKFORD CREEK BASIN

01467087 FRANKFORD CREEK AT CASTOR AVENUE, PHILADELPHIA PA

LOCATION.--Lat 40°00'57", long 75°05'50", Philadelphia County, Hydrologic Unit 02040203, on left bank at upstream side of Castor Avenue bridge 2.8 mi upstream from mouth in Northeast Philadelphia.

DRAINAGE AREA.--30.4 mi².

PERIOD OF RECORD.--July 1982 to current year. October 1965 to July 1982 at site 0.7 mi downstream. Not equivalent drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6.58 ft, above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	●7.4	7.5	12	19	18	13	19	16	12	7.5	9.8	21
2	●7.6	7.3	12	18	16	15	20	16	11	7.0	8.9	18
3	●7.5	7.7	196	16	16	380	18	15	11	9.6	27	19
4	●8.0	8.6	396	15	16	49	18	15	12	8.1	26	●18
5	●9.0	7.7	16	15	16	17	18	14	11	8.9	10	●30
6	●7.2	11	12	15	26	83	18	814	11	8.0	8.1	●18
7	●7.2	9.0	11	20	26	48	18	34	9.9	208	7.7	●14
8	●7.2	9.1	10	16	17	16	18	17	9.6	19	7.7	●12
9	●12	8.7	9.8	251	16	15	18	14	9.5	16	1050	●12
10	●9.0	424	9.8	31	15	15	16	14	9.6	15	51	●12
11	●9.2	16	8.8	161	15	14	15	13	11	15	14	●12
12	●8.3	8.1	8.7	434	14	14	15	13	38	34	11	●12
13	●10	8.9	9.1	31	14	14	23	13	10	●800	10	●12
14	●11	8.7	8.8	25	37	29	32	13	8.9	●150	15	●24
15	●7.3	8.7	94	23	15	38	68	14	8.9	●20	29	●12
16	●7.3	8.7	20	202	14	17	19	12	20	11	9.3	●11
17	●7.1	8.7	9.8	44	14	15	15	12	16	10	8.5	●11
18	●180	8.7	81	25	14	109	13	11	991	9.6	8.5	●11
19	31	8.7	19	24	35	23	14	10	41	9.5	164	●80
20	4.1	8.7	10	23	23	17	14	9.8	13	10	146	●65
21	3.1	8.7	78	121	15	16	319	10	11	9.4	17	●16
22	2.7	8.7	20	24	15	16	31	10	9.9	17	11	●12
23	200	24	59	21	14	170	18	9.0	14	14	11	●11
24	33	10	161	21	14	46	190	9.3	9.9	15	9.0	●11
25	9.0	7.7	16	19	14	21	26	9.4	8.8	26	8.7	414
26	7.4	7.7	13	19	14	18	19	8.8	8.7	222	8.7	118
27	7.3	7.9	12	19	14	27	18	8.3	8.4	17	8.7	9.6
28	7.7	9.9	15	19	13	19	17	322	8.4	6.3	8.8	8.4
29	7.7	13	47	18	---	24	16	11	8.5	20	15	8.1
30	7.7	13	115	28	---	53	16	14	8.1	13	20	8.6
31	7.7	---	54	59	---	20	---	15	---	9.9	21	---
TOTAL	650.7	705.1	1543.8	1776	490	1371	1079	1516.6	1360.1	1745.8	1760.4	1040.7
MEAN	21.0	23.5	49.8	57.3	17.5	44.2	36.0	48.9	45.3	56.3	56.8	34.7
MAX	200	424	396	434	37	380	319	814	991	800	1050	414
MIN	2.7	7.3	8.7	15	13	13	13	8.3	8.1	6.3	7.7	8.1
CFSM	.69	.77	1.64	1.88	.58	1.45	1.18	1.61	1.49	1.85	1.87	1.14
IN.	.80	.86	1.89	2.17	.60	1.68	1.32	1.86	1.66	2.14	2.15	1.27

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1991, BY WATER YEAR

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	24.7	43.1	37.3	34.0	36.9	44.6	53.7	59.9	43.6	64.0
MAX	41.4	81.7	90.9	57.3	80.4	86.8	143	98.4	111	116
(WY)	1990	1987	1984	1991	1988	1983	1983	1989	1989	1989
MIN	14.1	17.7	15.5	10.6	17.5	11.7	14.4	20.8	15.8	35.9
(WY)	1987	1985	1989	1985	1991	1985	1985	1986	1986	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1982 - 1991
ANNUAL TOTAL	14395.7	15039.2	
ANNUAL MEAN	39.4	41.2	44.3
HIGHEST ANNUAL MEAN			54.6
LOWEST ANNUAL MEAN			32.1
HIGHEST DAILY MEAN	702	1050	1570
LOWEST DAILY MEAN	2.7	2.7	2.6
ANNUAL SEVEN-DAY MINIMUM	6.1	7.6	2.7
INSTANTANEOUS PEAK FLOW		8560	10300
INSTANTANEOUS PEAK STAGE		10.49	11.82
INSTANTANEOUS LOW FLOW		2.5	1.1
ANNUAL RUNOFF (CFSM)	1.30	1.26	1.46
ANNUAL RUNOFF INCHES	17.62	18.40	19.82
10 PERCENT EXCEEDS	91	61	89
50 PERCENT EXCEEDS	16	14	17
90 PERCENT EXCEEDS	7.7	8.1	7.6

a From rating curve extended above 8,000 ft³/s, on basis of slope-area measurement of peak flow.

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA

LOCATION.--Lat 39°57'11", long 75°08'05", Philadelphia County, Hydrologic Unit 02040202, at center of river on a line 200 ft upstream of bridge from the north side of pier 12 north through channel station +14.3 to pier-head line on New Jersey side of river.

DRAINAGE AREA.--7,993 mi².

PERIOD OF RECORD.--August 1949 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1963 to current year.

pH: October 1967 to current year.

WATER TEMPERATURE: November 1960 to current year.

DISSOLVED OXYGEN: November 1960 to current year.

INSTRUMENTATION.--Water-quality monitor interfaced with data collection platform, located at river end of pier 12 north about 100 ft upstream from bridge. From November 1960 to July 1988 located on edge of pier 11.

REMARKS.--Further information on this station is given in U.S. Geological Survey Water-Supply Paper 1809-0. Station not operated Dec. 1 to March 5. Other interruptions in the record were due to malfunctions of the instruments. Subsequent to water year 1981, station not operated during the winter months.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,450 microsiemens, Nov. 20, 1964; minimum, 65 microsiemens, Sept. 15, 1979.

pH: Maximum, 8.7, Oct. 14, 1979; minimum, 4.7, Dec. 29, 1978.

WATER TEMPERATURES: Maximum, 31.0°C, July 13-15, 1966; minimum, 0.0°C on many days during winter months.

DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Dec. 14, 1962; minimum, 0.0 mg/L, on many days.

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	159	141	150	---	---	---	---	---	---
2	---	---	---	157	142	150	---	---	---	---	---	---
3	---	---	---	156	143	151	---	---	---	---	---	---
4	---	---	---	161	146	153	---	---	---	---	---	---
5	276	253	264	173	148	158	---	---	---	---	---	---
6	279	245	265	189	155	168	---	---	---	---	---	---
7	282	189	266	180	159	165	---	---	---	---	---	---
8	283	257	269	---	---	---	---	---	---	---	---	---
9	281	262	271	195	166	178	---	---	---	---	---	---
10	---	---	---	185	172	180	---	---	---	---	---	---
11	---	---	---	177	171	173	---	---	---	---	---	---
12	294	265	284	186	166	176	---	---	---	---	---	---
13	292	266	280	---	---	---	---	---	---	---	---	---
14	291	264	279	---	---	---	---	---	---	---	---	---
15	294	264	277	---	---	---	---	---	---	---	---	---
16	292	257	273	---	---	---	---	---	---	---	---	---
17	286	256	271	---	---	---	---	---	---	---	---	---
18	282	256	266	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	264	234	249	---	---	---	---	---	---	---	---	---
22	257	230	244	---	---	---	---	---	---	---	---	---
23	251	225	240	155	145	152	---	---	---	---	---	---
24	239	204	223	156	149	152	---	---	---	---	---	---
25	216	190	205	160	150	153	---	---	---	---	---	---
26	190	156	174	161	155	158	---	---	---	---	---	---
27	169	158	161	168	160	164	---	---	---	---	---	---
28	166	157	161	184	159	170	---	---	---	---	---	---
29	159	141	150	197	172	181	---	---	---	---	---	---
30	160	144	153	---	---	---	---	---	---	---	---	---
31	159	141	151	---	---	---	---	---	---	---	---	---
MONTH	294	141	234	197	141	163	---	---	---	---	---	---

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	172	159	166	164	155	160
2	---	---	---	---	---	---	170	162	166	164	155	161
3	---	---	---	---	---	---	171	165	168	166	157	162
4	---	---	---	---	---	---	173	166	170	169	160	166
5	---	---	---	180	172	176	177	168	171	172	164	169
6	---	---	---	180	167	174	176	168	172	179	168	173
7	---	---	---	175	151	166	176	168	172	177	168	172
8	---	---	---	154	136	144	177	170	173	181	173	177
9	---	---	---	147	137	141	180	173	176	187	178	182
10	---	---	---	146	138	142	183	175	179	189	182	186
11	---	---	---	150	138	145	---	---	---	192	184	188
12	---	---	---	157	145	151	190	180	183	204	187	191
13	---	---	---	159	147	153	197	182	190	211	196	203
14	---	---	---	165	151	158	199	186	192	212	193	200
15	---	---	---	165	156	161	200	188	194	208	188	199
16	---	---	---	167	158	163	198	188	193	210	188	198
17	---	---	---	170	162	165	199	188	195	210	187	197
18	---	---	---	181	164	171	203	191	199	210	172	197
19	---	---	---	180	171	175	208	195	201	223	191	205
20	---	---	---	187	175	180	208	195	202	216	189	203
21	---	---	---	194	182	188	213	199	206	215	193	204
22	---	---	---	198	187	192	205	192	198	216	193	204
23	---	---	---	202	187	195	197	191	194	217	195	206
24	---	---	---	198	188	193	197	189	193	222	201	212
25	---	---	---	194	181	189	194	177	184	224	199	212
26	---	---	---	196	174	183	185	171	179	224	203	214
27	---	---	---	197	174	182	181	158	171	232	208	220
28	---	---	---	196	176	182	176	149	162	229	208	219
29	---	---	---	183	169	177	174	152	161	233	208	221
30	---	---	---	181	164	175	167	155	159	239	216	226
31	---	---	---	175	159	167	---	---	---	241	219	230
MONTH	---	---	---	202	136	170	213	149	182	241	155	195
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	247	219	232	288	263	278	279	248	266	291	253	267
2	245	217	230	291	267	280	296	249	270	295	258	276
3	243	221	231	291	266	280	285	250	270	293	260	275
4	242	224	232	293	270	283	284	255	271	289	260	276
5	---	---	---	296	270	284	290	255	269	294	261	277
6	---	---	---	298	272	286	290	256	273	297	263	281
7	246	231	240	298	273	286	296	258	275	299	266	288
8	249	232	241	298	272	284	297	261	279	305	268	287
9	251	234	244	301	271	286	303	243	277	307	270	289
10	253	239	247	302	270	287	290	234	257	309	272	291
11	256	242	251	305	270	288	281	236	255	306	272	289
12	260	245	254	310	273	291	276	236	254	309	273	292
13	262	247	256	316	244	278	284	239	261	317	279	299
14	265	249	258	291	243	263	293	245	269	319	282	300
15	268	250	260	273	235	254	289	249	270	318	283	300
16	269	251	262	270	236	253	285	251	268	318	283	302
17	272	250	263	277	240	255	293	250	269	321	285	301
18	277	238	261	---	---	---	290	255	272	327	289	306
19	265	238	253	---	---	---	292	259	272	329	289	309
20	263	243	253	---	---	---	285	257	271	329	289	308
21	266	245	254	---	---	---	281	249	261	335	293	315
22	267	246	257	292	249	268	272	243	257	337	291	315
23	270	250	260	300	249	271	277	246	258	343	295	317
24	272	248	260	302	249	274	275	244	258	338	294	316
25	272	249	261	303	250	276	278	246	262	345	282	315
26	273	252	263	295	246	272	279	250	264	330	276	301
27	273	255	264	288	237	263	276	254	266	316	272	293
28	276	259	267	290	238	265	274	256	260	314	270	291
29	279	261	270	293	242	266	275	252	264	309	270	288
30	281	264	274	277	242	261	282	257	270	320	270	290
31	---	---	---	281	245	264	283	258	271	---	---	---
MONTH	281	217	253	316	235	274	303	234	266	345	253	295

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	7.1	7.0	7.1	---	---	---	---	---	---
2	---	---	---	7.1	7.0	7.0	---	---	---	---	---	---
3	---	---	---	7.0	7.0	7.0	---	---	---	---	---	---
4	---	---	---	7.0	7.0	7.0	---	---	---	---	---	---
5	7.1	7.0	7.1	7.1	7.0	7.0	---	---	---	---	---	---
6	7.3	7.0	7.0	7.1	6.9	7.0	---	---	---	---	---	---
7	7.4	7.0	7.0	7.1	7.0	7.1	---	---	---	---	---	---
8	7.1	6.8	7.0	---	---	---	---	---	---	---	---	---
9	7.0	7.0	7.0	7.2	6.8	7.1	---	---	---	---	---	---
10	---	---	---	7.2	7.1	7.1	---	---	---	---	---	---
11	---	---	---	7.3	7.2	7.2	---	---	---	---	---	---
12	---	---	---	7.6	7.3	7.5	---	---	---	---	---	---
13	7.0	6.9	7.0	---	---	---	---	---	---	---	---	---
14	7.0	6.9	7.0	---	---	---	---	---	---	---	---	---
15	7.1	6.9	7.0	---	---	---	---	---	---	---	---	---
16	7.2	6.9	7.0	---	---	---	---	---	---	---	---	---
17	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	7.1	6.5	7.0	---	---	---	---	---	---	---	---	---
22	7.0	7.0	7.0	---	---	---	---	---	---	---	---	---
23	---	---	---	7.0	6.8	6.9	---	---	---	---	---	---
24	7.0	6.9	7.0	7.1	6.9	7.0	---	---	---	---	---	---
25	7.1	7.0	7.0	7.1	7.0	7.0	---	---	---	---	---	---
26	7.2	7.0	7.1	7.2	7.0	7.1	---	---	---	---	---	---
27	7.3	7.2	7.2	7.2	7.0	7.1	---	---	---	---	---	---
28	7.2	7.2	7.2	7.2	7.0	7.0	---	---	---	---	---	---
29	7.2	7.2	7.2	7.2	7.0	7.1	---	---	---	---	---	---
30	7.2	7.1	7.2	---	---	---	---	---	---	---	---	---
31	7.2	7.1	7.1	---	---	---	---	---	---	---	---	---
MONTH	7.4	6.5	7.1	7.6	6.8	7.1	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	7.0	6.9	7.0	6.6	6.5	6.6
2	---	---	---	---	---	---	7.0	6.9	6.9	6.6	6.5	6.6
3	---	---	---	---	---	---	7.0	6.9	6.9	6.8	6.6	6.7
4	---	---	---	---	---	---	7.0	6.8	6.9	6.8	6.7	6.7
5	---	---	---	7.4	7.1	7.2	6.9	6.8	6.8	6.8	6.7	6.7
6	---	---	---	7.4	7.1	7.3	6.9	6.7	6.8	6.8	6.6	6.7
7	---	---	---	7.1	7.0	7.0	6.8	6.7	6.8	6.7	6.6	6.7
8	---	---	---	7.2	7.0	7.1	6.8	6.7	6.8	6.7	6.6	6.7
9	---	---	---	7.8	7.1	7.1	6.9	6.7	6.8	6.7	6.6	6.7
10	---	---	---	7.1	7.1	7.1	6.9	6.7	6.8	6.7	6.6	6.7
11	---	---	---	7.5	7.1	7.2	---	---	---	6.7	6.6	6.7
12	---	---	---	7.3	7.1	7.2	---	---	---	7.0	6.6	6.7
13	---	---	---	7.3	7.1	7.2	7.0	6.9	6.9	7.2	6.7	7.0
14	---	---	---	7.2	7.1	7.2	7.0	6.8	6.9	7.1	6.7	6.7
15	---	---	---	7.2	7.1	7.1	6.9	6.8	6.8	6.7	6.6	6.7
16	---	---	---	7.2	7.1	7.1	6.8	6.7	6.8	6.7	6.7	6.7
17	---	---	---	7.2	7.1	7.1	6.8	6.7	6.8	6.7	6.7	6.7
18	---	---	---	7.2	7.0	7.1	6.9	6.8	6.8	7.0	6.7	6.8
19	---	---	---	7.2	7.0	7.1	6.8	6.7	6.8	7.0	6.9	6.9
20	---	---	---	7.2	7.1	7.2	6.8	6.7	6.8	7.0	6.9	6.9
21	---	---	---	7.3	7.1	7.2	6.8	6.7	6.7	7.1	6.8	6.9
22	---	---	---	7.3	7.1	7.2	6.9	6.7	6.8	7.1	6.8	6.9
23	---	---	---	7.3	7.1	7.2	6.9	6.8	6.8	6.9	6.8	6.8
24	---	---	---	7.2	7.1	7.1	6.9	6.8	6.9	6.9	6.8	6.9
25	---	---	---	7.2	7.2	7.2	6.9	6.8	6.8	6.9	6.7	6.8
26	---	---	---	7.2	6.9	7.0	6.9	6.8	6.8	6.8	6.7	6.7
27	---	---	---	7.3	6.8	6.9	6.8	6.7	6.7	6.7	6.6	6.7
28	---	---	---	7.0	6.9	6.9	6.7	6.7	6.7	6.6	6.5	6.6
29	---	---	---	7.0	6.9	6.9	6.7	6.7	6.7	6.6	6.5	6.5
30	---	---	---	7.1	6.9	7.0	6.7	6.6	6.6	6.5	6.4	6.5
31	---	---	---	7.1	7.0	7.0	---	---	---	6.5	6.4	6.4
MONTH	---	---	---	7.8	6.8	7.1	7.0	6.6	6.8	7.2	6.4	6.7

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.5	6.4	6.4	6.8	6.7	6.7	6.7	6.7	6.7	7.0	6.9	7.0
2	6.5	6.4	6.5	6.7	6.7	6.7	6.8	6.7	6.7	7.0	7.0	7.0
3	6.5	6.4	6.5	6.7	6.7	6.7	6.8	6.7	6.8	7.0	6.9	7.0
4	6.6	6.5	6.5	6.7	6.6	6.7	6.8	6.8	6.8	7.0	6.9	7.0
5	---	---	---	6.7	6.7	6.7	6.8	6.8	6.8	7.0	6.9	7.0
6	---	---	---	6.7	6.6	6.6	6.9	6.8	6.9	7.0	6.9	7.0
7	6.6	6.4	6.5	6.6	6.6	6.6	6.9	6.8	6.9	7.0	6.9	7.0
8	6.6	6.5	6.6	6.6	6.6	6.6	6.9	6.8	6.8	7.0	6.9	6.9
9	6.6	6.5	6.6	6.6	6.6	6.6	6.9	6.8	6.8	7.0	6.9	6.9
10	6.6	6.5	6.6	6.7	6.6	6.6	6.9	6.8	6.8	7.0	6.9	6.9
11	6.6	6.5	6.5	6.7	6.6	6.6	6.8	6.8	6.8	7.0	6.9	6.9
12	6.6	6.5	6.5	6.7	6.6	6.6	6.8	6.7	6.8	7.0	6.9	7.0
13	6.6	6.5	6.6	6.7	6.6	6.7	6.8	6.8	6.8	7.0	6.9	7.0
14	6.6	6.5	6.6	6.6	6.6	6.6	6.8	6.8	6.8	7.0	7.0	7.0
15	6.6	6.5	6.5	6.6	6.6	6.6	6.8	6.8	6.8	7.0	6.9	7.0
16	6.5	6.4	6.5	6.6	6.6	6.6	6.9	6.8	6.8	6.9	6.9	6.9
17	6.5	6.5	6.5	6.6	6.6	6.6	6.8	6.8	6.8	6.9	6.9	6.9
18	6.6	6.5	6.6	---	---	---	6.9	6.8	6.9	6.9	6.9	6.9
19	6.6	6.5	6.5	---	---	---	6.9	6.8	6.9	7.0	6.9	6.9
20	6.5	6.4	6.4	---	---	---	6.9	6.8	6.9	7.1	7.0	7.0
21	6.6	6.4	6.5	---	---	---	6.9	6.8	6.8	7.1	7.0	7.0
22	6.6	6.5	6.6	6.8	6.6	6.7	6.9	6.8	6.8	7.1	7.0	7.1
23	6.7	6.6	6.7	6.9	6.8	6.9	6.9	6.8	6.8	7.1	7.0	7.0
24	6.7	6.6	6.6	6.9	6.8	6.9	6.9	6.8	6.9	7.0	7.0	7.0
25	6.7	6.6	6.6	6.9	6.8	6.9	6.9	6.9	6.9	7.0	7.0	7.0
26	6.7	6.6	6.6	6.9	6.8	6.8	6.9	6.9	6.9	7.0	7.0	7.0
27	6.7	6.6	6.7	6.8	6.8	6.8	6.9	6.9	6.9	7.1	7.0	7.0
28	6.7	6.6	6.7	6.8	6.7	6.7	6.9	6.9	6.9	7.1	7.0	7.0
29	6.7	6.6	6.7	6.8	6.7	6.7	6.9	6.8	6.9	7.1	7.0	7.0
30	6.7	6.6	6.7	6.8	6.7	6.7	6.9	6.8	6.9	7.1	7.0	7.1
31	---	---	---	6.8	6.7	6.7	6.9	6.8	6.9	---	---	---
MONTH	6.7	6.4	6.6	6.9	6.6	6.7	6.9	6.7	6.8	7.1	6.9	7.0

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	13.5	12.5	13.0	---	---	---	---	---	---
2	---	---	---	15.0	12.5	13.0	---	---	---	---	---	---
3	---	---	---	16.0	12.5	13.0	---	---	---	---	---	---
4	---	---	---	14.5	13.0	13.0	---	---	---	---	---	---
5	20.0	19.5	19.5	14.0	13.0	13.5	---	---	---	---	---	---
6	20.0	19.5	19.5	13.5	13.0	13.5	---	---	---	---	---	---
7	20.5	19.5	20.0	13.0	12.5	13.0	---	---	---	---	---	---
8	21.0	19.5	20.0	---	---	---	---	---	---	---	---	---
9	20.0	20.0	20.0	12.5	12.0	12.5	---	---	---	---	---	---
10	---	---	---	12.5	12.0	12.5	---	---	---	---	---	---
11	---	---	---	12.0	12.0	12.0	---	---	---	---	---	---
12	21.0	20.5	21.0	12.0	10.0	11.0	---	---	---	---	---	---
13	21.5	21.0	21.0	---	---	---	---	---	---	---	---	---
14	21.5	21.0	21.5	---	---	---	---	---	---	---	---	---
15	21.5	21.5	21.5	---	---	---	---	---	---	---	---	---
16	21.5	20.0	21.0	---	---	---	---	---	---	---	---	---
17	21.0	21.0	21.0	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	19.5	19.5	19.5	---	---	---	---	---	---	---	---	---
22	19.5	19.5	19.5	---	---	---	---	---	---	---	---	---
23	---	---	---	7.5	7.5	7.5	---	---	---	---	---	---
24	19.0	18.0	19.0	8.0	7.5	7.5	---	---	---	---	---	---
25	18.0	17.0	17.5	8.0	7.5	8.0	---	---	---	---	---	---
26	16.5	14.5	15.5	8.0	7.5	8.0	---	---	---	---	---	---
27	14.5	14.5	14.5	8.5	8.0	8.0	---	---	---	---	---	---
28	14.5	14.0	14.0	8.5	8.0	8.5	---	---	---	---	---	---
29	14.0	13.0	13.5	9.0	8.5	8.5	---	---	---	---	---	---
30	13.5	10.5	13.0	---	---	---	---	---	---	---	---	---
31	13.5	12.5	13.0	---	---	---	---	---	---	---	---	---
MONTH	21.5	10.5	18.3	16.0	7.5	10.9	---	---	---	---	---	---

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	10.5	9.5	10.0	16.0	14.5	15.0
2	---	---	---	---	---	---	10.5	9.5	10.0	16.5	15.0	15.5
3	---	---	---	---	---	---	10.5	10.0	10.5	16.5	15.5	16.0
4	---	---	---	---	---	---	10.5	10.0	10.5	17.0	16.0	16.5
5	---	---	---	8.0	7.5	7.5	11.0	10.5	10.5	17.0	16.5	17.0
6	---	---	---	9.5	7.5	8.5	11.0	10.5	11.0	17.5	17.0	17.0
7	---	---	---	9.5	9.0	9.5	11.5	11.0	11.5	18.0	17.0	17.5
8	---	---	---	9.0	7.0	8.5	12.5	11.5	12.0	18.5	17.5	18.0
9	---	---	---	8.0	7.0	7.5	13.0	12.5	12.5	18.5	18.0	18.0
10	---	---	---	7.5	7.0	7.5	13.5	13.0	13.0	18.5	18.0	18.5
11	---	---	---	7.5	6.0	7.0	---	---	---	19.0	18.5	18.5
12	---	---	---	7.0	6.5	7.0	14.0	13.0	13.5	22.0	18.5	19.0
13	---	---	---	7.0	6.0	6.5	13.5	13.0	13.5	21.5	19.5	20.5
14	---	---	---	6.5	6.0	6.5	14.0	13.0	13.5	21.0	20.0	20.0
15	---	---	---	6.5	6.0	6.5	14.0	13.0	13.5	21.0	20.0	20.5
16	---	---	---	6.5	6.0	6.0	15.0	13.5	14.0	21.0	20.5	21.0
17	---	---	---	6.5	6.0	6.0	15.0	14.0	14.5	21.5	21.0	21.0
18	---	---	---	6.5	6.5	6.5	15.0	14.0	14.5	21.5	21.0	21.5
19	---	---	---	7.0	6.5	6.5	15.0	14.0	14.5	22.0	21.0	21.5
20	---	---	---	7.5	6.5	7.0	14.5	14.5	14.5	22.0	21.0	21.5
21	---	---	---	8.0	7.0	7.5	14.5	14.0	14.0	22.5	21.5	22.0
22	---	---	---	8.5	7.5	8.0	14.0	13.0	13.5	22.5	22.0	22.0
23	---	---	---	8.5	8.0	8.0	13.5	13.0	13.5	23.5	22.5	23.0
24	---	---	---	9.0	8.0	8.5	13.5	13.0	13.0	23.5	22.5	23.0
25	---	---	---	9.0	8.5	9.0	13.0	12.5	13.0	24.0	23.0	23.5
26	---	---	---	9.0	8.5	9.0	13.5	12.5	13.0	24.5	23.5	24.0
27	---	---	---	9.5	9.0	9.0	14.0	13.0	13.5	25.0	24.0	24.5
28	---	---	---	9.5	8.5	9.0	14.0	13.5	14.0	25.5	24.5	25.0
29	---	---	---	9.0	9.0	9.0	14.5	14.0	14.0	26.0	25.0	25.5
30	---	---	---	9.5	9.0	9.0	15.0	14.0	14.5	26.0	25.5	26.0
31	---	---	---	10.0	9.0	9.5	---	---	---	26.5	26.0	26.0
MONTH	---	---	---	10.0	6.0	7.8	15.0	9.5	12.9	26.5	14.5	20.6
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.5	26.0	26.5	26.5	26.0	26.5	28.0	27.5	27.5	27.0	26.5	27.0
2	27.0	26.0	26.5	26.5	26.0	26.5	28.0	27.5	27.5	26.5	26.0	26.5
3	27.0	26.5	26.5	26.5	26.0	26.5	28.5	27.5	28.0	26.5	26.0	26.0
4	27.0	26.5	26.5	26.5	26.0	26.0	28.0	28.0	28.0	26.5	26.0	26.0
5	---	---	---	26.0	25.5	26.0	28.0	28.0	28.0	26.0	26.0	26.0
6	---	---	---	26.5	25.5	26.0	28.0	27.5	27.5	26.0	26.0	26.0
7	26.0	25.0	25.5	26.5	26.0	26.0	28.0	27.5	27.5	26.5	26.0	26.0
8	26.0	25.0	25.5	26.5	26.0	26.0	28.0	27.5	27.5	26.5	26.0	26.0
9	26.0	25.0	25.5	27.0	26.0	26.5	27.5	26.5	27.0	26.5	26.0	26.0
10	26.5	25.5	25.5	27.0	26.0	26.5	27.0	26.5	27.0	26.0	26.0	26.0
11	26.5	25.5	26.0	27.0	26.0	26.5	27.0	26.5	27.0	26.0	26.0	26.0
12	26.0	25.5	26.0	27.0	26.5	27.0	27.0	26.5	27.0	26.0	25.0	25.5
13	26.0	25.5	25.5	27.0	26.0	26.5	27.0	26.5	27.0	25.5	25.0	25.5
14	26.0	21.5	25.5	27.0	26.5	26.5	27.5	27.0	27.0	25.5	25.0	25.0
15	26.0	25.0	25.5	27.0	26.5	26.5	27.0	27.0	27.0	25.5	25.0	25.0
16	26.5	25.5	26.0	27.0	26.5	27.0	27.5	27.0	27.0	25.5	25.0	25.5
17	26.5	26.0	26.0	27.0	26.5	27.0	27.5	27.0	27.0	26.0	25.5	25.5
18	25.5	25.0	25.5	---	---	---	27.5	27.0	27.5	26.0	25.5	26.0
19	25.0	24.5	25.0	---	---	---	27.5	27.0	27.5	26.0	25.0	25.5
20	25.5	24.5	25.0	---	---	---	27.5	27.0	27.0	25.0	24.5	25.0
21	26.0	25.0	25.5	---	---	---	27.0	27.0	27.0	24.5	24.0	24.5
22	26.0	25.5	25.5	29.0	28.5	28.5	27.0	26.5	27.0	24.0	23.5	24.0
23	25.5	25.0	25.0	29.0	28.5	28.5	27.0	26.5	27.0	24.0	23.5	23.5
24	25.0	24.5	25.0	29.5	28.5	29.0	27.0	26.5	27.0	23.5	23.5	23.5
25	25.0	24.5	25.0	29.0	28.5	29.0	27.0	26.5	27.0	23.5	23.0	23.5
26	25.5	24.5	25.0	29.0	28.5	28.5	27.0	26.5	26.5	23.0	22.5	23.0
27	25.5	25.0	25.0	28.5	28.0	28.5	27.0	26.5	27.0	23.0	22.0	22.5
28	26.0	25.0	25.5	28.5	28.0	28.0	27.5	27.0	27.0	22.5	21.5	22.0
29	26.5	25.5	26.0	28.0	27.5	28.0	27.5	27.0	27.0	22.0	21.5	21.5
30	26.5	26.0	26.5	27.5	27.5	27.5	28.0	27.0	27.5	21.5	21.0	21.0
31	---	---	---	27.5	27.5	27.5	28.0	27.5	27.5	---	---	---
MONTH	27.0	21.5	25.6	29.5	25.5	27.1	28.5	26.5	27.2	27.0	21.0	24.8

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	9.0	8.5	8.7	---	---	---	---	---	---
2	---	---	---	9.1	8.5	8.8	---	---	---	---	---	---
3	---	---	---	9.2	8.5	8.7	---	---	---	---	---	---
4	---	---	---	8.9	8.3	8.6	---	---	---	---	---	---
5	7.3	5.9	6.5	8.9	8.2	8.5	---	---	---	---	---	---
6	6.8	5.8	6.3	8.9	8.3	8.6	---	---	---	---	---	---
7	6.6	5.7	6.1	9.1	8.2	8.9	---	---	---	---	---	---
8	6.8	5.4	6.0	---	---	---	---	---	---	---	---	---
9	6.4	5.1	5.7	9.2	8.3	8.9	---	---	---	---	---	---
10	---	---	---	9.0	8.5	8.7	---	---	---	---	---	---
11	---	---	---	9.0	8.7	8.9	---	---	---	---	---	---
12	6.2	5.0	5.3	10.0	9.0	9.7	---	---	---	---	---	---
13	5.8	4.7	5.3	---	---	---	---	---	---	---	---	---
14	5.8	4.8	5.3	---	---	---	---	---	---	---	---	---
15	5.9	4.7	5.3	---	---	---	---	---	---	---	---	---
16	6.0	4.9	5.4	---	---	---	---	---	---	---	---	---
17	5.9	4.9	5.4	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	5.8	5.4	5.6	---	---	---	---	---	---	---	---	---
22	5.6	5.0	5.3	---	---	---	---	---	---	---	---	---
23	---	---	---	11.4	11.1	11.3	---	---	---	---	---	---
24	6.2	5.3	5.7	11.2	11.1	11.2	---	---	---	---	---	---
25	7.3	6.1	6.7	11.3	11.0	11.1	---	---	---	---	---	---
26	8.5	7.5	8.0	11.2	10.0	11.0	---	---	---	---	---	---
27	8.7	8.4	8.6	12.0	10.9	11.1	---	---	---	---	---	---
28	8.6	8.4	8.5	11.1	10.7	10.9	---	---	---	---	---	---
29	9.0	8.6	8.8	11.0	10.4	10.7	---	---	---	---	---	---
30	9.1	8.6	8.9	---	---	---	---	---	---	---	---	---
31	9.0	8.6	8.8	---	---	---	---	---	---	---	---	---
MONTH	9.1	4.7	6.5	12.0	8.2	9.7	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	11.2	10.8	11.0	8.5	8.2	8.3
2	---	---	---	---	---	---	10.9	10.6	10.7	8.4	7.9	8.1
3	---	---	---	---	---	---	11.3	10.5	10.7	8.1	7.9	8.0
4	---	---	---	---	---	---	10.9	10.4	10.6	8.1	7.8	7.9
5	---	---	---	11.9	11.6	11.8	11.0	10.4	10.6	8.0	7.5	7.8
6	---	---	---	11.7	10.2	11.2	10.8	10.4	10.5	7.9	7.2	7.6
7	---	---	---	10.6	9.9	10.1	10.6	10.2	10.4	7.3	6.8	7.0
8	---	---	---	11.7	10.4	11.0	10.5	9.7	10.2	7.0	6.6	6.9
9	---	---	---	12.0	11.4	11.6	10.3	9.8	10.1	7.1	6.8	6.9
10	---	---	---	11.7	11.4	11.6	10.3	9.8	10.1	6.8	6.4	6.7
11	---	---	---	12.6	11.3	12.0	---	---	---	7.2	6.4	6.6
12	---	---	---	12.5	12.0	12.1	10.3	9.7	10.2	7.6	6.3	6.7
13	---	---	---	12.6	11.9	12.2	10.1	9.8	9.9	7.7	6.4	7.0
14	---	---	---	12.6	12.1	12.3	9.8	9.5	9.7	7.2	6.4	6.7
15	---	---	---	12.4	12.0	12.2	9.6	8.9	9.3	7.4	6.3	6.8
16	---	---	---	12.5	12.1	12.3	9.0	8.4	8.8	7.8	6.6	7.1
17	---	---	---	12.6	12.1	12.4	8.5	8.1	8.3	7.9	7.2	7.6
18	---	---	---	12.5	12.0	12.2	8.4	7.7	8.2	8.5	7.3	7.9
19	---	---	---	12.2	12.0	12.1	8.2	7.8	8.0	8.9	8.0	8.3
20	---	---	---	12.2	12.0	12.1	8.4	8.1	8.2	9.1	8.2	8.6
21	---	---	---	12.3	11.9	12.1	8.4	8.2	8.3	9.5	8.3	8.7
22	---	---	---	12.1	11.7	12.0	8.8	8.2	8.5	8.7	8.3	8.5
23	---	---	---	11.9	11.4	11.7	8.9	8.5	8.7	8.8	8.4	8.7
24	---	---	---	11.5	11.1	11.3	9.0	8.7	8.8	8.5	8.0	8.2
25	---	---	---	11.4	11.1	11.2	8.9	8.4	8.7	8.3	7.4	7.8
26	---	---	---	11.3	11.0	---	9.3	8.6	9.0	7.9	7.1	7.4
27	---	---	---	11.4	11.0	---	9.2	8.8	9.0	7.0	6.4	6.8
28	---	---	---	11.1	10.2	10.7	9.0	8.8	8.9	6.3	5.6	5.9
29	---	---	---	11.4	10.6	11.1	9.0	8.5	8.8	5.6	5.0	5.3
30	---	---	---	11.4	11.0	11.2	8.7	8.4	8.6	4.9	4.3	4.6
31	---	---	---	11.3	11.1	11.2	---	---	---	4.5	3.8	4.1
MONTH	---	---	---	12.6	9.9	11.7	11.3	7.7	9.4	9.5	3.8	7.2

DELAWARE RIVER BASIN

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	4.6	3.5	3.9	4.5	4.0	4.3	2.9	2.2	2.5	5.1	4.3	4.7
2	4.9	3.5	4.1	4.5	3.8	4.1	3.3	2.5	2.9	5.3	4.6	4.9
3	4.9	3.7	4.2	4.1	3.6	3.8	3.7	2.8	3.2	5.3	4.8	5.1
4	5.2	3.8	4.6	3.9	3.3	3.6	3.9	3.0	3.4	5.3	4.7	5.1
5	---	---	---	4.1	3.4	3.7	4.3	3.6	3.7	5.2	4.8	5.0
6	---	---	---	3.8	3.1	3.5	4.6	3.7	4.1	5.0	4.6	4.8
7	5.8	4.4	4.8	3.8	3.0	3.3	4.3	3.9	4.1	4.8	4.4	4.6
8	5.9	4.5	5.0	3.6	2.8	3.2	4.2	3.8	4.0	4.8	4.4	4.5
9	6.0	4.7	5.2	3.6	2.9	3.2	4.4	3.8	4.1	4.7	4.3	4.5
10	5.8	4.8	5.1	3.9	3.0	3.3	3.9	3.3	3.6	4.7	4.3	4.5
11	5.6	4.8	5.1	4.1	3.2	3.5	3.5	2.9	3.2	4.6	4.1	4.3
12	5.2	4.5	4.8	4.3	3.2	3.6	3.6	2.7	3.2	4.7	4.1	4.4
13	5.2	4.4	4.7	4.4	3.5	3.9	3.4	2.9	3.2	4.8	4.5	4.6
14	5.0	4.5	4.7	4.2	3.2	3.6	3.5	3.0	3.3	4.8	4.2	4.4
15	5.0	4.4	4.6	4.0	2.8	3.3	3.7	3.2	3.4	4.5	4.0	4.2
16	5.0	4.2	4.5	3.8	2.9	3.3	3.6	3.0	3.4	4.4	3.9	4.1
17	4.6	3.9	4.1	4.0	3.1	3.5	4.0	3.1	3.5	4.4	3.9	4.1
18	4.7	3.9	4.2	---	---	---	4.3	3.5	3.9	4.5	4.0	4.2
19	4.2	3.2	3.7	---	---	---	4.3	3.8	4.0	4.7	4.1	4.3
20	3.6	2.8	3.2	---	---	---	4.1	3.5	3.9	4.6	4.3	4.4
21	3.4	2.7	3.0	---	---	---	3.8	3.2	3.6	4.7	4.3	4.5
22	3.7	2.7	3.1	4.7	4.2	4.5	3.9	3.1	3.5	5.0	4.4	4.7
23	3.8	3.1	3.4	4.7	4.0	4.3	4.2	3.1	3.7	4.9	4.6	4.7
24	3.8	3.1	3.4	4.6	4.0	4.2	4.3	3.5	3.9	4.9	4.5	4.7
25	4.1	3.1	3.4	4.3	3.7	4.0	4.7	3.8	4.2	4.8	4.3	4.6
26	4.3	3.3	3.6	3.9	3.2	3.5	4.6	4.2	4.4	4.6	4.1	4.3
27	4.4	3.4	3.8	3.3	2.8	3.0	4.5	4.2	4.3	4.7	4.0	4.3
28	4.7	3.6	4.1	2.9	2.5	2.7	4.5	4.3	4.5	4.9	4.1	4.5
29	4.7	4.0	4.3	2.8	2.3	2.6	4.6	4.2	4.3	5.0	4.3	4.7
30	4.6	4.0	4.3	2.8	2.3	2.6	4.5	4.0	4.2	5.1	4.8	5.0
31	---	---	---	2.8	2.3	2.5	4.4	4.0	4.2	---	---	---
MONTH	6.0	2.7	4.2	4.7	2.3	3.5	4.7	2.2	3.7	5.3	3.9	4.6

SCHUYLKILL RIVER BASIN

01468500 SCHUYLKILL RIVER AT LANDINGVILLE, PA

LOCATION.--Lat 40°37'45", long 76°07'30", Schuylkill County, Hydrologic Unit 02040203, on left bank 10 ft upstream from highway bridge at Landingville, 0.1 mi upstream from Mahannon Creek, and 5 mi downstream from West Branch Schuylkill River.

DRAINAGE AREA.--133 mi².

PERIOD OF RECORD.--August 1947 to April 1953, October 1963 to September 1965, August 1973 to current year.

REVISED RECORDS.--WDR PA-75-1: 1973(P), 1974(P).

GAGE.--Water-stage recorder. Datum of gage is 470.64 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 27, 1947, nonrecording gage 10 ft downstream at same datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1972 reached a stage of 17.36 ft, 14,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	299	186	576	245	217	365	257	149	73	54	57
2	125	277	179	552	229	295	355	258	141	75	52	56
3	124	253	358	519	228	266	328	223	141	94	52	57
4	142	241	2240	464	226	654	313	215	151	82	56	59
5	130	232	1280	422	222	599	307	203	143	79	53	63
6	116	310	894	398	254	545	316	363	135	79	54	57
7	113	236	711	375	366	561	284	371	130	87	53	58
8	111	215	602	349	334	457	263	301	120	73	53	57
9	118	213	522	334	327	417	256	300	108	68	308	58
10	116	741	464	315	319	391	259	298	108	69	125	67
11	142	708	414	301	305	368	232	277	128	67	79	59
12	281	543	380	308	282	355	221	263	157	68	71	55
13	408	454	357	295	275	340	222	250	128	83	66	55
14	322	408	324	270	321	340	227	251	116	84	64	55
15	271	376	320	255	305	346	259	343	114	65	118	54
16	250	356	336	508	269	312	245	240	109	65	79	53
17	229	353	299	612	245	296	223	237	107	61	66	52
18	641	309	395	530	238	398	209	307	108	61	60	51
19	784	288	421	468	255	376	203	224	118	62	81	73
20	519	274	367	435	281	354	202	212	107	59	142	55
21	431	258	464	441	272	346	272	209	101	66	98	51
22	386	242	489	384	269	374	318	202	92	82	75	51
23	737	286	603	352	268	447	275	196	106	65	73	52
24	895	251	1100	339	254	456	296	189	97	64	73	54
25	675	227	926	315	245	435	301	176	100	64	71	81
26	562	215	747	●287	234	407	275	166	97	68	68	64
27	475	207	627	●284	229	484	267	164	94	67	67	56
28	418	203	591	●278	222	453	266	180	88	61	65	55
29	377	196	521	266	---	412	252	168	75	61	65	53
30	347	189	522	263	---	408	252	160	72	60	65	53
31	326	---	663	295	---	376	---	157	---	55	62	---
TOTAL	10695	9360	18302	11790	7519	12485	8063	7360	3440	2167	2468	1721
MEAN	345	312	590	380	269	403	269	237	115	69.9	79.6	57.4
MAX	895	741	2240	612	366	654	365	371	157	94	308	81
MIN	111	189	179	255	222	217	202	157	72	55	52	51
CFSM	2.59	2.35	4.44	2.86	2.02	3.03	2.02	1.79	.86	.53	.60	.43
IN.	2.99	2.62	5.12	3.30	2.10	3.49	2.26	2.06	.96	.61	.69	.48

● Estimated.

SCHUYLKILL RIVER BASIN

01468500 SCHUYLKILL RIVER AT LANDINGVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1953, 1964 - 1965, 1974 - 1991

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	180	257	345	336	337	427	422	375	229	177	132	161
MAX	760	569	805	887	620	929	1016	811	562	471	243	475
(WY)	1977	1952	1951	1979	1981	1977	1983	1989	1982	1984	1973	1975
MIN	28.5	52.5	62.4	41.2	124	164	157	127	77.1	54.2	57.2	55.6
(WY)	1964	1965	1981	1981	1980	1985	1985	1965	1965	1965	1949	1964

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1948 - 1953
1964 - 1965
1974 - 1991

				1974 - 1991			
ANNUAL TOTAL	113316			95370			
ANNUAL MEAN	310			261			278
HIGHEST ANNUAL MEAN							441
LOWEST ANNUAL MEAN							122
HIGHEST DAILY MEAN	2240	Dec 4		2240	Dec 4		4660
LOWEST DAILY MEAN	106	Aug 4		51	Sep 18, 21, 22		21
ANNUAL SEVEN-DAY MINIMUM	115	Sep 8		53	Aug 2		23
INSTANTANEOUS PEAK FLOW				2890	Dec 4		8570
INSTANTANEOUS PEAK STAGE				9.41	Dec 4		13.60
INSTANTANEOUS LOW FLOW				46	Sep 21		19
ANNUAL RUNOFF (CFSM)	2.33			1.96			2.09
ANNUAL RUNOFF (INCHES)	31.69			26.67			28.36
10 PERCENT EXCEEDS	583			486			562
50 PERCENT EXCEEDS	250			245			197
90 PERCENT EXCEEDS	132			60			74

SCHUYLKILL RIVER BASIN

01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA

LOCATION.--Lat 40°48'25", long 75°58'20", Schuylkill County, Hydrologic Unit 02040203, on left bank at pumping plant of Panther Valley Water Co., 0.6 mi upstream from Tamaqua, and 0.8 mi upstream from Panther Creek.

DRAINAGE AREA.--42.9 mi².

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for periods, published in WSP 1302. June 1916 to September 1919, gage heights and discharge measurements only, in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 756: Drainage area. WSP 971: 1942. WSP 1302: 1922, 1926-30. WSP 1432: 1920-21, 1933.

GAUGE.--Water-stage recorder and broad-crested weir. Datum of gage is 817.48 ft above National Geodetic Vertical Datum of 1929. Prior to June 21, 1929, nonrecording gage at site 3,600 ft downstream at datum 28.64 ft lower.

REMARKS.--Record good except for periods of estimated record, which are fair. Flow regulated by Still Creek Reservoir (station 01469200) 6.5 mi upstream. Figures of daily discharge do not include water diverted from reservoir. Several observations of water temperatures were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	109	48	240	67	55	116	82	39	17	8.8	11
2	35	98	48	222	61	76	111	83	32	16	8.1	7.9
3	33	90	101	197	58	83	98	74	28	15	7.3	7.1
4	35	84	1120	171	58	213	89	68	28	18	13	8.1
5	38	78	802	152	58	225	84	64	26	14	9.2	11
6	34	105	511	142	65	210	84	96	24	14	8.1	8.6
7	32	82	313	129	117	231	80	114	23	29	7.5	7.8
8	31	71	241	112	121	180	74	90	21	26	7.2	7.3
9	30	64	201	102	118	162	69	84	21	17	55	7.2
10	31	214	172	94	117	149	67	84	20	14	46	8.4
11	31	272	146	89	109	132	60	82	22	13	24	8.7
12	91	215	128	94	98	116	55	78	28	12	17	7.5
13	319	182	117	86	90	106	53	74	25	17	15	6.7
14	321	155	102	74	98	104	60	71	22	25	13	6.4
15	231	137	98	68	93	100	64	67	19	17	17	6.4
16	173	124	109	121	77	93	67	60	19	14	17	6.5
17	143	123	99	204	72	89	61	56	18	12	14	6.2
18	273	110	121	164	69	120	57	63	18	11	13	6.0
19	557	96	147	146	68	133	53	54	21	12	33	12
20	363	86	120	138	80	119	51	49	19	15	24	32
21	261	78	162	136	77	113	68	45	18	14	25	9.5
22	211	74	192	115	71	124	101	43	16	30	18	7.1
23	347	90	265	101	66	150	86	41	20	33	15	7.0
24	539	82	516	96	62	163	95	38	19	25	14	7.2
25	388	73	454	86	61	162	111	36	17	15	13	14
26	291	67	338	●74	61	151	102	35	16	14	12	12
27	227	62	259	●72	60	159	101	36	15	14	11	8.9
28	190	58	237	●69	57	149	97	45	15	12	10	7.6
29	161	55	200	●68	---	135	91	35	14	11	9.5	7.0
30	139	51	198	66	---	134	87	39	22	9.9	14	6.8
31	122	---	288	84	---	123	---	48	---	9.4	10	---
TOTAL	5715	3185	7853	3712	2209	4259	2392	1934	645	515.3	508.7	269.9
MEAN	184	106	253	120	78.9	137	79.7	62.4	21.5	16.6	16.4	9.00
MAX	557	272	1120	240	121	231	116	114	39	33	55	32
MIN	30	51	48	66	57	55	51	35	14	9.4	7.2	6.0
†	8.6	8.5	7.4	9.1	9.3	8.7	9.2	6.6	7.0	6.5	8.7	8.4
MEAN‡	193	114	260	129	88.2	146	88.9	69.0	23.0	18.0	18.8	8.6
CFSM‡	4.50	2.66	6.06	3.01	2.06	3.40	2.07	1.61	.54	.42	.44	.20
IN.‡	5.19	2.97	6.99	3.47	2.14	3.92	2.31	1.86	.60	.48	.51	.22

† Diversion from Still Creek Reservoir equivalent in cubic feet per second, furnished by the borough of Tamaqua.

‡ Adjusted for diversion and change in contents in Still Creek Reservoir.

● Estimated.

SCHUYLKILL RIVER BASIN

01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.0	79.8	102	85.7	94.8	138	137	109	64.9	52.4	40.3	45.4
MAX	317	242	288	278	241	365	402	315	430	394	226	259
(WY)	1977	1952	1974	1979	1951	1936	1983	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 1990 CALENDAR YEAR				FOR 1991 WATER YEAR				WATER YEARS 1933 - 1991			
ANNUAL TOTAL	41708				33197.9							
ANNUAL MEAN	114				91.0				83.3			
HIGHEST ANNUAL MEAN									155			
LOWEST ANNUAL MEAN									33.8			
HIGHEST DAILY MEAN	1120				1120				2790			
LOWEST DAILY MEAN	18				6.0				2.9			
ANNUAL SEVEN-DAY MINIMUM	20				6.5				3.5			
INSTANTANEOUS PEAK FLOW					1450				7790			
INSTANTANEOUS PEAK STAGE					5.27				11.10			
INSTANTANEOUS LOW FLOW					5.9				2.9			
ANNUAL RUNOFF (CFSM)	2.66				2.12				1.94			
ANNUAL RUNOFF (INCHES)	36.17				28.79				26.37			
10 PERCENT EXCEEDS	246				200				176			
50 PERCENT EXCEEDS	78				67				50			
90 PERCENT EXCEEDS	31				11				13			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1932, BY WATER YEAR (PRIOR TO REGULATION)

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			
LOWEST ANNUAL MEAN	42.3			
HIGHEST DAILY MEAN	3600			
LOWEST DAILY MEAN	3.0			
ANNUAL SEVEN-DAY MINIMUM	3.8			
INSTANTANEOUS PEAK FLOW	5000			
INSTANTANEOUS PEAK STAGE	---			
INSTANTANEOUS LOW FLOW	1.8			
ANNUAL RUNOFF (CFSM)	2.13			
ANNUAL RUNOFF (INCHES)	28.97			
10 PERCENT EXCEEDS	201			
50 PERCENT EXCEEDS	54			
90 PERCENT EXCEEDS	12			

‡ Adjusted for diversion and change in contents in Still Creek Reservoir.

* From rating curve extended above 3,200 ft³/s, on basis of contracted-opening measurement of peak flow.

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA

LOCATION.--Lat 40°31'21", long 75°59'55", Berks County, Hydrologic Unit 02040203, on right bank 50 ft upstream from highway bridge at Berne, 0.5 mi upstream from Mill Creek, 6.5 mi downstream from Little Schuylkill River. Water-quality sampling site at bridge 50 ft downstream.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--August 1947 to current year. Monthly discharge only for August 1947, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 310.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except periods of estimated discharge which are poor. Some regulation at low flow by mine pumpage and by Still Creek Reservoir (station 01469200) about 25 mi upstream. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	776	405	1820	630	523	952	628	341	168	121	132
2	219	704	391	1670	564	648	925	648	308	154	114	119
3	213	●640	540	1490	547	674	837	568	285	221	112	102
4	215	●600	7400	1310	547	1470	775	529	293	179	120	106
5	263	564	4630	1150	540	1750	743	496	290	181	129	140
6	211	742	2930	1060	578	1530	762	754	269	184	113	133
7	196	594	2150	1010	921	1710	700	1100	257	223	110	127
8	192	518	1700	890	965	1390	651	826	250	236	107	120
9	195	479	1420	833	921	1230	626	770	231	177	487	117
10	198	1990	1240	788	892	1130	615	750	225	156	464	124
11	200	●2600	1090	742	841	1020	564	699	229	148	233	146
12	523	●1900	969	790	770	932	524	651	311	144	181	129
13	1060	1480	894	758	719	868	507	609	272	213	147	117
14	1250	1220	805	666	846	841	529	594	236	253	141	117
15	847	1080	754	630	900	880	553	939	225	186	182	117
16	671	973	853	1240	736	799	642	648	220	155	238	117
17	570	947	755	2070	672	744	542	580	213	149	164	120
18	1360	835	901	1790	639	1020	514	696	213	140	147	116
19	3520	744	1170	1470	655	1180	478	547	272	138	194	147
20	1910	694	1010	1310	710	1060	458	496	237	140	251	163
21	1410	644	1170	1290	714	977	561	472	214	147	314	147
22	1160	613	1470	1090	670	970	883	448	193	185	201	120
23	1740	705	1660	947	646	1200	748	426	210	214	173	117
24	3230	666	3510	896	615	1330	733	408	231	173	212	125
25	2340	573	3190	813	608	1300	848	387	204	159	180	222
26	1810	514	2390	●712	591	1200	741	364	193	150	164	192
27	1440	482	1880	●693	565	1290	716	353	185	158	155	148
28	1220	472	1700	●674	539	1310	693	415	181	142	147	133
29	1070	461	1440	●646	---	1150	651	355	167	137	146	120
30	939	429	1350	640	---	1120	640	350	167	131	139	117
31	858	---	1960	775	---	1030	---	362	---	125	139	---
TOTAL	31249	25639	53727	32663	19541	34276	20111	17868	7122	5266	5725	3950
MEAN	1008	855	1733	1054	698	1106	670	576	237	170	185	132
MAX	3520	2600	7400	2070	965	1750	952	1100	341	253	487	222
MIN	192	429	391	630	539	523	458	350	167	125	107	102
CFSM	2.84	2.41	4.88	2.97	1.97	3.11	1.89	1.62	.67	.48	.52	.37
IN.	3.27	2.69	5.63	3.42	2.05	3.59	2.11	1.87	.75	.55	.60	.41

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR

	MEAN	MAX	(WY)	MIN	(WY)
1947	412	1896	1977	75.7	1964
1948	686	1631	1971	120	1965
1949	918	2408	1984	125	1981
1950	789	2547	1979	88.4	1981
1951	907	1735	1981	290	1980
1952	1139	2454	1977	462	1985
1953	1098	3309	1983	424	1985
1954	897	2689	1989	325	1965
1955	565	3410	1972	148	1965
1956	380	1240	1984	113	1965
1957	342	1594	1955	119	1957
1958	361	1381	1987	94.6	1964

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1947 - 1991
ANNUAL TOTAL	297930	257137	707
ANNUAL MEAN	816	704	1182
HIGHEST ANNUAL MEAN			321
LOWEST ANNUAL MEAN			1952
HIGHEST DAILY MEAN	7400	7400	26000
LOWEST DAILY MEAN	185	102	40
ANNUAL SEVEN-DAY MINIMUM	208	115	65
INSTANTANEOUS PEAK FLOW		10000	a42800
INSTANTANEOUS PEAK STAGE		10.46	b19.90
INSTANTANEOUS LOW FLOW		99	31
ANNUAL RUNOFF (CFSM)	2.30	1.98	1.99
ANNUAL RUNOFF (INCHES)	31.22	26.95	27.05
10 PERCENT EXCEEDS	1670	1410	1460
50 PERCENT EXCEEDS	581	591	448
90 PERCENT EXCEEDS	240	140	158

a From rating curve extended above 17,000 ft³/s.

b From floodmark in gage shelter.

SCHUYLKILL RIVER BASIN

01470756 MAIDEN CREEK AT VIRGINVILLE, PA

LOCATION.--Lat 40°30'51", long 75°53'00", Berks County, Hydrologic Unit 02040203, on right bank 0.9 mi downstream from Sacony Creek, 0.9 mi southwest of Virginville, and 1.0 mi upstream from Moselem Creek.

DRAINAGE AREA.--159 mi².

PERIOD OF RECORD.--January 1973 to current year.

REVISED RECORD.--WDR PA-87-1: 1975(P), 1976(P), 1978(P), 1979(P), 1982-1984(P).

GAGE.--Water-stage recorder. Elevation of gage is 310 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for periods of estimated records which are poor. Several observation of water temperature were made during the year. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of 17.2 feet, from floodmarks, discharge, about 40,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	169	103	822	216	167	304	183	118	33	44	24
2	47	156	101	674	201	216	286	181	84	31	40	21
3	43	145	208	544	196	228	253	160	76	76	36	20
4	47	135	2900	441	193	890	236	147	74	52	33	20
5	61	130	1360	363	188	823	227	139	78	48	33	22
6	47	173	803	343	213	645	227	334	72	55	31	22
7	42	136	580	325	406	706	209	434	65	125	29	20
8	42	120	453	264	378	519	197	267	61	90	28	18
9	44	109	365	256	345	450	188	236	58	53	96	17
10	42	1070	311	250	314	390	179	218	55	43	137	17
11	41	1160	266	231	281	330	160	196	53	40	39	18
12	61	637	239	323	242	292	151	178	75	36	29	18
13	134	453	223	315	231	268	152	166	63	99	27	16
14	160	346	197	261	384	266	170	173	52	105	25	15
15	75	288	190	242	438	300	192	679	49	54	24	16
16	56	253	268	740	329	250	214	312	46	44	34	17
17	49	256	221	1200	312	222	169	257	44	40	27	16
18	194	220	310	897	272	427	165	281	49	36	114	16
19	638	189	397	672	281	469	149	203	175	34	220	28
20	282	171	339	549	325	411	142	175	86	35	112	29
21	219	156	442	524	279	367	270	157	60	33	92	24
22	187	146	557	387	253	341	404	141	53	33	55	19
23	522	192	622	●324	228	465	288	128	58	67	43	17
24	1160	174	1690	●293	210	518	287	114	59	85	46	19
25	629	145	1220	●227	211	477	298	108	48	58	40	245
26	432	132	787	●206	202	429	241	100	45	56	37	94
27	327	123	576	●198	189	472	225	97	43	67	35	49
28	276	123	509	●189	175	445	211	162	40	52	33	36
29	235	122	435	●181	---	383	198	97	38	49	33	34
30	204	109	439	●177	---	380	195	98	34	51	31	30
31	185	---	948	319	---	331	---	118	---	48	28	---
TOTAL	6531	7738	18059	12737	7492	12877	6587	6239	1911	1728	1631	957
MEAN	211	258	583	411	268	415	220	201	63.7	55.7	52.6	31.9
MAX	1160	1160	2900	1200	438	890	404	679	175	125	220	245
MIN	41	109	101	177	175	167	142	97	34	31	24	15
CFSM	1.33	1.62	3.66	2.58	1.68	2.61	1.38	1.27	.40	.35	.33	.20
IN.	1.53	1.81	4.23	2.98	1.75	3.01	1.54	1.46	.45	.40	.38	.22

● Estimated.

SCHUYLKILL RIVER BASIN

01470756 MAIDEN CREEK AT VIRGINVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	231	345	354	365	390	392	335	192	147	101	145
MAX	505	571	833	982	565	802	1049	1103	528	457	247	613
(WY)	1980	1978	1978	1979	1979	1977	1983	1989	1982	1984	1978	1987
MIN	29.2	67.5	49.7	35.3	110	124	92.4	119	58.1	44.4	21.9	17.6
(WY)	1981	1981	1981	1981	1980	1985	1985	1986	1987	1987	1980	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1973 - 1991	
ANNUAL TOTAL	105250		84487			
ANNUAL MEAN	288		231		262	
HIGHEST ANNUAL MEAN					403	
LOWEST ANNUAL MEAN					123	
HIGHEST DAILY MEAN	2900		2900		7010	
LOWEST DAILY MEAN	41		15		11	
ANNUAL SEVEN-DAY MINIMUM	46		16		13	
INSTANTANEOUS PEAK FLOW			3970		17000	
INSTANTANEOUS PEAK STAGE			7.80		12.67	
INSTANTANEOUS LOW FLOW			15		11	
ANNUAL RUNOFF (CFSM)	1.81		1.46		1.65	
ANNUAL RUNOFF (INCHES)	24.62		19.77		22.40	
10 PERCENT EXCEEDS	569		474		565	
50 PERCENT EXCEEDS	208		175		155	
90 PERCENT EXCEEDS	69		32		41	

SCHUYLKILL RIVER BASIN

01470779 TOLPEHOCKEN CREEK NEAR BERNVILLE, PA

LOCATION.--Lat 40°24'48", long 76°10'19", Berks County, Hydrologic Unit 02040203, on left bank 30 ft downstream from Kricks Mill Bridge, 0.4 mi upstream from Mill Creek, and 3.5 mi west of Bernville.

DRAINAGE AREA.--66.5 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 311.26 ft above Pennsylvania Department of Transportation datum.

REMARKS.--Records good, except periods of estimated daily discharge which are poor. Satellite 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 not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	72	65	191	122	101	119	85	63	42	30	28
2	46	69	65	177	127	105	113	84	70	38	37	28
3	41	66	94	167	125	106	115	82	70	49	33	28
4	42	59	394	156	122	145	112	80	70	42	40	29
5	51	56	188	148	120	120	111	78	68	41	39	31
6	41	68	156	148	126	117	110	103	65	42	38	29
7	44	65	141	149	141	129	107	110	64	43	37	28
8	46	60	131	138	114	116	103	88	62	41	38	28
9	47	61	123	136	124	113	102	85	53	38	47	28
10	46	252	117	134	120	112	101	83	46	37	70	28
11	47	155	111	134	118	108	97	81	56	36	47	28
12	63	116	108	161	112	92	95	79	51	35	44	28
13	105	104	105	155	107	106	96	81	56	59	37	28
14	65	96	100	141	145	109	98	81	57	40	37	27
15	56	92	105	137	135	114	105	84	56	39	34	28
16	52	89	115	336	119	107	102	79	49	37	33	28
17	50	88	102	342	118	104	95	80	41	37	36	24
18	93	84	144	273	117	137	92	87	43	36	38	25
19	168	80	144	235	119	122	91	78	54	33	45	40
20	84	78	124	216	126	113	89	77	56	32	61	27
21	78	76	140	224	119	109	106	75	53	34	55	28
22	75	74	143	184	116	113	119	74	52	35	45	28
23	154	82	159	159	110	163	100	72	54	37	43	28
24	183	76	318	●153	109	159	99	71	53	41	41	28
25	114	72	210	●146	109	142	98	71	51	34	41	55
26	102	69	186	●141	106	122	91	71	50	35	39	37
27	95	69	167	●133	89	145	89	70	48	33	39	32
28	91	68	●155	●125	103	139	88	104	47	29	38	29
29	77	67	●150	●113	---	131	86	62	42	30	38	30
30	82	65	●146	●100	---	133	86	81	47	32	33	29
31	82	---	261	146	---	125	---	84	---	31	29	---
TOTAL	2372	2528	4667	5298	3318	3757	3015	2520	1647	1168	1262	892
MEAN	76.5	84.3	151	171	118	121	100	81.3	54.9	37.7	40.7	29.7
MAX	183	252	394	342	145	163	119	110	70	59	70	55
MIN	41	56	65	100	89	92	86	62	41	29	29	24
CFSM	1.15	1.27	2.26	2.57	1.78	1.82	1.51	1.22	.83	.57	.61	.45
IN.	1.33	1.41	2.61	2.96	1.86	2.10	1.69	1.41	.92	.65	.71	.50

● Estimated.

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1991, BY WATER YEAR

	OCT.	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.2	92.2	111	130	138	146	138	120	101	91.3	69.1	70.8
MAX	250	172	253	385	264	325	359	277	208	216	129	181
(WY)	1977	1990	1984	1979	1979	1978	1983	1989	1982	1984	1976	1975
MIN	39.0	38.7	41.4	33.6	62.2	67.5	58.8	60.7	50.2	37.7	35.2	29.7
(WY)	1982	1982	1982	1981	1980	1981	1985	1985	1985	1991	1981	1991

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1975 - 1991	
ANNUAL TOTAL	38773		32444			
ANNUAL MEAN	106		88.9		106	
HIGHEST ANNUAL MEAN					156	
LOWEST ANNUAL MEAN					55.7	
HIGHEST DAILY MEAN	583	Jan 30	394	Dec 4	2140	Jan 26 1978
LOWEST DAILY MEAN	41	Oct 3	24	Sep 17	23	Aug 26 1981
ANNUAL SEVEN-DAY MINIMUM	44	Oct 2	27	Sep 12	27	Sep 12 1991
INSTANTANEOUS PEAK FLOW			688	Jan 16	25560	Jan 24 1979
INSTANTANEOUS PEAK STAGE			4.47	Jan 16	10.16	Jan 24 1979
ANNUAL RUNOFF (CFSM)	1.60		1.34		1.60	
ANNUAL RUNOFF (INCHES)	21.69		18.15		21.68	
10 PERCENT EXCEEDS	159		147		177	
50 PERCENT EXCEEDS	98		82		86	
90 PERCENT EXCEEDS	57		33		45	

■ From rating curve extended above 740 ft³/s, on basis of contracted-opening measurement of peak flow.

SCHUYLKILL RIVER BASIN

01470779 TULPEROCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1977 to current year.

INSTRUMENTATION.--Temperature record since October 1977. Subsequent to 1986, interfaced with data collection platform.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27°C, July 21, 1985, July 22, 1987; minimum 0.0°C, on several days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.5	15.0	15.5	12.5	12.0	12.5	8.0	7.0	7.5	10.0	9.5	9.5
2	15.0	14.5	14.5	12.5	12.0	12.5	7.5	7.0	7.5	9.5	9.0	9.0
3	14.5	13.5	14.0	13.0	12.5	12.5	7.5	6.5	7.0	9.0	9.0	9.0
4	15.5	13.5	14.5	13.0	12.5	12.5	---	---	---	9.0	8.0	8.5
5	15.0	14.0	14.5	12.5	12.0	12.0	---	---	---	8.0	7.5	7.5
6	15.5	14.5	15.0	12.5	12.0	12.5	---	---	---	8.5	8.0	8.0
7	17.0	15.5	16.0	12.0	10.5	11.0	---	---	---	8.5	8.0	8.5
8	16.5	16.0	16.5	10.5	9.5	10.0	---	---	---	8.0	6.5	7.0
9	17.5	16.5	17.0	9.5	8.5	8.5	---	---	---	7.0	6.5	6.5
10	18.5	17.0	17.5	12.5	8.5	10.0	---	---	---	7.5	7.5	7.5
11	18.5	17.5	18.0	12.5	12.0	12.5	---	---	---	8.0	5.0	7.0
12	18.0	15.5	17.0	12.0	11.0	11.5	---	---	---	7.5	5.0	6.0
13	19.5	15.5	16.5	11.5	10.5	11.0	---	---	---	---	---	---
14	17.5	16.0	16.0	10.5	10.0	10.5	---	---	---	---	---	---
15	17.0	15.5	16.5	11.0	10.0	10.5	---	---	---	---	---	---
16	15.5	14.0	14.5	11.5	10.5	11.0	---	---	---	---	---	---
17	14.5	13.0	14.0	11.5	11.0	11.5	---	---	---	---	---	---
18	16.5	14.5	16.0	11.0	10.0	10.0	---	---	---	10.0	10.0	10.0
19	15.0	13.5	14.5	9.5	9.0	9.0	---	---	---	10.0	10.0	10.0
20	13.5	12.5	13.0	9.5	9.0	9.0	---	---	---	10.0	9.5	10.0
21	12.5	12.0	12.5	9.5	9.0	9.0	---	---	---	10.0	9.0	9.5
22	13.5	12.5	13.0	10.0	9.0	9.5	---	---	---	9.0	7.5	8.0
23	14.0	13.5	14.0	10.5	10.0	10.0	11.5	10.5	11.0	7.5	6.5	7.0
24	14.5	14.0	14.0	10.5	9.5	10.0	11.5	11.0	11.0	7.5	7.5	7.5
25	14.0	13.5	13.5	9.5	9.0	9.5	11.5	10.5	11.0	---	---	---
26	13.5	12.5	13.0	9.5	9.0	9.5	10.5	10.0	10.5	---	---	---
27	12.5	11.5	12.0	9.5	9.5	9.5	10.0	8.5	9.5	---	---	---
28	12.0	11.5	12.0	10.5	9.5	10.0	8.5	7.5	8.0	---	---	---
29	12.0	10.5	11.5	10.5	10.0	10.5	9.0	8.0	8.5	---	---	---
30	11.0	10.5	11.0	10.0	8.0	9.0	9.0	8.5	9.0	7.5	7.5	7.5
31	12.0	11.0	11.5	---	---	---	10.0	8.0	9.5	8.5	7.0	8.0
MONTH	19.5	10.5	14.5	13.0	8.0	10.6	11.5	6.5	9.2	10.0	5.0	8.2

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	7.0	4.0	6.0	8.5	7.5	8.0	10.0	9.0	9.5	16.5	13.5	15.0
2	7.5	6.0	6.5	12.0	8.5	10.0	9.5	8.5	9.5	16.0	15.0	15.5
3	8.0	7.0	7.0	11.0	10.0	10.5	10.0	8.5	9.5	15.5	13.0	14.5
4	8.0	7.5	8.0	11.0	9.0	10.5	10.5	8.5	9.5	15.5	13.0	14.5
5	8.5	7.5	8.0	9.5	7.0	8.5	11.0	10.0	10.5	16.0	14.0	15.0
6	9.0	8.5	9.0	9.5	8.5	9.0	13.5	10.5	12.0	16.0	14.5	15.0
7	9.0	8.5	8.5	9.5	9.0	9.5	16.5	12.0	14.5	15.0	12.0	14.0
8	9.0	8.0	8.5	9.0	8.0	8.5	16.5	14.0	15.5	16.0	13.0	14.5
9	8.0	7.5	8.0	8.5	7.5	8.0	17.5	15.0	16.5	15.5	14.0	14.5
10	8.0	7.5	8.0	8.5	8.0	8.5	17.5	14.0	15.5	16.0	13.0	14.5
11	8.0	7.0	7.0	8.5	7.5	8.0	13.5	10.0	12.0	17.0	14.5	16.0
12	7.0	5.5	6.0	8.0	7.0	7.5	12.5	9.5	11.5	19.0	16.0	17.0
13	7.0	5.0	6.0	8.0	7.0	7.5	12.0	9.0	10.0	20.0	17.0	18.5
14	8.0	5.5	6.0	7.5	7.0	7.0	10.0	8.5	9.0	---	---	---
15	8.0	6.0	7.0	8.0	7.5	7.5	10.0	9.5	9.5	---	---	---
16	6.5	3.5	5.0	9.0	7.5	8.0	15.5	10.0	12.5	---	---	---
17	5.5	4.5	5.0	9.5	7.0	8.5	15.5	13.5	14.0	---	---	---
18	6.0	5.5	5.5	9.5	8.0	8.5	13.5	11.5	12.5	---	---	---
19	6.5	5.5	6.0	9.5	8.5	9.0	13.5	11.5	12.5	---	---	---
20	8.5	6.5	7.5	9.5	9.0	9.0	12.5	10.0	11.0	---	---	---
21	8.0	5.0	7.0	9.5	8.0	9.0	10.0	9.5	9.5	---	---	---
22	8.5	6.5	8.0	9.0	8.0	8.5	10.0	8.5	9.5	---	---	---
23	8.0	6.0	7.0	9.0	8.5	8.5	14.0	8.5	11.0	---	---	---
24	8.0	6.0	7.0	9.0	8.5	9.0	13.5	12.0	12.5	---	---	---
25	8.5	8.0	8.0	9.0	7.5	8.0	15.0	11.0	13.0	---	---	---
26	8.5	8.0	8.0	9.5	8.5	9.0	16.0	13.0	14.5	---	---	---
27	8.0	6.5	7.0	9.5	9.5	9.5	17.5	14.0	16.0	---	---	---
28	8.0	7.0	7.5	11.0	9.5	10.0	17.5	15.0	15.5	---	---	---
29	---	---	---	11.0	10.0	10.0	15.0	12.5	13.5	---	---	---
30	---	---	---	10.0	9.5	9.5	14.5	12.5	13.0	---	---	---
31	---	---	---	10.0	9.0	9.5	---	---	---	---	---	---
MONTH	9.0	3.5	7.1	12.0	7.0	8.8	17.5	8.5	12.2	20.0	12.0	15.3
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	22.5	20.0	21.0	23.0	19.5	21.0	---	---	---	---	---	---
2	21.5	20.0	21.0	21.5	20.5	21.5	---	---	---	---	---	---
3	21.0	20.0	20.5	20.5	18.5	20.0	---	---	---	---	---	---
4	20.5	19.0	20.0	---	---	---	---	---	---	---	---	---
5	19.0	17.5	18.0	---	---	---	---	---	---	---	---	---
6	17.5	16.5	17.0	---	---	---	---	---	---	---	---	---
7	18.5	16.0	17.5	---	---	---	---	---	---	---	---	---
8	19.5	17.5	18.5	---	---	---	---	---	---	---	---	---
9	20.5	16.5	19.0	---	---	---	---	---	---	---	---	---
10	22.0	19.5	20.5	---	---	---	---	---	---	---	---	---
11	21.5	20.5	21.0	---	---	---	---	---	---	---	---	---
12	21.0	19.0	20.0	---	---	---	---	---	---	---	---	---
13	20.5	19.0	20.0	---	---	---	---	---	---	---	---	---
14	20.0	18.0	19.0	---	---	---	---	---	---	---	---	---
15	21.0	19.0	20.0	---	---	---	---	---	---	---	---	---
16	23.0	19.5	21.0	---	---	---	---	---	---	---	---	---
17	23.0	22.0	22.5	---	---	---	---	---	---	---	---	---
18	22.5	19.5	21.0	---	---	---	---	---	---	---	---	---
19	19.5	18.5	19.0	---	---	---	---	---	---	---	---	---
20	21.0	18.5	19.5	---	---	---	---	---	---	---	---	---
21	23.0	20.0	21.5	---	---	---	---	---	---	---	---	---
22	22.5	20.5	21.5	---	---	---	---	---	---	---	---	---
23	20.5	18.0	19.5	---	---	---	---	---	---	---	---	---
24	19.5	17.5	18.5	---	---	---	---	---	---	---	---	---
25	20.5	19.0	19.5	---	---	---	---	---	---	---	---	---
26	20.5	19.5	20.0	---	---	---	---	---	---	---	---	---
27	21.5	20.0	20.5	---	---	---	---	---	---	---	---	---
28	22.0	20.0	21.5	---	---	---	---	---	---	---	---	---
29	24.0	19.5	22.0	---	---	---	---	---	---	---	---	---
30	23.5	21.0	22.5	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	24.0	16.0	20.1	23.0	18.5	20.8	---	---	---	---	---	---

SCHUYLKILL RIVER BASIN

01470853 FURNACE CREEK AT ROBESONIA, PA

LOCATION.--Lat 40°20'24", long 76°08'37", Berks County, Hydrologic Unit 02040202, left bank 500 ft upstream of Furnace Street in Robesonia

DRAINAGE AREA.--4.18 mi².

PERIOD OF RECORD.--October 1982 to current year.

REVISED RECORDS.--WDR PA-87-1: 1986 (P).

GAGE.--Water-stage recorder. Elevation of gage is 510 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good, except for periods of estimated discharge, which are poor. Diversion above station for municipal supply. Gage moved 760 ft upstream on Mar. 27, 1924 at datum 19.6 feet higher. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	1.7	2.6	14	7.3	6.2	8.4	6.2	4.5	1.7	.91	.92
2	.52	1.5	2.6	12	7.1	7.4	7.9	6.1	4.1	2.1	.81	.99
3	.39	1.5	11	11	7.1	7.4	7.5	5.8	4.0	2.4	.73	1.1
4	1.5	1.5	30	9.8	7.0	11	7.3	5.6	4.0	2.4	.85	1.2
5	1.0	1.5	9.7	9.0	6.8	7.4	7.5	5.5	3.5	2.5	.84	1.4
6	.57	3.6	6.9	9.5	8.1	8.1	7.3	16	3.3	2.5	.64	1.1
7	.55	1.4	5.9	9.4	11	9.6	6.9	9.9	3.3	2.5	.66	1.1
8	1.1	1.6	5.3	8.0	8.3	7.6	6.6	7.0	3.4	2.3	.84	.96
9	.87	1.7	5.0	8.0	7.5	7.3	6.5	6.7	3.4	2.0	3.7	.94
10	.97	33	4.7	7.9	7.2	7.2	6.3	6.4	3.2	1.8	2.3	1.1
11	.78	8.6	4.4	7.9	6.7	7.0	6.1	6.1	3.2	1.7	1.3	1.1
12	4.2	5.4	4.3	13	6.2	6.9	6.1	5.9	4.0	1.6	1.3	.97
13	6.9	4.4	4.3	9.3	6.4	6.8	6.7	6.8	2.9	7.1	1.1	.89
14	2.0	3.9	3.9	7.9	14	7.4	7.2	6.2	2.5	2.6	.95	.79
15	1.3	3.7	6.2	7.7	8.8	7.8	9.2	5.2	2.5	1.9	2.4	1.0
16	.95	3.5	6.7	30	6.9	8.3	7.4	4.6	2.3	1.7	1.3	1.4
17	1.3	4.5	4.8	22	6.9	7.7	6.4	4.8	2.3	1.7	.90	1.1
18	13	3.6	10	16	7.0	16	6.2	4.8	2.8	1.6	.95	1.1
19	6.1	3.4	8.5	13	8.1	9.5	5.9	4.6	3.3	1.5	1.5	4.1
20	2.1	3.2	6.0	12	9.2	8.3	5.9	4.5	2.8	1.2	5.5	1.7
21	1.8	3.1	9.7	14	7.4	7.8	15	4.5	2.5	1.1	3.1	1.3
22	1.7	3.0	8.8	11	7.1	8.1	12	4.4	2.4	1.3	1.3	1.3
23	18	4.8	11	9.7	6.9	16	8.6	4.3	2.7	1.9	1.4	1.4
24	8.9	3.5	33	9.3	6.8	12	9.6	4.2	2.5	1.7	1.4	1.5
25	4.0	3.1	14	8.5	6.8	10	8.3	4.1	2.4	1.4	1.4	8.9
26	2.9	2.9	11	7.4	6.8	9.3	7.5	3.9	2.3	1.6	1.3	2.7
27	2.4	2.8	8.9	6.8	6.5	12	7.1	6.8	2.2	1.5	1.4	1.6
28	2.2	2.9	7.9	6.0	6.3	9.9	6.8	15	2.1	1.1	1.2	1.4
29	1.9	2.7	7.6	5.8	---	9.0	6.6	4.5	2.0	1.5	1.1	1.2
30	1.8	2.6	16	8.0	---	10	6.5	13	1.6	1.3	1.1	1.2
31	1.8	---	26	11	---	8.8	---	6.6	---	1.1	1.1	---
TOTAL	94.26	124.6	296.7	334.9	212.2	277.8	227.3	200.0	88.0	60.3	45.28	47.46
MEAN	3.04	4.15	9.57	10.8	7.58	8.96	7.58	6.45	2.93	1.95	1.46	1.58
MAX	18	33	33	30	14	16	15	16	4.5	7.1	5.5	8.9
MIN	.39	1.4	2.6	5.8	6.2	6.2	5.9	3.9	1.6	1.1	.64	.79
†	.62	.50	.51	.56	.63	.65	.46	.40	.20	.17	.27	0
MEAN†	3.66	4.65	10.1	11.4	8.21	9.61	8.04	6.85	3.13	2.12	1.73	1.58
CFSM†	.88	1.11	2.41	2.73	1.96	2.30	1.92	1.64	.75	.51	.41	.38
IN.†	1.01	1.24	2.78	3.15	2.04	2.65	2.14	1.89	.84	.59	.47	.42

† Diversion, equivalent in cubic feet per second, furnished by Womelsdorf-Robeson Joint Water Authority.

‡ Adjusted for diversion.

● Estimated.

SCHUYLKILL RIVER BASIN

01470853 FURNACE CREEK AT ROBESONIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.99	5.61	7.33	6.10	8.91	10.0	11.3	11.6	5.83	4.47	2.98	2.52
MAX	6.38	10.3	17.3	11.9	14.1	15.9	30.2	24.7	14.8	11.7	8.98	4.85
(WY)	1990	1987	1984	1990	1986	1986	1983	1989	1989	1984	1986	1986
MIN	.94	2.25	2.42	2.34	4.09	5.18	3.32	5.25	2.10	1.36	.85	.63
(WY)	1989	1983	1983	1983	1989	1985	1985	1987	1985	1983	1983	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1983 - 1991	
ANNUAL TOTAL	2495.26		2008.80			
ANNUAL MEAN	6.84	#7.54	5.50	#5.92	6.62	#7.26
HIGHEST ANNUAL MEAN					9.71	#10.4 1984
LOWEST ANNUAL MEAN					3.82	#4.39 1985
HIGHEST DAILY MEAN	68	Jan 1	33	Nov 10	134	May 6 1989
LOWEST DAILY MEAN	.39	Oct 3	.39	Oct 3	.11	Sep 11 1983
ANNUAL SEVEN-DAY MINIMUM	.59	Sep 25	.76	Oct 1	.19	Sep 16 1985
INSTANTANEOUS PEAK FLOW			99	Nov 10	a478	May 6 1989
INSTANTANEOUS PEAK STAGE			2.05	Nov 10	4.16	May 6 1989
ANNUAL RUNOFF (CFSM)	1.64	#1.81	1.32	#1.42	1.58	#1.74
ANNUAL RUNOFF (INCHES)	22.21	#24.51	17.88	#19.24	21.52	#23.58
10 PERCENT EXCEEDS	13		10		13	
50 PERCENT EXCEEDS	5.7		4.5		4.6	
90 PERCENT EXCEEDS	1.1		1.1		1.1	

Adjusted for diversion.

a From rating extended on basis of slope-area measurement of peak.

SCHUYLKILL RIVER BASIN

01470960 TULPEROCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA

LOCATION.--Lat 40°22'14", long 76°01'32", Berks County, Hydrologic Unit 02040203, on right bank 1 mi upstream from Rebers Bridge and Plum Creek, 1 mi east of Blue Marsh, 3 mi north of Sinking Spring, and 5.5 mi northeast of Reading. Water-quality sampling site at Rebers bridge 1.0 mi downstream.

DRAINAGE AREA.--175 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORD.--WDR PA-72-1: 1969-1971 (M).

GAGE.--Water-stage recorder. Datum of gage is 230.06 ft above Western Berks Water Authority datum. Prior to Nov. 25, 1974, water-stage recorder at site 0.3 mi downstream at same datum.

REMARKS.--Records good, except periods of estimated discharge, which are poor. Flow regulated since April 1979 by Blue Marsh Lake (01470870) 0.8 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	144	111	714	306	198	160	237	151	64	71	43
2	285	136	111	●572	208	198	137	189	152	64	102	44
3	285	125	236	572	208	198	110	172	125	114	170	44
4	282	125	307	●480	304	422	105	157	91	181	169	78
5	281	125	1180	●390	363	576	106	157	91	152	164	94
6	281	410	1270	●390	363	338	107	202	91	106	158	123
7	281	613	405	●450	310	348	110	344	68	107	128	148
8	281	184	289	●360	294	332	111	336	51	146	103	146
9	281	73	289	250	298	277	112	215	52	145	72	146
10	279	74	289	250	299	277	103	259	139	100	39	146
11	445	587	289	318	337	328	110	197	198	78	40	90
12	508	585	291	364	313	326	111	198	181	64	41	47
13	177	307	255	364	273	248	111	199	102	65	41	38
14	177	265	202	517	312	243	111	198	53	64	41	32
15	302	215	202	687	365	284	203	335	47	147	41	33
16	223	192	202	684	365	273	363	271	47	164	71	62
17	89	177	423	869	365	273	271	178	47	75	108	83
18	90	177	527	1010	363	314	180	177	109	76	109	84
19	314	177	389	785	360	368	180	177	147	79	70	56
20	365	271	389	776	360	372	178	219	88	79	42	33
21	363	216	389	778	332	372	177	210	74	79	85	32
22	318	144	394	538	270	373	432	160	82	80	107	34
23	336	186	394	363	254	377	416	159	83	76	65	33
24	752	215	715	385	254	379	232	151	82	70	52	33
25	708	160	935	380	254	578	204	139	71	71	52	34
26	343	106	1060	339	254	703	206	139	64	71	52	35
27	243	106	658	339	254	628	205	140	64	71	52	59
28	243	168	575	351	221	321	205	221	64	70	54	77
29	243	149	495	363	---	161	254	236	64	71	54	75
30	187	133	495	324	---	154	289	153	64	71	47	68
31	144	---	711	334	---	156	---	140	---	71	41	---
TOTAL	9316	6545	14477	15296	8459	10395	5599	6265	2742	2871	2441	2050
MEAN	301	218	467	493	302	335	187	202	91.4	92.6	78.7	68.3
MAX	752	613	1270	1010	365	703	432	344	198	181	170	148
MIN	89	73	111	250	208	154	103	139	47	64	39	32
MEAN†	216	220	468	494	303	355	255	202	91.4	91.9	79.0	68.3
CFSM†	1.23	1.26	2.67	2.82	1.73	2.03	1.46	1.15	.52	.53	.45	.39
IN.†	1.42	1.40	3.08	3.26	1.80	2.34	1.63	1.33	.58	.61	.52	.44

† Adjusted for change in contents in Blue Marsh Lake.

● Estimated.

SCHUYLKILL RIVER BASIN

01470960 TULPHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	200	204	295	324	367	356	308	340	238	181	117	140
MAX	612	365	876	1151	596	683	1011	1058	606	543	234	379
(WY)	1980	1990	1984	1979	1979	1979	1983	1989	1982	1984	1984	1987
MIN	66.6	62.4	77.2	91.7	131	135	49.8	147	69.9	79.3	55.4	54.0
(WY)	1982	1981	1981	1981	1980	1981	1985	1985	1979	1985	1981	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1979 - 1991
ANNUAL TOTAL	104044	86456	
ANNUAL MEAN	285	237	255
HIGHEST ANNUAL MEAN			433
LOWEST ANNUAL MEAN			127
HIGHEST DAILY MEAN	1650	Feb 1	1270
LOWEST DAILY MEAN	66	Sep 3	32
ANNUAL SEVEN-DAY MINIMUM	73	Sep 10	33
INSTANTANEOUS PEAK FLOW			1760
INSTANTANEOUS PEAK STAGE			5.41
ANNUAL RUNOFF (CFSM)	1.63		1.35
ANNUAL RUNOFF (INCHES)	22.12		18.38
10 PERCENT EXCEEDS	502		437
50 PERCENT EXCEEDS	223		187
90 PERCENT EXCEEDS	102		58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1978, BY WATER YEAR (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 TOTAL	
ANNUAL MEAN	283
HIGHEST ANNUAL MEAN	416
LOWEST ANNUAL MEAN	122
HIGHEST DAILY MEAN	11000
LOWEST DAILY MEAN	23
ANNUAL SEVEN-DAY MINIMUM	25
INSTANTANEOUS PEAK FLOW	a16100
INSTANTANEOUS PEAK STAGE	b18.70
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 3000 ft³/s, on basis of runoff comparison with downstream station.

b From floodmarks.

SCHUYLKILL RIVER BASIN

01470960 TULPEROCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1968 to current year.

INSTRUMENTATION.--Temperature recorder since October 1968. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Temperature recorder located at gaging station 1.0 mi upstream from former sampling site. Missing record is due to malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 34.0°C, Oct. 2, 1968; minimum, 0.0°C on several days during Dec. 1970, Jan. and Mar. 1971, Feb. 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.0°C, Sept. 16; minimum, 2.5°C, Jan. 10-17, 22, 24, 25.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	19.0	17.5	18.0	12.5	11.5	12.0	7.0	6.5	7.0	4.0	4.0	4.0
2	19.0	18.0	18.5	11.5	11.0	11.0	7.0	6.5	7.0	---	---	---
3	18.5	18.0	18.5	11.5	10.5	11.0	7.0	6.5	7.0	4.0	3.5	3.5
4	19.0	18.0	18.5	11.5	10.5	11.0	7.0	6.5	7.0	---	---	---
5	19.0	18.0	18.5	11.5	10.5	11.0	6.5	6.0	6.5	---	---	---
6	19.0	18.0	18.5	13.5	11.0	12.5	6.0	6.0	6.0	---	---	---
7	18.5	18.0	18.5	12.5	12.0	12.5	6.0	6.0	6.0	---	---	---
8	18.5	18.0	18.5	12.0	11.0	12.0	6.0	6.0	6.0	---	---	---
9	19.0	18.5	18.5	12.0	11.0	11.5	6.0	5.5	5.5	3.0	3.0	3.0
10	18.5	18.0	18.5	11.5	11.0	11.5	6.0	5.5	5.5	3.0	2.5	3.0
11	19.0	18.0	18.5	11.0	10.5	11.0	5.5	5.0	5.5	3.0	2.5	2.5
12	19.0	18.5	18.5	10.5	10.0	10.5	5.5	5.0	5.5	3.0	2.5	2.5
13	19.0	18.5	18.5	10.0	9.5	9.5	5.5	5.0	5.5	2.5	2.5	2.5
14	19.0	18.5	18.5	9.5	9.0	9.0	5.0	5.0	5.0	2.5	2.5	2.5
15	19.5	18.0	19.0	9.5	9.0	9.0	5.0	4.5	5.0	2.5	2.5	2.5
16	19.5	18.0	18.5	9.5	9.0	9.0	5.0	4.5	4.5	3.0	2.5	3.0
17	19.0	18.0	18.5	9.5	9.0	9.0	4.5	4.5	4.5	3.0	2.5	3.0
18	19.0	18.0	18.5	9.0	8.5	8.5	4.5	4.5	4.5	3.0	3.0	3.0
19	18.5	18.0	18.5	8.5	8.0	8.5	5.0	4.5	4.5	3.0	3.0	3.0
20	18.0	17.5	18.0	8.5	8.0	8.0	4.5	4.5	4.5	3.0	3.0	3.0
21	17.5	17.0	17.5	8.0	8.0	8.0	4.5	4.5	4.5	3.0	3.0	3.0
22	16.5	16.0	16.5	8.0	8.0	8.0	4.5	4.5	4.5	3.0	2.5	3.0
23	16.5	15.5	16.0	8.0	7.5	8.0	5.5	4.5	5.0	3.0	3.0	3.0
24	16.5	16.0	16.5	7.5	7.5	7.5	5.5	5.0	5.0	3.0	2.5	3.0
25	16.5	15.5	16.0	8.0	7.5	7.5	5.0	4.5	5.0	3.0	2.5	3.0
26	16.0	15.0	15.5	7.5	7.0	7.5	4.5	4.5	4.5	3.0	3.0	3.0
27	15.0	14.5	15.0	7.5	7.0	7.0	4.5	3.5	4.0	3.5	3.0	3.0
28	14.5	14.0	14.5	7.5	7.0	7.0	4.0	3.5	4.0	3.5	3.5	3.5
29	14.0	13.5	14.0	8.0	7.5	7.5	4.0	4.0	4.0	3.5	3.5	3.5
30	14.0	13.5	13.5	7.5	7.0	7.0	4.5	4.0	4.0	---	---	---
31	13.0	12.5	13.0	---	---	---	4.0	4.0	4.0	3.5	3.0	3.5
MONTH	19.5	12.5	17.3	13.5	7.0	9.4	7.0	3.5	5.2	4.0	2.5	3.0

SCHUYLKILL RIVER BASIN

01470960 TULPEROCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.5	3.0	3.0	5.0	4.0	4.5	9.5	8.5	9.0	15.5	13.0	14.0
2	3.5	3.0	3.5	5.5	4.5	5.0	9.5	8.5	9.0	15.5	13.0	14.5
3	3.5	3.0	3.5	6.0	5.0	5.5	10.5	8.5	9.0	15.5	14.5	15.0
4	4.0	3.5	3.5	6.0	5.5	5.5	10.5	8.5	9.5	16.0	14.5	15.0
5	4.0	3.5	4.0	6.5	6.0	6.0	10.0	9.0	9.5	15.5	14.5	15.0
6	4.0	4.0	4.0	6.5	6.0	6.0	11.5	9.5	10.0	15.5	14.5	15.0
7	4.5	4.0	4.0	6.5	6.0	6.5	13.0	10.0	11.0	15.5	14.5	15.0
8	4.5	4.0	4.5	6.5	6.0	6.5	12.5	10.0	11.5	16.0	15.0	15.5
9	4.5	4.0	4.5	6.5	6.0	6.5	13.5	10.5	12.0	15.5	15.0	15.5
10	4.5	4.5	4.5	7.0	6.0	6.5	16.0	11.5	13.5	16.0	15.0	15.5
11	4.5	4.0	4.5	6.5	6.0	6.0	15.0	12.5	13.5	16.5	15.0	16.0
12	4.5	4.0	4.0	6.5	6.0	6.0	14.0	12.0	12.5	17.0	15.5	16.5
13	4.5	4.0	4.0	6.0	6.0	6.0	12.5	11.0	12.0	18.0	16.0	17.0
14	4.5	4.0	4.0	6.0	6.0	6.0	12.0	11.0	11.5	18.0	16.5	17.0
15	4.0	3.5	4.0	6.5	6.0	6.0	11.5	11.0	11.5	---	---	---
16	3.5	3.0	3.5	6.5	6.0	6.0	12.5	11.5	12.0	---	---	---
17	3.0	3.0	3.0	7.0	6.0	6.5	12.5	12.0	12.0	---	---	---
18	3.5	3.0	3.0	7.0	6.5	7.0	12.5	11.5	12.0	---	---	---
19	3.5	3.5	3.5	7.5	7.0	7.0	12.5	11.5	12.0	---	---	---
20	4.0	3.5	3.5	7.5	7.0	7.0	12.0	11.5	11.5	---	---	---
21	4.0	3.5	4.0	7.5	7.0	7.0	12.0	11.5	12.0	---	---	---
22	4.5	4.0	4.0	7.5	7.0	7.5	12.0	11.5	12.0	18.5	18.0	18.0
23	4.5	4.0	4.0	7.0	7.0	7.0	12.5	11.5	12.0	19.0	17.0	18.0
24	4.5	4.0	4.0	7.5	7.0	7.0	12.5	12.0	12.0	19.0	17.5	18.0
25	4.5	4.0	4.5	7.5	7.0	7.0	13.5	12.0	12.5	20.0	18.0	19.0
26	4.5	4.0	4.5	7.5	7.0	7.5	13.5	12.5	13.0	19.5	18.0	18.5
27	4.5	4.0	4.0	8.0	7.5	7.5	13.5	12.5	13.0	20.0	18.0	19.5
28	4.5	4.0	4.5	9.5	7.5	8.0	13.5	11.5	13.0	20.0	18.5	19.5
29	---	---	---	8.5	8.5	8.5	13.0	12.0	12.5	20.0	18.5	19.5
30	---	---	---	9.0	8.0	8.5	13.5	13.0	13.0	20.5	19.0	19.5
31	---	---	---	9.5	8.0	8.5	---	---	---	21.0	19.5	20.0
MONTH	4.5	3.0	3.9	9.5	4.0	6.6	16.0	8.5	11.6	21.0	13.0	16.9
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	20.5	19.0	19.5	19.5	17.0	17.5	22.0	19.5	20.5	22.5	20.0	21.0
2	20.5	19.0	19.5	18.0	17.0	17.5	22.0	19.5	20.0	23.0	20.0	21.0
3	20.5	18.5	19.5	20.0	17.5	18.5	21.0	19.5	20.0	22.5	20.0	21.0
4	20.0	18.5	19.0	20.5	19.5	20.0	20.5	19.5	20.0	22.5	20.5	21.5
5	19.5	18.0	19.0	20.5	19.5	20.0	21.0	20.0	20.5	23.0	21.5	22.0
6	19.5	18.0	18.5	22.0	20.0	21.0	21.0	19.5	20.0	22.5	21.5	22.0
7	20.0	17.5	18.5	21.5	20.5	21.0	21.0	19.5	20.0	23.0	22.0	22.5
8	20.0	17.0	18.0	21.5	20.5	21.0	21.5	19.5	20.5	23.0	22.0	22.5
9	20.0	17.5	18.0	21.5	19.0	20.0	21.0	20.0	20.5	23.0	22.0	22.5
10	19.0	17.5	18.0	20.5	18.5	19.5	22.0	19.0	20.0	23.0	22.0	22.5
11	19.0	18.0	18.5	20.5	18.0	19.0	21.5	18.5	20.0	23.0	21.0	22.5
12	20.0	18.5	19.0	20.0	18.0	19.0	22.5	19.0	20.0	23.0	20.5	21.5
13	20.5	18.5	19.5	19.5	18.0	18.5	23.0	19.0	20.5	23.0	20.0	21.5
14	21.0	17.5	19.0	20.5	18.5	19.0	22.0	19.0	20.0	23.5	21.0	22.0
15	21.0	18.0	19.0	19.5	18.0	18.5	21.0	20.0	20.0	22.5	21.0	21.5
16	21.5	18.0	19.5	19.5	18.5	18.5	22.5	19.0	20.5	24.0	21.0	22.0
17	20.5	18.5	19.0	20.5	18.0	19.0	22.0	20.5	21.0	23.5	22.0	22.5
18	19.0	18.5	18.5	21.0	18.5	19.0	22.5	20.5	21.5	23.0	22.0	22.5
19	19.5	17.5	18.5	21.0	18.5	19.5	22.5	20.0	21.5	22.0	20.0	21.5
20	21.0	17.5	19.0	20.5	18.5	19.5	21.5	20.0	20.5	21.5	19.0	20.0
21	20.0	16.5	18.5	21.0	19.0	19.5	22.5	20.0	21.0	21.0	18.5	19.5
22	18.0	17.0	17.0	21.0	19.0	19.5	22.5	20.5	21.5	21.5	18.5	20.0
23	18.0	17.0	17.0	21.5	18.5	20.0	22.5	20.5	21.5	21.5	19.5	20.5
24	19.0	17.0	17.5	21.0	18.5	19.5	22.0	20.5	21.0	21.5	19.5	20.5
25	19.0	16.0	17.5	20.0	19.0	19.5	22.5	20.5	21.0	20.5	19.0	20.0
26	19.0	16.0	17.0	20.0	19.0	19.5	22.5	20.5	21.0	21.0	18.0	19.5
27	19.0	16.0	17.0	20.5	19.0	19.5	23.0	20.5	21.5	20.0	17.0	18.5
28	19.0	16.5	17.5	21.0	19.0	19.5	23.0	21.0	21.5	20.5	18.5	19.0
29	19.5	16.5	17.5	20.0	19.0	19.5	23.0	21.0	22.0	20.5	18.5	19.5
30	19.0	17.0	18.0	21.0	19.5	20.0	23.0	21.0	22.0	19.5	18.0	19.0
31	---	---	---	21.5	19.5	20.0	23.0	20.5	21.5	---	---	---
MONTH	21.5	16.0	18.4	21.9	16.8	19.4	23.2	18.6	20.7	24.1	17.1	21.0

SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA

LOCATION.--Lat 40°22'08", long 75°58'46", Berks County, Hydrologic Unit 02040203, on right bank 15 ft upstream from covered bridge, 1 mi downstream from Cacoosing Creek, 2.5 mi upstream from mouth, and 3.5 mi northwest of square at Reading. Water-quality sampling site at covered bridge 15 ft downstream.

DRAINAGE AREA.--211 mi².

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for October, November 1950, published in WSP 1722.

REVISED RECORDS.--WSP 1382: 1951-53, 1954 (M). WSP 2102: 1965 (M). WDR PA-72-1: 1971 (M).

GAGE.--Water-stage recorder. Datum of gage is 216.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--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 telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	170	128	780	352	234	200	259	253	102	94	59
2	298	161	127	635	249	236	179	212	247	105	111	59
3	298	145	268	621	249	239	147	195	220	136	184	60
4	298	145	472	540	329	431	139	177	184	221	184	79
5	298	146	1240	417	392	591	140	177	179	198	178	117
6	298	392	1390	416	394	375	138	242	177	150	170	130
7	298	631	468	485	372	389	135	358	152	157	148	164
8	299	224	338	424	344	372	133	363	124	184	120	162
9	303	86	333	304	343	315	136	231	123	195	113	158
10	303	224	329	304	343	314	131	272	192	145	89	157
11	439	620	324	357	370	359	133	208	264	128	60	117
12	535	690	322	455	353	365	134	205	229	109	58	49
13	199	361	298	438	313	288	135	203	148	186	57	41
14	201	318	236	543	375	283	139	196	93	133	56	31
15	307	264	243	698	417	324	218	344	84	187	59	31
16	257	237	246	774	406	311	363	299	82	226	81	47
17	95	221	410	957	407	308	305	203	82	131	123	83
18	134	218	555	1090	405	380	207	200	128	129	135	83
19	340	215	433	828	407	417	204	190	184	130	106	91
20	385	299	429	811	408	414	204	216	133	129	80	36
21	381	260	435	814	378	403	232	217	109	128	101	33
22	342	177	435	604	316	395	434	164	121	130	129	32
23	379	222	444	423	296	431	456	163	124	123	93	31
24	764	254	822	433	294	426	280	153	122	91	76	27
25	729	202	992	430	294	567	235	140	109	88	76	152
26	385	133	1100	382	294	688	231	138	99	91	76	53
27	280	131	723	381	292	640	232	147	97	92	75	48
28	275	189	604	390	259	378	231	398	103	90	75	67
29	275	174	526	402	---	215	266	354	99	90	73	66
30	221	159	529	370	---	209	302	281	101	92	69	62
31	171	---	792	379	---	202	---	253	---	92	59	---
TOTAL	9995	7668	15991	16885	9651	11499	6419	7158	4362	4188	3108	2325
MEAN	322	256	516	545	345	371	214	231	145	135	100	77.5
MAX	764	690	1390	1090	417	688	456	398	264	226	184	164
MIN	95	86	127	304	249	202	131	138	82	88	56	27
MEAN*	237	258	517	546	346	391	282	231	145	134	100	77.5
CFSM*	1.12	1.22	2.45	2.59	1.64	1.85	1.34	1.09	.69	.64	.48	.37
IN.*	1.29	1.36	2.83	2.98	1.71	2.13	1.49	1.26	.77	.73	.55	.41

* Adjusted for change in contents of Blue Marsh Lake.

SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	227	248	349	369	424	423	386	404	286	220	145	164
MAX	624	432	1044	1193	663	823	1191	1226	673	661	322	456
(WY)	1980	1990	1984	1979	1986	1979	1983	1989	1982	1984	1984	1987
MIN	83.5	83.6	93.8	99.8	149	153	64.2	179	108	115	63.1	63.0
(WY)	1982	1981	1981	1981	1980	1981	1985	1981	1979	1985	1981	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1979 - 1991
ANNUAL TOTAL	120521	99249	
ANNUAL MEAN	330	272	303
HIGHEST ANNUAL MEAN			531
LOWEST ANNUAL MEAN			146
HIGHEST DAILY MEAN	1850	Jan 31	3950
LOWEST DAILY MEAN	86	Nov 9	27
ANNUAL SEVEN-DAY MINIMUM	94	Sep 10	48
INSTANTANEOUS PEAK FLOW			1860
INSTANTANEOUS PEAK STAGE			3.73
INSTANTANEOUS LOW FLOW			25
ANNUAL RUNOFF (CFSM)	1.56	1.29	1.44
ANNUAL RUNOFF (INCHES)	21.25	17.50	19.52
10 PERCENT EXCEEDS	557	470	586
50 PERCENT EXCEEDS	280	222	207
90 PERCENT EXCEEDS	121	83	83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1978, BY WATER YEAR (PRIOR TO REGULATION)

MEAN	180	264	362	376	437	512	451	322	269	212	181	192
MAX	689	490	829	815	917	914	806	712	1434	645	481	588
(WY)	1977	1973	1978	1978	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 - 1978
ANNUAL TOTAL	
ANNUAL MEAN	312
HIGHEST ANNUAL MEAN	491
LOWEST ANNUAL MEAN	144
HIGHEST DAILY MEAN	12000
LOWEST DAILY MEAN	33
ANNUAL SEVEN-DAY MINIMUM	35
INSTANTANEOUS PEAK FLOW	a17000
INSTANTANEOUS PEAK STAGE	b15.65
INSTANTANEOUS LOW FLOW	23
ANNUAL RUNOFF (CFSM)	1.48
ANNUAL RUNOFF (INCHES)	20.11
10 PERCENT EXCEEDS	607
50 PERCENT EXCEEDS	212
90 PERCENT EXCEEDS	85

- a From rating curve extended above 3,600 ft³/s, on basis of contracted-opening measurement of peak flow.
b From floodmark in gage shelter.

SCHUYLKILL RIVER BASIN

01471510 SCHUYLKILL RIVER AT READING, PA

LOCATION.--Lat 40°20'10", long 75°56'15", Berks County, Hydrologic Unit 02040203, on Penn Avenue Bridge at West Reading, 0.8 mi downstream from Tulpehocken Creek.

DRAINAGE AREA.--880 mi².

PERIOD OF RECORD.--May 1914 to September 1915, October 1919 to September 1930 and June 30, 1977 to current year. Monthly discharge only prior to 1977 published in WSP 1302. Diversion by Schuylkill Navigation Canal included during the navigation seasons of 1914-15.

REVISED RECORDS.--WDR PA-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 185.50 ft above Pennsylvania Railroad datum. May 7, 1914 to Sept. 30, 1930, nonrecording gage. June 30, 1977 to July 5, 1979, water-stage recorder at site 1,500 ft downstream at same datum. Satellite telemetry at station.

REMARKS.--Records good, except for periods of estimated record which are poor. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Reservoir (station 01470870) since April 1979 and to some extent by Lake Ontelaunee. Several measurements of water temperature were made during the year. Pressure sensor interfaced with DCP.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972, reached a stage of about 31.3 ft at site 1,500 ft downstream, present datum, from floodmarks, discharge, about 90,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	553	1410	685	4100	1680	1280	2040	1510	883	323	278	278
2	614	1110	678	3660	1450	1410	1870	1450	693	340	276	278
3	614	1100	850	3330	1400	1650	1630	1250	653	365	296	270
4	636	1050	2300	2950	1460	2590	1550	1170	541	485	316	260
5	868	983	7910	2530	1600	3660	1500	1120	525	506	316	260
6	681	1100	5840	2410	1650	3140	1520	1500	494	413	316	266
7	640	1590	3990	2420	2110	3310	1480	2310	463	590	309	297
8	640	1070	3200	2160	2230	2880	1410	1980	409	630	278	297
9	653	889	2750	1820	2130	2540	1330	1660	402	487	434	297
10	646	2240	2480	1770	2050	2370	1280	1650	421	350	1080	297
11	710	5270	2310	1810	2010	2270	1180	1530	579	322	463	291
12	880	3820	2070	2160	1810	2170	1090	1480	794	297	371	260
13	1180	2870	1790	1980	1730	1830	1110	1440	764	791	333	256
14	2070	2350	1650	1970	2030	1810	1140	1360	392	584	320	241
15	1570	2000	1680	2100	2340	1980	1250	2080	355	458	304	236
16	1290	1690	1750	2830	2090	1870	1620	1830	355	447	321	233
17	932	1650	1800	4890	1940	1630	1460	1530	408	330	370	241
18	1080	1580	2150	4630	1840	2040	1140	1590	603	318	397	248
19	4310	1410	2320	3790	1850	2530	1130	1370	559	312	556	383
20	2970	1410	2300	3390	1940	2410	1110	1310	536	299	859	269
21	2390	1320	2480	3310	1890	2330	1320	1330	410	297	821	269
22	1920	1170	3020	2790	1700	2260	2010	1210	396	355	503	261
23	2230	1280	3120	2310	1570	2580	2010	967	374	403	404	245
24	4990	1370	5730	2250	1520	2850	1760	900	395	434	418	244
25	4160	1200	6120	2120	1530	2930	1840	881	394	344	387	847
26	3100	970	4900	1840	1510	2920	1690	839	363	327	353	431
27	2470	850	3840	1790	1410	2890	1640	928	409	299	339	317
28	2190	958	3410	1720	1320	2810	1610	1370	360	297	328	297
29	1790	918	3010	1670	---	2400	1550	993	326	288	316	297
30	1560	991	2850	1620	---	2300	1540	928	333	278	312	290
31	1500	---	3970	1810	---	2170	---	841	---	278	290	---
TOTAL	51837	47619	92953	79930	49790	73810	44810	42307	14589	12247	12664	8956
MEAN	1672	1587	2998	2578	1778	2381	1494	1365	486	395	409	299
MAX	4990	5270	7910	4890	2340	3660	2040	2310	883	791	1080	847
MIN	553	850	678	1620	1320	1280	1090	839	326	278	276	233

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1991, BY WATER YEAR

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	1044	1381	1973	1840	2041	2297	2360	2289	1375	973	711	765			
MAX	3390	2681	5334	5682	3358	4361	6472	5493	3411	2907	1423	2705			
(WY)	1980	1978	1984	1979	1984	1978	1983	1989	1982	1984	1984	1987			
MIN	322	360	278	265	681	824	606	1005	486	395	354	273			
(WY)	1981	1981	1981	1981	1980	1985	1985	1985	1991	1991	1981	1983			

SUMMARY STATISTIC

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1987 - 1991
ANNUAL TOTAL	648098	531512	
ANNUAL MEAN	1776	1456	1590
HIGHEST ANNUAL MEAN			2559
LOWEST ANNUAL MEAN			805
HIGHEST DAILY MEAN	8660 Jan 30	7910 Dec 5	24700 Jan 25 1979
LOWEST DAILY MEAN	454 Aug 4	233 Sep 16	180 Oct 1 1980
ANNUAL SEVEN-DAY MINIMUM	496 Sep 8	245 Sep 12	224 Dec 24 1980
INSTANTANEOUS PEAK FLOW		11900 Dec 4	37500 Jan 25 1979
INSTANTANEOUS PEAK STAGE		9.58 Dec 4	17.36 Jan 25 1979
10 PERCENT EXCEEDS	3070	2870	3250
50 PERCENT EXCEEDS	1500	1330	1060
90 PERCENT EXCEEDS	644	297	391

a From rating curve extended above 16,000 ft³/s.

b At site 1,500 ft downstream.

SCHUYLKILL RIVER BASIN

01471980 MANATAWNY CREEK NEAR POTTSTOWN, PA

LOCATION.--Lat 40°16'22", long 75°40'49", Berks County, Hydrologic Unit 02040203, on left bank about 180 ft upstream from bridge on Manatawny Street, 0.7 mi downstream from Ironstone Creek, 2.4 mi northwest of Pottstown, 3.1 mi upstream from mouth, and 4.7 southwest of Boyertown.

DRAINAGE AREA.--85.5 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a stage of 17.1 ft, from floodmarks, discharge about 9,600 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	47	66	258	121	89	118	104	73	36	34	25
2	34	45	66	207	115	99	117	95	60	35	30	24
3	31	44	100	185	114	119	118	91	55	49	26	25
4	30	44	851	161	113	366	111	86	55	44	28	28
5	36	43	250	144	110	193	106	83	54	43	27	35
6	33	50	166	150	124	155	103	183	53	46	25	33
7	28	52	138	165	190	227	●95	226	51	62	27	28
8	29	47	124	137	173	153	●90	119	49	57	29	25
9	111	45	113	153	136	134	●88	102	48	41	61	23
10	42	680	106	153	124	127	●85	97	46	37	147	22
11	38	378	98	145	116	118	●82	88	49	35	47	22
12	37	162	93	493	105	113	●75	83	119	33	39	21
13	340	128	92	263	106	111	●81	79	58	168	37	●25
14	196	111	85	189	164	122	●105	75	48	119	37	●26
15	65	103	102	170	173	141	●120	119	46	43	39	●26
16	50	96	170	377	139	136	●120	82	44	33	48	●26
17	45	99	121	371	148	129	●105	84	43	27	40	●26
18	88	101	188	229	106	265	●98	166	67	27	38	●37
19	179	88	197	192	121	162	93	90	101	25	94	●45
20	66	83	137	180	160	130	88	77	60	25	106	●48
21	53	79	149	222	126	125	234	72	48	27	94	●38
22	50	77	185	182	114	274	302	69	44	38	48	●26
23	199	100	167	●160	102	213	163	64	47	37	41	●22
24	323	101	388	●140	98	170	183	61	47	69	38	●21
25	104	83	197	●130	100	156	214	60	42	41	37	●200
26	70	77	155	●125	98	209	145	57	39	45	36	●100
27	59	73	●130	●120	94	155	128	60	37	48	35	●60
28	55	72	●110	●115	90	171	119	291	36	39	34	●38
29	51	74	●98	●110	---	142	111	85	35	40	33	●28
30	49	68	●90	●105	---	134	110	71	35	41	31	●27
31	48	---	575	169	---	123	---	68	---	37	29	---
TOTAL	2576	3250	5507	5900	3480	4961	3707	3087	1589	1447	1415	1130
MEAN	83.1	108	178	190	124	160	124	99.6	53.0	46.7	45.6	37.7
MAX	340	680	851	493	190	366	302	291	119	168	147	200
MIN	28	43	66	105	90	89	75	57	35	25	25	21
CFSM	.97	1.27	2.08	2.23	1.45	1.87	1.45	1.16	.62	.55	.53	.44
IN.	1.12	1.41	2.40	2.57	1.51	2.16	1.61	1.34	.69	.63	.62	.49

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1991, BY WATER YEAR

	MEAN	111	144	175	193	184	189	172	108	94.0	63.4	72.4
MAX	212	187	425	499	356	348	427	390	266	312	138	191
(WY)	1976	1978	1984	1979	1984	1978	1983	1989	1982	1984	1990	1987
MIN	34.0	37.9	36.7	28.0	69.0	69.6	53.6	67.4	43.1	36.4	21.6	27.1
(WY)	1983	1982	1981	1981	1980	1981	1985	1987	1987	1981	1981	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1974 - 1991
ANNUAL TOTAL	49113	38049	
ANNUAL MEAN	135	104	132
HIGHEST ANNUAL MEAN			230
LOWEST ANNUAL MEAN			63.4
HIGHEST DAILY MEAN	1200	851	3010
LOWEST DAILY MEAN	28	21	14
ANNUAL SEVEN-DAY MINIMUM	32	23	17
INSTANTANEOUS PEAK FLOW		2600	7550
INSTANTANEOUS PEAK STAGE		6.43	11.46
INSTANTANEOUS LOW FLOW		14	13
ANNUAL RUNOFF (CFSM)	1.57	1.22	1.54
ANNUAL RUNOFF (INCHES)	21.37	16.55	20.91
10 PERCENT EXCEEDS	251	188	24
50 PERCENT EXCEEDS	98	88	87
90 PERCENT EXCEEDS	41	31	33

SCHUYLKILL RIVER BASIN

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA

LOCATION.---Lat 40°14'30", long 75°39'07", Montgomery County, Hydrologic Unit 02040203, on right bank 75 ft upstream from Hanover Street Bridge in Pottstown and 0.4 mi downstream from Manatawny Creek.

DRAINAGE.---1,147 mi².

PERIOD OF RECORD.---October 1926 to current year. Monthly discharges only for some periods, published in WSP 1302.

GAGE.---Water-stage recorder. Datum of gage is 117.86 ft above National Geodetic Vertical Datum of 1929. October 1926 to Nov. 22, 1928, nonrecording gage and Nov. 23, 1928, to Dec. 26, 1972, recording gage, at site 100 ft downstream at same datum. Dec. 27, 1972, to May 10, 1974, nonrecording gage 1.0 mi downstream at datum 2.83 ft lower.

REMARKS.---Records good. Flow regulated by Blue Marsh Reservoir (station 01470870) since April 1979 and to some extent by Still Creek Reservoir and Lake Ontelaunee. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	640	1620	960	5250	2030	1500	2400	1790	1100	544	433	369
2	775	1310	878	4460	1740	1520	2190	1670	963	506	399	363
3	786	1240	1110	4020	1640	1830	1980	1540	930	582	428	361
4	782	1250	8670	3580	1640	2910	1870	1400	814	681	464	364
5	952	1050	11000	3010	1750	4300	1750	1390	792	722	460	402
6	863	1300	7380	2810	1970	3650	1780	1770	780	640	463	403
7	762	1900	4550	2810	2480	3980	1730	2970	747	904	459	438
8	751	1290	3490	2690	2650	3420	1640	2390	701	804	417	450
9	1080	1060	2960	2210	2470	2920	1590	1950	664	778	565	446
10	812	3470	2600	2170	2290	2680	1470	1890	634	574	1670	446
11	787	6830	2510	2100	2240	2520	1440	1780	774	516	774	446
12	1150	4960	2250	3910	2100	2440	1300	1670	1130	469	545	378
13	1900	3410	1950	2820	1910	2120	1310	1620	1060	1310	490	336
14	2400	2810	1750	2460	2170	2070	1420	1540	756	1480	459	330
15	1810	2390	1890	2530	2790	2250	1490	2110	611	778	493	317
16	1560	1990	2080	3300	2340	2130	1820	2190	581	703	469	314
17	1100	1910	1920	6000	2230	1930	1790	1700	569	578	535	337
18	1150	1890	2550	5850	2040	2490	1450	1950	837	499	487	353
19	4490	1670	2820	4670	2030	3030	1390	1640	988	477	764	683
20	3660	1590	2510	4040	2220	2830	1360	1450	808	465	1100	467
21	2820	1600	2680	4050	2160	2640	2070	1490	712	447	1090	383
22	2270	1400	3410	3540	1950	2580	2710	1340	614	520	810	361
23	2460	1490	3380	2750	1800	3240	2610	1190	625	559	569	340
24	5880	1660	6310	2640	1740	3600	2320	1110	644	685	540	338
25	5230	1490	7860	2510	1680	3390	2450	1050	646	595	509	1760
26	3710	1260	6050	2160	1660	3400	2110	1020	556	525	470	921
27	2830	1100	4730	2070	1650	3420	1960	968	600	549	448	569
28	2460	1110	3890	2020	1500	3410	1890	2680	572	468	430	464
29	2130	1130	3560	1930	---	2840	1810	1380	510	476	419	437
30	1730	1230	3400	1900	---	2760	1820	1220	500	485	407	406
31	1610	---	5640	2110	---	2590	---	1100	---	465	392	---
TOTAL	61340	58410	116738	98370	56870	86390	54920	50958	22218	19784	17958	13982
MEAN	1979	1947	3766	3173	2031	2787	1831	1644	741	638	579	466
MAX	5880	6830	11000	6000	2790	4300	2710	2970	1130	1480	1670	1760
MIN	640	1050	878	1900	1500	1500	1300	968	500	447	392	314

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR

	1109	1644	2120	2149	2489	3085	2900	2329	1566	1273	1053	1072
MEAN	1109	1644	2120	2149	2489	3085	2900	2329	1566	1273	1053	1072
MAX	3870	3897	6805	7383	5117	8948	7820	7220	7634	3940	5290	3732
(WY)	1977	1951	1984	1979	1971	1936	1983	1989	1972	1984	1933	1987
MIN	258	309	419	316	540	1101	875	729	461	302	301	256
(WY)	1931	1931	1931	1981	1934	1981	1985	1965	1965	1966	1966	1932

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1928 - 1991
ANNUAL TOTAL	783874	657938	
ANNUAL MEAN	2148	1803	1896
HIGHEST ANNUAL MEAN			3211
LOWEST ANNUAL MEAN			843
HIGHEST DAILY MEAN	12300	11000	71200
LOWEST DAILY MEAN	590	314	175
ANNUAL SEVEN-DAY MINIMUM	649	338	210
INSTANTANEOUS PEAK FLOW		14700	95900
INSTANTANEOUS PEAK STAGE		9.32	29.97
10 PERCENT EXCEEDS	3680	3420	3820
50 PERCENT EXCEEDS	1720	1600	1300
90 PERCENT EXCEEDS	783	460	468

a From floodmark.

SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA

LOCATION.--Lat 40°12'22", long 75°33'57", Montgomery County, Hydrologic Unit 02040203, on left bank 100 ft above Vincent Dam, 0.3 mi south of Linfield.

DRAINAGE AREA.--Not determined.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1986 to September 1990 (discontinued).

WATER TEMPERATURE: September 1989 to current year.

DISSOLVED OXYGEN: January 1986 to September 1990 (discontinued).

INSTRUMENTATION.--Water-quality monitor since January 1986. Subsequent to 1986, interfaced with data collection platform.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 752 microsiemens, Sept. 15, 1989; minimum, 118 microsiemens, Sept. 15, 1987.

WATER TEMPERATURE: Maximum, 31.5°C, July 20-22, 1991; minimum, 1.5°C, Feb. 17, 1991.

DISSOLVED OXYGEN: Maximum, 19.6 mg/L, Mar. 24, 1988; minimum, 0.8 mg/L, July 26, 1986.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	20.0	18.5	19.0	13.0	11.0	12.0	7.0	6.0	6.5	---	---	---
2	19.0	17.5	18.5	13.5	11.5	12.5	6.5	6.0	6.0	---	---	---
3	18.5	16.5	17.5	14.0	12.5	13.5	---	---	---	---	---	---
4	18.0	17.5	17.5	13.5	13.0	13.5	---	---	---	---	---	---
5	19.0	17.0	18.0	14.0	12.5	13.0	---	---	---	---	---	---
6	20.0	17.5	18.5	14.0	12.5	13.5	---	---	---	---	---	---
7	21.0	18.5	19.5	12.5	11.0	11.5	---	---	---	---	---	---
8	21.0	19.5	20.0	11.5	10.5	11.0	6.5	6.0	6.0	---	---	---
9	22.0	20.0	21.0	10.5	9.0	9.5	6.0	5.5	6.0	---	---	---
10	22.5	21.0	21.5	---	---	---	6.5	5.5	6.0	---	---	---
11	22.0	21.5	22.0	---	---	---	6.0	5.0	5.5	---	---	---
12	22.0	21.0	21.5	---	---	---	5.0	4.0	4.5	---	---	---
13	22.0	21.0	21.5	---	---	---	5.5	4.5	5.0	---	---	---
14	22.0	21.0	21.5	---	---	---	5.0	4.0	5.0	---	---	---
15	21.0	19.5	20.5	---	---	---	4.0	3.5	4.0	---	---	---
16	19.0	18.0	18.5	9.0	7.5	8.0	5.0	4.0	4.5	---	---	---
17	---	---	---	9.5	8.5	9.0	5.5	4.5	5.0	---	---	---
18	18.5	17.5	18.0	---	---	---	6.0	5.0	5.5	---	---	---
19	17.5	13.0	16.0	7.5	6.5	7.0	7.0	6.0	6.5	---	---	---
20	16.0	11.0	13.0	7.5	6.0	6.5	6.0	5.5	5.5	---	---	---
21	16.5	10.5	13.5	7.5	6.0	6.5	6.5	5.5	6.0	---	---	---
22	15.5	13.5	14.0	7.5	6.5	7.0	---	---	---	---	---	---
23	15.0	14.5	14.5	8.5	7.5	8.0	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
28	11.5	11.0	11.5	---	---	---	---	---	---	---	---	---
29	11.0	10.5	11.0	11.0	9.0	10.0	---	---	---	---	---	---
30	11.0	9.5	10.5	9.0	7.0	7.5	---	---	---	5.5	4.5	5.0
31	12.0	10.0	11.0	---	---	---	---	---	---	5.5	4.0	5.0
MONTH	22.5	9.5	17.1	14.0	6.0	10.0	7.0	3.5	5.5	5.5	4.0	5.0

SCHUYLKILL RIVER BASIN

01472104 SCHUYLKILL RIVER AT VINCENT DAM AT LINFIELD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	4.0	3.0	3.5	6.5	4.5	5.5	9.5	8.5	9.0	---	---	---
2	5.0	3.0	4.0	9.0	6.5	7.5	9.0	8.5	8.5	---	---	---
3	---	---	---	10.0	8.5	9.0	10.0	8.0	9.0	---	---	---
4	6.5	4.5	5.5	10.5	9.0	10.0	11.5	9.0	10.0	---	---	---
5	7.0	5.0	6.0	9.0	8.0	8.5	11.0	10.0	10.5	---	---	---
6	7.0	6.5	6.5	8.5	7.5	8.0	13.5	10.0	11.5	---	---	---
7	6.5	6.5	6.5	8.5	8.0	8.0	15.5	12.5	13.5	---	---	---
8	7.0	6.5	6.5	7.5	6.5	7.0	17.0	14.0	15.5	17.0	15.5	16.0
9	7.0	5.5	6.0	7.0	6.0	6.5	18.0	15.5	16.5	16.5	15.5	16.5
10	6.5	5.5	6.0	7.0	6.0	6.5	18.0	16.0	17.0	17.5	15.0	16.0
11	6.0	5.0	5.5	6.5	5.5	6.0	16.0	14.0	15.0	---	---	---
12	4.5	3.5	4.0	6.5	5.0	6.0	15.0	13.0	14.0	---	---	---
13	4.0	3.5	3.5	6.0	5.0	5.5	14.0	11.5	12.5	---	---	---
14	4.5	3.5	4.0	5.0	5.0	5.0	12.0	11.0	11.5	---	---	---
15	4.0	3.0	4.0	6.0	5.0	5.5	11.5	11.0	11.0	23.0	21.5	22.0
16	3.0	2.0	2.5	7.0	5.0	6.0	13.5	10.5	12.0	22.5	21.0	22.0
17	2.5	1.5	2.0	8.5	6.0	7.0	15.0	13.0	14.0	22.5	21.0	21.5
18	3.0	2.0	2.5	8.0	7.0	7.5	14.0	13.0	13.5	21.5	20.0	21.0
19	4.5	3.0	3.5	8.0	7.0	7.5	14.5	12.5	13.5	20.5	19.0	19.5
20	6.0	4.5	5.0	9.0	7.5	8.0	14.0	12.0	13.0	20.5	18.5	19.5
21	6.0	4.5	5.5	8.5	8.0	8.5	12.0	10.5	11.0	21.0	19.0	20.0
22	7.5	5.5	6.0	8.0	8.0	8.0	11.0	10.0	10.5	22.5	20.0	21.0
23	6.5	5.0	6.0	8.0	7.0	7.5	13.0	10.5	11.5	24.0	21.5	22.5
24	5.5	4.0	5.0	8.0	7.0	7.5	---	---	---	23.5	22.5	23.0
25	6.0	4.5	5.0	7.5	7.0	7.5	---	---	---	25.5	23.0	24.0
26	5.5	5.0	5.5	8.0	7.0	7.5	---	---	---	25.5	24.0	24.5
27	5.5	4.5	5.0	8.5	8.0	8.0	---	---	---	25.5	24.0	24.5
28	5.5	4.0	5.0	11.5	8.5	10.0	---	---	---	25.0	23.5	24.5
29	---	---	---	11.0	10.0	10.5	---	---	---	26.0	24.0	25.0
30	---	---	---	10.5	9.0	10.0	---	---	---	25.5	24.5	25.0
31	---	---	---	10.0	8.5	9.0	---	---	---	26.0	24.5	25.0
MONTH	7.5	1.5	4.8	11.5	4.5	7.6	18.0	8.0	12.3	26.0	15.0	21.6
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.0	25.0	25.5	---	---	---	28.5	26.0	27.0	29.0	25.0	26.5
2	26.0	24.0	25.0	---	---	---	29.5	27.5	28.0	25.5	23.0	24.0
3	26.0	24.0	25.0	26.5	24.5	25.0	---	---	---	24.0	22.5	23.0
4	---	---	---	25.0	23.5	24.5	---	---	---	23.5	22.5	23.0
5	22.5	22.0	22.0	24.5	23.0	23.5	28.5	26.5	27.0	25.0	23.0	24.0
6	22.0	20.5	21.5	26.0	22.5	24.0	27.5	25.0	26.0	25.0	23.5	24.5
7	22.5	20.5	21.0	---	---	---	---	---	---	24.5	23.0	24.0
8	23.5	21.5	22.0	27.0	24.5	25.5	26.0	25.0	25.5	24.5	23.5	23.5
9	23.5	22.0	22.5	28.0	25.5	26.5	---	---	---	25.5	23.5	24.5
10	23.5	23.0	23.0	27.5	25.5	26.5	---	---	---	25.5	24.0	25.0
11	26.0	22.0	24.5	28.0	25.5	26.5	---	---	---	25.0	24.0	24.5
12	25.5	24.0	24.5	27.5	26.0	26.5	---	---	---	24.5	22.5	23.5
13	24.0	22.5	23.5	27.5	24.0	26.0	---	---	---	23.5	21.5	22.5
14	24.5	22.0	23.0	26.0	24.0	25.0	---	---	---	23.5	23.0	23.5
15	25.5	22.5	23.5	27.5	24.5	26.0	---	---	---	23.5	23.0	23.5
16	26.0	25.0	25.5	28.5	25.0	26.5	---	---	---	26.0	23.5	24.5
17	---	---	---	29.0	26.0	27.0	---	---	---	---	---	---
18	---	---	---	29.5	27.0	28.0	---	---	---	---	---	---
19	---	---	---	30.5	28.5	29.0	---	---	---	---	---	---
20	---	---	---	31.5	29.5	30.0	---	---	---	---	---	---
21	---	---	---	31.5	29.5	30.5	26.0	23.5	24.5	---	---	---
22	---	---	---	31.5	30.0	30.5	26.5	24.5	25.5	26.0	24.5	25.0
23	---	---	---	31.0	29.0	30.0	27.5	25.0	26.0	24.5	23.5	24.0
24	---	---	---	31.0	29.0	30.0	27.5	26.0	26.5	23.5	23.0	23.5
25	---	---	---	30.0	28.0	28.5	---	---	---	23.0	23.0	23.0
26	---	---	---	28.5	26.5	27.5	---	---	---	25.0	23.0	24.0
27	---	---	---	26.5	25.0	25.5	---	---	---	26.5	24.5	25.5
28	---	---	---	27.0	24.5	25.5	28.0	26.0	27.0	25.0	24.5	25.0
29	---	---	---	26.5	25.0	26.0	29.5	27.0	28.0	25.0	24.5	24.5
30	---	---	---	26.0	24.0	25.0	29.5	27.5	28.5	24.5	24.5	24.5
31	---	---	---	27.0	25.0	25.5	29.5	28.5	29.0	---	---	---
MONTH	26.0	20.5	23.5	31.5	22.5	26.8	29.5	23.5	26.8	29.0	21.5	24.1

SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA

LOCATION.--40°09'05", long 75°36'06", Chester County, Hydrologic Unit 02040203, on right bank 70 ft downstream from two-span county bridge on French Creek Road, 4.5 mi northwest of Phoenixville, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--59.1 mi².

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 Datum, from topographic map. Prior to Nov. 7, 1968, nonrecording gage at site 70 ft upstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	33	33	141	86	61	93	86	49	27	25	20
2	23	33	33	113	79	71	87	81	43	26	24	19
3	22	32	60	100	79	82	79	77	40	27	23	19
4	24	31	484	90	78	246	76	74	39	28	22	20
5	25	31	155	81	76	127	77	71	38	31	21	26
6	23	35	85	85	93	97	78	108	38	32	20	22
7	22	36	69	98	155	165	73	115	36	53	20	22
8	21	32	61	83	123	100	69	79	34	55	20	24
9	92	31	56	121	94	86	68	72	33	32	24	26
10	42	286	52	124	85	82	69	70	32	27	148	26
11	29	236	48	114	79	76	67	66	31	25	42	26
12	28	79	46	466	73	72	63	62	51	25	26	29
13	96	57	46	199	72	72	65	58	38	388	23	32
14	145	48	44	132	110	83	89	56	32	256	23	32
15	49	44	64	116	101	131	110	62	31	58	34	33
16	35	43	113	231	72	118	110	53	30	37	28	32
17	31	43	67	270	76	89	75	55	31	32	23	31
18	62	43	122	152	69	195	69	83	57	29	23	31
19	174	39	116	127	84	151	64	56	92	27	29	40
20	54	37	74	119	108	108	62	50	48	25	166	43
21	40	36	91	152	85	94	265	47	37	25	143	24
22	36	35	127	126	76	91	244	46	33	28	42	19
23	94	45	102	113	69	228	133	44	34	28	29	18
24	175	50	258	104	64	198	159	42	34	24	24	18
25	67	40	123	98	67	128	173	41	30	25	22	159
26	49	37	87	90	66	106	114	41	29	27	22	74
27	41	35	76	84	64	111	102	39	27	38	22	34
28	38	35	68	80	61	107	95	182	26	26	21	25
29	36	36	62	74	---	91	89	66	26	28	21	22
30	34	34	59	71	---	137	90	53	25	31	21	21
31	33	---	275	128	---	113	---	71	---	26	21	---
TOTAL	1664	1632	3156	4082	2344	3616	3007	2106	1124	1546	1152	967
MEAN	53.7	54.4	102	132	83.7	117	100	67.9	37.5	49.9	37.2	32.2
MAX	175	286	484	466	155	246	265	182	92	388	166	159
MIN	21	31	33	71	61	61	62	39	25	24	20	18
CFSM	.91	.92	1.72	2.23	1.42	1.97	1.70	1.15	.63	.84	.63	.55
IN.	1.05	1.03	1.99	2.57	1.48	2.28	1.89	1.33	.71	.97	.73	.61

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	47.3	73.3	97.7	110	133	130	133	111	87.0	68.5	41.9	46.2											
MAX	125	166	267	394	266	319	306	250	353	258	110	125											
(WY)	1980	1973	1984	1979	1984	1978	1983	1989	1972	1984	1971	1971											
MIN	17.9	24.6	19.2	13.7	39.7	40.5	35.6	31.9	22.7	21.9	15.2	14.1											
(WY)	1987	1982	1981	1981	1969	1981	1985	1969	1969	1985	1981	1980											

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1969 - 1991
ANNUAL TOTAL	29943	26396	
ANNUAL MEAN	82.0	72.3	89.7
HIGHEST ANNUAL MEAN			155
LOWEST ANNUAL MEAN			36.1
HIGHEST DAILY MEAN	854	May 30	4530
LOWEST DAILY MEAN	21	Oct 8	8.9
ANNUAL SEVEN-DAY MINIMUM	23	Oct 2	9.1
INSTANTANEOUS PEAK FLOW			11200
INSTANTANEOUS PEAK STAGE			13.66
INSTANTANEOUS LOW FLOW			8.9
ANNUAL RUNOFF (CFSM)	1.39	1.22	1.52
ANNUAL RUNOFF (INCHES)	18.85	16.61	20.62
10 PERCENT EXCEEDS	153	132	170
50 PERCENT EXCEEDS	62	57	59
90 PERCENT EXCEEDS	28	24	21

• From rating curve extended above 2,500 ft³/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.--October 1970 to current year.

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (µS/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CAC03) (00900)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CAC03 (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
NOV 15...	1130	44	157	7.7	16.5	5.5	1.0	13.4	57	0	15	
DATE		MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CAC03 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
NOV 15...	4.7	6.4	0.4	19	1.9	60	15	10	17	114	<0.010	
DATE		NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	
NOV 15...	1.80	0.050	0.20	0.20	0.020	<0.010	<0.010	10	120	8		

SCHUYLKILL RIVER BASIN

01472198 PERKIOMEN CREEK AT EAST GREENVILLE, PA

Location.--Lat 40°23'38", long 75°30'57", Montgomery County, hydrologic Unit 02040203, on right bank 100 ft upstream from Church Road Bridge, 0.9 mi upstream of Molasses Creek, and 1 mi southwest of East Greenville.

DRAINAGE AREA.--38.0 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 288.50 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	24	24	112	56	44	70	51	34	16	16	11
2	18	24	24	88	54	51	65	49	26	16	15	11
3	17	23	27	78	55	64	60	45	24	47	14	11
4	18	23	198	68	54	237	57	42	24	23	15	11
5	20	22	118	62	54	105	57	41	23	22	13	14
6	18	26	79	65	68	91	58	122	23	23	13	11
7	18	23	65	71	111	164	54	90	22	58	13	12
8	17	22	56	57	91	90	49	61	22	31	13	11
9	35	21	50	69	72	76	52	51	21	21	34	10
10	20	390	47	72	64	69	49	48	20	19	43	10
11	18	123	43	68	59	63	45	43	21	18	18	11
12	19	63	40	231	52	59	42	38	57	17	16	9.4
13	69	49	39	124	52	57	46	39	26	53	15	8.3
14	68	41	35	89	93	65	53	37	22	32	15	10
15	28	37	49	79	77	87	64	51	21	20	15	10
16	23	34	76	262	52	75	58	36	21	18	17	10
17	22	34	51	225	52	68	50	36	20	18	14	9.7
18	46	31	88	134	51	163	51	42	42	17	14	9.3
19	65	29	80	107	63	113	45	33	48	16	14	22
20	30	27	56	97	83	86	46	30	27	18	32	17
21	26	27	75	113	62	74	126	29	22	16	27	13
22	24	26	92	85	57	69	110	28	21	15	16	12
23	174	32	92	75	52	129	71	27	24	25	15	12
24	125	32	224	71	49	116	117	27	22	34	15	12
25	54	28	99	63	50	95	94	26	20	19	14	128
26	40	26	73	57	49	80	71	25	19	22	14	40
27	33	26	63	e54	46	106	64	26	18	21	13	20
28	29	26	e59	e52	44	93	59	61	17	17	13	16
29	27	26	e56	e51	---	78	55	28	17	20	13	14
30	26	24	e54	e50	---	89	55	26	17	18	12	14
31	25	---	240	84	---	75	---	35	---	17	12	---
TOTAL	1171	1339	2372	2913	1722	2831	1893	1323	741	727	523	509.7
MEAN	37.8	44.6	76.5	94.0	61.5	91.3	63.1	42.7	24.7	23.5	16.9	17.0
MAX	174	390	240	262	111	237	126	122	57	58	43	128
MIN	17	21	24	50	44	44	42	25	17	15	12	8.3
CFSM	.99	1.17	2.01	2.47	1.62	2.40	1.66	1.12	.65	.62	.44	.45
IN.	1.15	1.31	2.32	2.85	1.69	2.77	1.85	1.30	.73	.71	.51	.50

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1991, BY WATER YEAR

MEAN	28.9	51.6	61.6	60.5	83.6	76.0	94.4	86.1	54.8	43.7	26.7	36.7
MAX	54.7	83.9	187	103	138	113	224	163	121	163	49.8	113
(WY)	1990	1984	1984	1990	1984	1983	1983	1989	1982	1984	1990	1987
MIN	13.6	16.7	18.1	26.4	43.6	34.5	24.9	40.6	24.7	22.9	14.4	13.4
(WY)	1982	1982	1990	1985	1987	1985	1985	1987	1991	1983	1985	1986

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1981 - 1991
ANNUAL TOTAL	23360	18064.7	
ANNUAL MEAN	64.0	49.5	58.7
HIGHEST ANNUAL MEAN			103
LOWEST ANNUAL MEAN			37.1
HIGHEST DAILY MEAN	1520	390	2360
LOWEST DAILY MEAN	14	8.3	4.2
ANNUAL SEVEN-DAY MINIMUM	17	9.5	4.4
INSTANTANEOUS PEAK FLOW		1200	24900
INSTANTANEOUS PEAK STAGE		3.71	7.07
INSTANTANEOUS LOW FLOW		7.4	3.8
ANNUAL RUNOFF (AC-FT)	46330	35830	42540
ANNUAL RUNOFF (CFSM)	1.68	1.30	1.55
ANNUAL RUNOFF (INCHES)	22.87	17.68	20.99
10 PERCENT EXCEEDS	99	92	107
50 PERCENT EXCEEDS	44	39	37
90 PERCENT EXCEEDS	20	14	15

SCHUYLKILL RIVER BASIN

01472199 NORTHWEST BRANCH PERKIOMEN CREEK AT HILLEGASS, PA

Location.--Lat 40°22'26", long 75°31'22", Montgomery County, Hydrologic Unit 02040203, on left bank 0.3 mi downstream of bridge on private road, and 0.5 mi north of Hillegass.

DRAINAGE AREA.--23.0 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 290.00 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	17	15	77	35	27	41	29	18	8.3	7.7	5.1
2	9.3	16	16	62	33	30	37	28	15	9.1	7.2	5.0
3	8.7	15	55	52	33	45	34	26	13	24	7.1	5.1
4	9.1	15	350	45	33	144	33	25	12	13	6.9	5.4
5	11	14	78	39	32	62	34	24	12	12	6.7	6.3
6	9.2	19	50	42	41	53	33	85	12	13	6.1	5.8
7	8.7	16	40	46	80	88	31	62	12	24	6.0	5.5
8	8.6	14	35	37	58	47	30	34	11	19	5.9	5.2
9	35	13	32	48	44	40	30	30	10	11	18	5.1
10	12	278	30	49	39	37	28	29	9.9	9.7	28	5.0
11	10	88	28	44	35	34	26	27	10	8.9	9.7	5.1
12	10	41	26	184	31	32	26	25	28	8.5	7.8	4.9
13	68	32	26	86	31	32	27	24	14	37	7.4	4.8
14	57	28	24	60	59	35	33	23	11	28	7.3	4.8
15	24	26	31	53	51	43	41	26	10	13	8.1	4.9
16	18	25	53	185	32	43	38	21	10	10	9.1	5.1
17	16	25	32	151	31	42	30	22	9.7	9.4	7.3	4.9
18	31	24	64	85	30	107	30	26	74	8.8	6.7	4.7
19	47	21	54	66	37	70	27	21	48	8.6	8.4	12
20	23	20	35	60	57	48	26	19	22	7.9	16	10
21	20	19	53	75	38	41	87	18	15	8.0	20	6.2
22	18	19	62	54	34	38	79	18	12	8.0	8.9	5.7
23	111	27	63	53	31	90	42	17	13	10	7.4	5.7
24	93	24	151	45	29	77	72	14	13	16	7.0	5.8
25	37	20	62	39	30	60	61	15	12	9.3	6.8	68
26	29	19	46	38	29	47	41	14	11	12	6.5	24
27	25	18	39	37	28	71	36	14	9.8	11	6.4	12
28	23	18	34	37	27	60	33	31	9.4	8.6	6.2	8.3
29	20	19	32	37	---	46	31	17	8.5	9.5	6.1	7.3
30	18	16	52	39	---	55	31	15	8.4	9.8	5.9	7.0
31	18	---	196	58	---	46	---	17	---	8.6	5.6	---
TOTAL	837.6	946	1864	1983	1068	1690	1148	796	473.7	394.0	274.2	264.7
MEAN	27.0	31.5	60.1	64.0	38.1	54.5	38.3	25.7	15.8	12.7	8.85	8.82
MAX	111	278	350	185	80	144	87	85	74	37	28	68
MIN	8.6	13	15	37	27	27	26	14	8.4	7.9	5.6	4.7
CFSM	1.17	1.37	2.61	2.78	1.66	2.37	1.66	1.12	.69	.55	.38	.38
IN.	1.35	1.53	3.01	3.21	1.73	2.73	1.86	1.29	.77	.64	.44	.43

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1991, BY WATER YEAR

MEAN	17.5	33.1	45.0	38.5	52.6	48.7	60.8	55.4	34.2	25.5	15.4	18.0
MAX	35.3	58.7	165	64.0	93.8	78.2	146	114	83.7	99.0	33.8	42.7
(WY)	1990	1984	1984	1991	1984	1983	1983	1989	1982	1984	1990	1985
MIN	7.85	8.61	10.3	15.7	25.9	23.4	16.4	25.2	12.9	10.0	7.95	5.47
(WY)	1983	1982	1990	1985	1987	1985	1985	1987	1985	1986	1983	1983

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1981 - 1991
ANNUAL TOTAL	14545.6	11739.2	
ANNUAL MEAN	39.9	32.2	36.9
HIGHEST ANNUAL MEAN			69.5
LOWEST ANNUAL MEAN			21.1
HIGHEST DAILY MEAN	509	350	1030
LOWEST DAILY MEAN	8.6	4.7	4.4
ANNUAL SEVEN-DAY MINIMUM	9.2	4.9	4.7
INSTANTANEOUS PEAK FLOW		773	2690
INSTANTANEOUS PEAK STAGE		4.13	5.52
INSTANTANEOUS LOW FLOW		4.6	4.2
ANNUAL RUNOFF (CFSM)	1.73	1.40	1.61
ANNUAL RUNOFF (INCHES)	23.53	18.99	21.82
10 PERCENT EXCEEDS	68	62	75
50 PERCENT EXCEEDS	27	26	24
90 PERCENT EXCEEDS	12	7.0	7.8

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 of bridge on Bucks Road, 4.5 miles northeast of Perkasie, and 5 miles southeast of Quakertown.

DRAINAGE AREA.--4.05 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 334.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Regulation by releases from Bradshaw Reservoir since August 1989. Peak flows are unregulated. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	9.3	10	17	11	9.8	12	41	42	56	60	60
2	43	9.0	9.9	14	10	9.9	11	39	33	60	61	61
3	43	9.0	18	13	10	23	11	40	25	51	61	61
4	43	9.0	153	12	10	37	10	41	25	60	61	60
5	43	9.0	19	11	10	16	10	42	24	60	61	52
6	43	9.4	14	12	16	22	11	63	25	60	61	60
7	43	9.4	12	13	27	28	13	53	25	51	61	55
8	45	9.4	12	11	17	14	13	44	25	59	61	61
9	95	10	11	48	13	12	17	43	34	61	62	62
10	44	84	11	25	12	11	24	43	54	60	62	61
11	43	18	10	17	11	11	27	43	59	60	62	62
12	43	12	10	70	10	11	28	42	61	60	62	62
13	43	11	10	28	10	11	25	40	60	50	61	62
14	43	11	9.7	16	17	12	25	42	59	60	59	55
15	43	10	15	16	13	20	26	44	59	60	60	62
16	33	10	23	79	10	14	26	43	53	60	60	62
17	42	10	13	39	9.8	12	26	42	56	60	60	62
18	55	11	31	17	9.8	39	29	43	59	58	60	61
19	110	10	20	14	12	19	26	43	60	44	47	23
20	146	9.8	13	13	20	14	25	42	60	41	48	54
21	42	9.4	23	15	13	12	82	42	60	41	49	60
22	43	9.4	21	12	12	11	42	33	60	42	57	60
23	107	11	30	11	11	30	32	39	60	36	60	60
24	80	12	60	11	10	22	45	40	60	47	60	61
25	144	11	16	10	10	16	37	40	60	50	60	58
26	115	10	13	9.8	10	14	29	40	60	40	58	60
27	43	10	12	9.8	10	23	28	42	60	56	53	60
28	43	10	12	10	9.8	16	27	44	58	61	53	58
29	43	9.8	13	10	---	13	25	42	45	60	54	58
30	22	9.8	49	11	---	17	37	40	49	60	53	55
31	9.8	---	68	16	---	13	---	39	---	61	52	---
MEAN	57.3	12.8	23.9	19.7	12.3	17.2	26.0	42.4	49.0	54.4	58.0	58.3
MAX	146	84	153	79	27	39	82	63	61	61	62	62
MIN	9.8	9.0	9.7	9.8	9.8	9.8	10	33	24	36	47	23
†	-41.4	-10.0	-8.7	-9.8	-10.0	-9.9	-22.3	-42.1	-49.2	-53.3	-56.4	-57.1
MEAN‡	15.9	2.8	15.2	9.9	2.3	7.3	3.7	0.3	0	1.1	1.6	1.2
CFSM‡	3.93	.69	3.75	2.44	.57	1.80	.91	.07	0	.27	.40	.30
IN.‡	4.52	.77	4.33	2.82	.59	2.08	1.02	.09	0	.31	.46	.33

† Release from Bradshaw Reservoir, furnished by Philadelphia Electric Company.

‡ Adjusted for releases from Bradshaw Reservoir.

SCHUYLKILL RIVER BASIN

01472620 EAST BRANCH PERKIOMEN CREEK NEAR DUBLIN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.1	17.9	16.2	15.6	11.1	22.3	17.1	33.5	37.5	33.9	44.3	46.9
MAX	57.3	27.6	23.9	22.8	15.0	42.2	26.0	42.4	51.1	54.4	59.3	58.3
(WY)	1991	1990	1991	1990	1990	1990	1991	1991	1990	1991	1990	1991
MIN	.16	12.8	1.96	4.43	6.00	7.42	4.49	18.1	12.5	2.73	15.6	25.7
(WY)	1989	1991	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1989 - 1991
ANNUAL MEAN	37.4	\$7.00	27.0
HIGHEST ANNUAL MEAN			36.1
LOWEST ANNUAL MEAN			9.34
HIGHEST DAILY MEAN	288	Jun 19	418
LOWEST DAILY MEAN	1.4	Mar 11	.01
ANNUAL SEVEN-DAY MINIMUM	2.5	Apr 17	.02
INSTANTANEOUS PEAK FLOW			442
INSTANTANEOUS PEAK STAGE			4.01
ANNUAL RUNOFF (CFSM)		\$ 1.73	\$ 1.28
ANNUAL RUNOFF (INCHES)		\$23.47	\$17.32
10 PERCENT EXCEEDS	62		61
50 PERCENT EXCEEDS	35		39
90 PERCENT EXCEEDS	9.7		10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1988, BY WATER YEAR

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	1.39	9.48	10.0	5.83	13.0	8.11	8.24	7.37	1.33	5.76	.35	2.71
MAX	2.56	14.7	20.9	9.16	19.1	15.7	17.2	21.0	4.72	20.9	.87	13.0
(WY)	1986	1986	1984	1986	1984	1984	1984	1984	1984	1984	1984	1985
MIN	.14	1.92	3.05	2.61	4.26	2.21	.91	.41	.090	.13	.025	.027
(WY)	1987	1985	1988	1985	1987	1985	1985	1986	1987	1985	1987	1986

SUMMARY STATISTICS	WATER YEARS 1984 - 1988
ANNUAL MEAN	6.09
HIGHEST ANNUAL MEAN	11.7
LOWEST ANNUAL MEAN	3.60
HIGHEST DAILY MEAN	372
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	2270
INSTANTANEOUS PEAK STAGE	8.41
ANNUAL RUNOFF (CFSM)	1.50
ANNUAL RUNOFF (INCHES)	20.42
10 PERCENT EXCEEDS	11
50 PERCENT EXCEEDS	1.0
90 PERCENT EXCEEDS	.05

‡ Adjusted for releases from Bradshaw Reservoir.

a From slope-area measurement.

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 of Bergey's Mill bridge, 2 miles east of Schwenksville.

DRAINAGE.--58.7 mi².

PERIOD OF RECORD.--January 1991 to September 1991.

GAGE.--Pressure sensor. Elevation of gage is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for periods of estimated discharge which are poor. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	59	49	95	81	97	61	70	60
2	---	---	---	---	53	55	82	76	70	82	69	63
3	---	---	---	---	52	91	70	70	55	107	68	63
4	---	---	---	---	54	369	63	67	50	89	68	63
5	---	---	---	---	52	177	59	67	48	129	67	73
6	---	---	---	---	61	124	56	204	●50	103	67	57
7	---	---	---	---	201	300	53	320	●48	120	68	62
8	---	---	---	---	165	133	50	121	47	97	68	57
9	---	---	---	---	114	98	49	98	46	●92	94	62
10	---	---	---	---	93	83	52	89	61	●86	147	63
11	---	---	---	---	80	71	49	81	75	●81	78	62
12	---	---	---	---	65	63	50	76	111	●80	73	62
13	---	---	---	---	60	60	47	73	82	230	72	61
14	---	---	---	---	83	58	53	68	76	186	70	60
15	---	---	---	---	103	94	63	70	77	117	●70	60
16	---	---	---	---	63	110	78	63	77	91	70	62
17	---	---	---	---	61	80	59	63	72	67	67	64
18	---	---	---	---	183	50	361	76	64	67	66	62
19	---	---	---	---	133	54	258	65	56	98	61	●67
20	---	---	---	---	108	115	139	58	55	81	57	250
21	---	---	---	---	140	91	100	373	53	●70	52	143
22	---	---	---	---	118	78	84	419	54	●69	54	76
23	---	---	---	---	94	68	254	173	49	●68	59	73
24	---	---	---	---	96	60	270	277	56	●66	62	69
25	---	---	---	---	79	60	178	299	●54	●65	66	67
26	---	---	---	---	69	58	123	140	●51	●64	113	66
27	---	---	---	---	67	54	171	108	●54	●64	101	61
28	---	---	---	---	55	49	178	91	152	63	72	64
29	---	---	---	---	52	---	109	78	77	61	75	58
30	---	---	---	---	51	---	147	77	72	57	73	62
31	---	---	---	---	96	---	123	---	74	---	72	54
TOTAL	---	---	---	---	2156	4510	3262	2608	2049	2802	2462	2139
MEAN	---	---	---	---	77.0	145	109	84.1	68.3	90.4	79.4	71.3
MAX	---	---	---	---	201	369	419	320	111	230	250	255
MIN	---	---	---	---	49	49	47	49	46	52	54	35
†	---	---	---	---	9.9	10.0	9.9	22.3	42.1	49.2	53.3	56.4
MEAN‡	---	---	---	---	67.0	135	86.7	42.0	19.1	37.1	23.0	14.2
CFSM‡	---	---	---	---	1.14	2.30	1.48	.72	.33	.63	.39	.24
IN.‡	---	---	---	---	1.19	2.57	1.65	.83	.36	.73	.45	.27

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1991, BY WATER YEAR (SINCE REGULATION)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
1991	95.8	95.8	95.8	1991	77.0	77.0	77.0	1991	145	145	145	1991
1991	77.0	77.0	77.0	1991	109	109	109	1991	84.1	84.1	84.1	1991
1991	68.3	68.3	68.3	1991	90.4	90.4	90.4	1991	79.4	79.4	79.4	1991
1991	71.3	71.3	71.3	1991	71.3	71.3	71.3	1991	71.3	71.3	71.3	1991

SUMMARY STATISTICS

FOR 1991 WATER YEAR

HIGHEST DAILY MEAN	419	Apr 22
LOWEST DAILY MEAN	35	Sep 20
ANNUAL SEVEN-DAY MINIMUM	49	Jun 3
INSTANTANEOUS PEAK FLOW	868	Apr 21
INSTANTANEOUS PEAK STAGE	5.15	Apr 21

† Diversion to the East Branch Perkiomen from Bradshaw Reservoir, equivalent in ft³/s.

‡ Adjusted for diversion from Bradshaw Reservoir.

SCHUYLKILL RIVER BASIN

01473000 PERKIOMEN CREEK AT GRATERFORD, PA

LOCATION.--Lat 40°13'46", long 75°27'07", Montgomery County, Hydrologic Unit 02040203, on left bank 1,650 ft upstream from highway bridge at Graterford, 0.5 mi upstream from Landis Brook and 2.5 mi north of Collegeville.

DRAINAGE AREA.--279 mi².

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. 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. Some regulation by Green Lane Reservoir (station 01472200) 10.5 mi upstream since December 21, 1956. Diversion to the East Branch Perkiomen from Bradshaw reservoir since August 1989. Satellite telemetry at station.

AVERAGE DISCHARGE.--77 years, 392 ft³/s, 19.07 in/yr, adjusted for storage since December 1956, and diversion since August 1989.

REVISIONS.--Revised adjusted monthly and annual means and runoff figures for 1989 and 1990 water years are given below. Revisions were made to include diversions to the Perkiomen Creek from Bradshaw Reservoir.

1989	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	3155	18947	5942	10680	12446	17360	14265	40235	19627	11806	10758	16667
MEAN	102	632	192	345	444	560	475	1298	654	381	347	556
MAX	523	4990	596	1710	2470	2160	1470	6110	2910	1690	2370	7150
MIN	60	96	90	130	110	209	147	159	191	107	82	58
†	0	0	0	0	0	0	0	0	0	0	-4.6	-7.87
MEAN‡	98	646	189	347	444	566	469	1299	654	380	341	549
CFSM‡	.35	2.32	.68	1.24	1.59	2.03	1.68	4.66	2.34	1.36	1.22	1.97
IN.‡	.41	2.58	.78	1.43	1.66	2.34	1.88	5.37	2.62	1.57	1.41	2.20

CAL YR 1988	TOTAL	130895.0	MEAN	358	MAX	4990	MIN	49	MEAN‡	358	CFSM‡	1.28	IN.‡	17.45
WTR YR 1989	TOTAL	181888	MEAN	498	MAX	7150	MIN	58	MEAN‡	498	CFSM‡	1.79	IN.‡	24.25

1990	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	17767	7635	5074	33438	15032	8596	14502	29715	13783	5087	9046	3743
MEAN	573	254	164	1079	537	277	483	959	459	164	292	125
MAX	4000	527	230	6820	1120	677	2060	8750	3110	735	1410	245
MIN	123	166	132	195	243	189	193	174	149	104	109	97
†	-17.2	-25.3	-23.3	-9.4	-9.9	-42.0	-16.3	-28.0	-36.3	-46.2	-60.2	-59.5
MEAN‡	557	228	139	1077	522	235	466	936	417	112	237	65.0
CFSM‡	2.00	.82	.50	3.86	1.87	.84	1.67	3.35	1.50	.40	.85	.23
IN.‡	2.30	.91	.57	4.45	1.95	.97	1.86	3.87	1.67	.46	.98	.26

CAL YR 1989	TOTAL	184320	MEAN	505	MAX	7150	MIN	58	MEAN‡	498	CFSM‡	1.78	IN.‡	24.23
WTR YR 1990	TOTAL	163418	MEAN	448	MAX	8750	MIN	97	MEAN‡	416	CFSM‡	1.49	IN.‡	20.25

† Diversion to Perkiomen Creek basin from Bradshaw Reservoir.

‡ Adjusted for diversion from Bradshaw Reservoir and change in contents of Green Lane Reservoir.

SCHUYLKILL RIVER BASIN

01473000 PERKIOMEN CREEK AT GRATERFORD, PA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	128	109	1100	327	222	406	296	220	116	122	106
2	97	119	102	645	261	227	363	272	182	128	119	110
3	93	113	121	513	244	273	311	249	151	152	114	110
4	92	107	3850	427	244	1650	280	227	139	141	121	111
5	99	104	1150	367	242	887	268	215	136	180	111	123
6	99	110	516	366	273	505	269	517	136	160	109	107
7	98	107	383	469	788	1310	256	1300	123	194	106	113
8	89	102	314	365	748	593	234	465	119	222	108	105
9	1150	103	271	837	487	418	217	340	117	176	142	110
10	302	1830	245	983	398	360	219	301	125	147	413	110
11	185	1570	213	719	349	307	203	266	144	137	155	110
12	159	479	192	3490	288	267	177	240	251	136	122	108
13	285	317	188	1510	258	254	177	226	190	491	115	108
14	999	244	176	784	357	265	227	207	166	520	116	107
15	316	207	196	560	541	422	300	211	153	194	117	103
16	215	184	660	1990	325	512	457	200	147	145	118	107
17	172	179	408	3010	270	371	300	184	141	135	111	110
18	195	172	795	987	253	1370	319	275	161	128	110	112
19	837	151	813	620	264	1190	283	190	267	120	113	116
20	311	142	449	507	509	607	242	170	223	120	374	94
21	227	129	473	653	450	433	1350	160	177	108	331	99
22	192	124	893	533	354	374	1840	152	156	113	162	101
23	773	151	654	394	297	1020	727	136	154	114	131	100
24	1840	197	2610	350	253	1250	923	134	150	125	121	105
25	514	161	884	292	252	773	1250	135	144	119	114	626
26	340	140	506	276	257	532	583	127	138	187	113	321
27	249	126	389	256	261	659	446	119	132	276	114	188
28	221	122	356	248	234	788	372	684	129	148	117	141
29	200	129	409	259	---	482	316	241	122	139	112	120
30	174	119	740	258	---	539	302	191	112	135	113	119
31	144	---	3500	438	---	513	---	178	---	125	106	---
TOTAL	10765	7866	22565	24206	9784	19373	13617	8608	4705	5331	4450	4100
MEAN	347	262	728	781	349	625	454	278	157	172	144	137
MAX	1840	1830	3850	3490	788	1650	1840	1300	267	520	413	626
MIN	89	102	102	248	234	222	177	119	112	108	106	94
†	-41.1	-10.0	-8.7	-9.8	-10.0	-9.9	-22.3	-42.1	-49.2	-53.3	-56.4	-57.1
MEAN‡	307	252	728	766	337	616	431	234	105	119	77.4	72.7
CFSM‡	1.10	.90	2.61	2.74	1.21	2.21	1.55	.84	.38	.43	.28	.26
IN.‡	1.27	1.01	3.01	3.17	1.26	2.55	1.73	.97	.42	.49	.32	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1991, BY WATER YEAR (SINCE REGULATION)

	MEAN	180	347	490	541	622	702	632	428	267	203	140	214
MAX	657	1182	1491	2071	1241	1525	1759	1298	1330	1286	493	1163	
(WY)	1980	1973	1984	1979	1971	1978	1983	1989	1972	1984	1971	1971	
MIN	28.1	43.8	63.3	75.6	156	186	128	84.0	52.9	41.7	37.4	24.8	
(WY)	1958	1958	1966	1981	1980	1985	1985	1965	1965	1965	1957	1957	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1957 - 1991
ANNUAL TOTAL	174138	135370	
ANNUAL MEAN	477	371	396
HIGHEST ANNUAL MEAN		‡337	767
LOWEST ANNUAL MEAN			165
HIGHEST DAILY MEAN	8750	3850	14800
LOWEST DAILY MEAN	89	89	13
ANNUAL SEVEN-DAY MINIMUM	95	95	19
INSTANTANEOUS PEAK FLOW		5900	35800
INSTANTANEOUS PEAK STAGE		6.65	17.08
INSTANTANEOUS LOW FLOW		67	13
ANNUAL RUNOFF (CFSM)	1.71	1.33	1.42
ANNUAL RUNOFF (INCHES)	23.2	18.05	19.28
10 PERCENT EXCEEDS	971	786	823
50 PERCENT EXCEEDS	249	222	168
90 PERCENT EXCEEDS	117	110	57

† Diversion to Perkiomen Creek basin from Bradshaw Reservoir.

‡ Adjusted for diversion from Bradshaw Reservoir and change in contents of Green Lane Reservoir.

SCHUYLKILL RIVER BASIN

01473000 PERKIOMEN CREEK AT GRATERFORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1956, BY WATER YEAR (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	1032	1923	1925	1934	1915	1946	1941	1921	1954	1930	1932

SUMMARY STATISTICS

WATER YEARS 1915 - 1956

ANNUAL TOTAL	
ANNUAL MEAN	389
HIGHEST ANNUAL MEAN	689 1928
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
INSTANTANEOUS PEAK FLOW	^a 39900 Jul 9 1935
INSTANTANEOUS PEAK STAGE	18.26 Jul 9 1935
INSTANTANEOUS LOW FLOW	4.7 Oct 5 1941
ANNUAL RUNOFF (CFSM)	1.40
ANNUAL RUNOFF (INCHES)	18.96
10 PERCENT EXCEEDS	800
50 PERCENT EXCEEDS	166
90 PERCENT EXCEEDS	42

^a From rating curve extended above 12,000 ft³/s, on basis of slope-area measurement at gage height 16.23 ft.

SCHUYLKILL RIVER BASIN

01473120 SKIPPACK CREEK NEAR COLLEGEVILLE, PA

LOCATION.--Lat 40°09'52", long 75°26'01", Montgomery County, Hydrologic Unit 02040203, on right bank 60 ft downstream from two-span highway bridge, 1.5 mi upstream from mouth, and 2 mi southeast of Collegeville.

DRAINAGE AREA.--53.7 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 99.03 ft above National Geodetic Vertical Datum of 1929. Prior to June 15, 1967, nonrecording gage at site 60 ft upstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	9.1	11	158	42	24	74	41	24	7.1	9.3	7.9
2	5.4	8.8	10	105	37	29	63	35	16	7.2	7.6	6.6
3	5.8	8.3	15	80	35	40	52	30	13	14	6.4	6.2
4	6.3	8.0	535	65	33	233	46	27	14	10	6.3	6.7
5	6.5	7.3	107	53	31	102	43	23	13	15	5.3	9.9
6	6.8	7.8	56	51	43	76	42	357	12	13	5.7	9.8
7	6.0	9.2	42	58	113	182	36	281	11	65	5.4	7.6
8	5.4	8.6	34	49	91	85	32	93	10	29	4.4	6.6
9	23	8.3	28	384	66	68	30	68	9.5	13	43	5.8
10	11	171	25	248	57	58	28	56	8.9	9.8	238	5.4
11	7.0	82	22	148	49	49	24	45	8.4	8.5	28	5.7
12	7.6	28	20	1170	41	43	21	38	17	7.3	15	5.3
13	10	22	19	263	39	40	21	35	13	633	12	4.3
14	11	18	17	136	60	44	31	30	9.8	309	11	4.7
15	7.9	16	38	99	56	86	33	30	8.6	40	20	6.0
16	7.3	15	111	269	38	65	40	24	8.3	24	13	4.6
17	7.4	13	47	395	37	49	26	21	7.6	16	8.8	4.1
18	10	12	183	136	31	258	27	28	13	13	7.2	4.8
19	74	11	123	97	37	170	23	19	48	11	29	5.1
20	14	11	64	81	60	97	21	16	18	11	962	7.2
21	10	11	77	134	47	75	398	16	13	8.5	172	6.4
22	8.4	10	103	90	42	65	275	15	11	10	57	4.6
23	68	13	90	83	36	275	116	14	10	21	34	4.0
24	109	35	483	60	32	209	184	13	12	32	25	4.5
25	26	18	129	51	32	114	169	12	9.6	12	20	345
26	17	14	80	42	30	84	93	11	8.1	39	16	96
27	14	12	63	39	28	99	74	9.3	7.7	55	15	30
28	12	12	62	38	25	94	60	242	7.1	15	13	19
29	10	12	62	35	---	69	50	33	7.1	12	12	15
30	9.5	11	413	35	---	130	47	22	7.2	16	11	13
31	9.6	---	705	76	---	93	---	19	---	11	9.4	---
TOTAL	531.3	622.4	3774	4728	1268	3105	2179	1703.3	375.9	1487.4	1821.8	661.8
MEAN	17.1	20.7	122	153	45.3	100	72.6	54.9	12.5	48.0	58.8	22.1
MAX	109	171	705	1170	113	275	398	357	48	633	962	345
MIN	5.4	7.3	10	35	25	24	21	9.3	7.1	7.1	4.4	4.0
CFSM	.32	.39	2.27	2.84	.84	1.87	1.35	1.02	.23	.89	1.09	.41
IN.	.37	.43	2.61	3.28	.88	2.15	1.51	1.18	.26	1.03	1.26	.46

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	34.9	76.1	104	117	115	126	105	76.7	53.5	49.3	33.8	43.8														
MAX	154	236	315	390	274	270	316	230	189	345	175	314														
(WY)	1980	1973	1974	1979	1979	1977	1983	1984	1982	1975	1971	1971														
MIN	2.99	12.8	9.59	9.25	19.3	22.1	17.6	15.1	6.59	3.11	.70	1.76														
(WY)	1969	1975	1981	1981	1980	1985	1985	1986	1969	1966	1966	1968														

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1966 - 1991
ANNUAL TOTAL	26020.9	22257.9	
ANNUAL MEAN	71.3	61.0	78.3
HIGHEST ANNUAL MEAN			131
LOWEST ANNUAL MEAN			32.5
HIGHEST DAILY MEAN	1760	May 29	6600
LOWEST DAILY MEAN	3.3	Jul 1	.20
ANNUAL SEVEN-DAY MINIMUM	4.5	Sep 8	.29
INSTANTANEOUS PEAK FLOW			4740
INSTANTANEOUS PEAK STAGE			9.45
INSTANTANEOUS LOW FLOW			2.4
ANNUAL RUNOFF (CFSM)	1.33		1.14
ANNUAL RUNOFF (INCHES)	18.03		15.42
10 PERCENT EXCEEDS	130		139
50 PERCENT EXCEEDS	29		28
90 PERCENT EXCEEDS	7.1		6.0

a From rating curve extended above 8,400 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmark.

SCHUYLKILL RIVER BASIN

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA.

LOCATION.--Lat 40°04'45", long 75°27'40", Chester County, Hydrologic Unit 02040202, on right bank, 100 ft. upstream of Pennsylvania turnpike bridge, 0.9 miles downstream of confluence with Little Valley Creek, near Valley Forge.

DRAINAGE AREA.--20.8 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 108.62 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	16	30	27	21	27	24	21	20	16	18
2	17	17	15	27	26	26	26	24	20	17	16	18
3	17	17	29	26	25	37	25	26	20	16	18	18
4	17	17	99	24	25	44	27	26	20	17	18	18
5	17	17	25	24	25	26	27	25	19	17	16	22
6	17	19	22	24	26	27	27	66	19	17	15	18
7	17	18	20	26	29	32	26	34	19	37	15	18
8	17	17	20	24	25	26	26	27	19	18	15	18
9	19	17	19	61	24	25	26	26	18	16	40	17
10	18	81	19	34	24	24	26	25	18	16	58	17
11	18	26	19	34	24	23	25	26	18	16	17	17
12	20	20	19	173	24	24	25	26	23	15	16	17
13	22	18	19	40	24	23	28	25	17	309	16	16
14	19	18	18	33	28	28	31	25	16	54	75	17
15	17	17	30	32	24	34	35	24	17	24	38	19
16	17	17	31	60	23	27	27	23	24	23	19	16
17	17	17	20	43	23	24	25	23	24	19	18	18
18	49	16	42	33	23	56	25	23	60	19	17	19
19	27	16	25	32	25	32	24	22	29	19	21	16
20	18	16	21	31	24	28	24	22	20	19	292	20
21	16	16	30	41	23	26	107	21	19	19	33	18
22	17	15	24	30	22	26	43	22	19	17	24	17
23	35	23	26	29	22	69	32	21	19	17	21	17
24	25	18	56	28	22	39	55	21	18	17	20	17
25	20	16	25	27	22	32	35	21	18	17	19	167
26	19	16	23	27	22	29	30	20	17	29	19	39
27	18	16	22	26	22	32	29	20	17	20	19	20
28	18	16	24	26	22	29	28	69	17	17	19	19
29	17	16	25	26	---	27	28	22	16	18	19	18
30	17	15	68	26	---	44	27	31	16	17	19	16
31	17	---	58	33	---	30	---	26	---	17	19	---
TOTAL	616	585	909	1130	675	970	946	836	617	913	987	705
MEAN	19.9	19.5	29.3	36.5	24.1	31.3	31.5	27.0	20.6	29.5	31.8	23.5
MAX	49	81	99	173	29	69	107	69	60	309	292	167
MIN	16	15	15	24	22	21	24	20	16	15	15	16
CFSM	.96	.94	1.41	1.75	1.16	1.50	1.52	1.30	.99	1.42	1.53	1.13
IN.	1.10	1.05	1.63	2.02	1.21	1.73	1.69	1.50	1.10	1.63	1.77	1.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1991, BY WATER YEAR

	MEAN	21.7	29.8	29.9	30.1	35.3	38.3	45.4	42.9	31.6	30.6	26.5	26.3
MAX	34.7	48.8	60.8	40.6	53.5	65.5	98.8	77.5	49.9	46.4	36.3	50.7	
(WY)	1990	1987	1984	1990	1984	1983	1983	1984	1984	1984	1989	1989	
MIN	15.0	19.5	18.9	16.8	24.1	17.9	18.1	25.4	16.9	18.5	19.1	15.4	
(WY)	1987	1991	1989	1985	1991	1985	1985	1985	1985	1985	1983	1986	

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1983 - 1991
ANNUAL TOTAL	11237	9889	
ANNUAL MEAN	30.8	27.1	32.3
HIGHEST ANNUAL MEAN			47.0
LOWEST ANNUAL MEAN			23.0
HIGHEST DAILY MEAN	344	May 29	684
LOWEST DAILY MEAN	15	Nov 22	12
ANNUAL SEVEN-DAY MINIMUM	16	Nov 26	12
INSTANTANEOUS PEAK FLOW		800	1580
INSTANTANEOUS PEAK STAGE		7.21	9.02
ANNUAL RUNOFF (CFSM)	1.48	1.30	1.55
ANNUAL RUNOFF (INCHES)	20.10	17.69	21.13
10 PERCENT EXCEEDS	42	35	54
50 PERCENT EXCEEDS	26	22	25
90 PERCENT EXCEEDS	17	17	16

^a Also Nov. 30, Dec. 2, July 12, Aug. 6-8.

^b Also Oct. 6, 10, 11, 17, 18, 1983, Sept. 14, 1985, Sept. 13-16, 29, 30, 1986, Oct. 1, 10, 11, 1986 Jan. 18, 1988.

SCHUYLKILL RIVER BASIN

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA

LOCATION.--Lat 40°00'54", long 75°12'24", Philadelphia County, Hydrologic Unit 02040203, on left bank 100 ft upstream from dam at Ridge Ave., 750 ft upstream from mouth, 1,000 ft northwest of Gustine Lake in Philadelphia.

DRAINAGE AREA.--64.0 mi².

PERIOD OF RECORD.--June 1897 to September 1903, January 1905 to July 1906, October 1965 to current year. Records for 1971-74 published in WDR PA-81-1. Prior to October 1965 published as "near Philadelphia".

REVISED RECORDS.--WSP 1302: 1905; WDR PA-89-1: 1988.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 26.41 ft above National Geodetic Vertical Datum of 1929. Prior to October 1965, water-stage recorder at about same site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	35	33	121	82	60	91	64	●68	33	34	41
2	38	35	33	97	75	62	85	57	●51	33	33	39
3	37	34	72	84	74	135	81	54	●45	36	33	39
4	38	31	725	74	69	337	82	59	●47	36	48	37
5	39	31	107	64	66	93	79	57	●44	35	31	45
6	38	29	62	68	76	85	74	548	●43	34	26	41
7	42	36	51	75	106	176	70	293	●42	76	28	40
8	●42	37	47	72	91	82	66	105	●41	49	29	34
9	●50	34	46	405	79	70	72	89	●40	32	630	31
10	44	353	44	212	76	66	65	80	●40	31	398	31
11	43	125	43	152	72	62	59	83	●40	33	65	32
12	37	50	43	1140	69	63	57	78	●80	33	43	32
13	38	46	43	225	68	64	61	73	●51	1010	31	31
14	43	44	44	138	98	79	76	67	●39	355	34	30
15	40	43	83	118	85	140	92	63	38	61	97	32
16	32	43	162	355	67	103	86	56	36	44	53	29
17	31	46	60	270	64	74	65	56	47	37	34	27
18	118	48	220	138	65	256	71	52	449	38	35	28
19	174	46	120	117	85	161	60	50	124	34	182	32
20	44	37	63	109	98	96	54	47	50	34	942	68
21	43	36	90	187	78	82	559	47	39	31	387	33
22	41	44	115	129	70	78	285	46	35	39	67	29
23	85	54	80	100	66	265	110	51	37	55	53	28
24	114	68	439	95	63	189	193	47	37	58	52	30
25	47	46	112	91	62	106	220	47	41	41	47	625
26	41	40	76	82	65	93	96	45	36	257	43	192
27	39	36	76	81	64	103	89	43	37	147	32	57
28	45	36	80	82	61	105	84	607	36	47	31	38
29	43	36	88	77	---	90	78	71	36	44	32	36
30	36	38	342	83	---	146	71	46	34	40	36	35
31	40	---	467	133	---	112	---	37	---	38	41	---
TOTAL	1579	1617	4066	5174	2094	3633	3231	3118	1783	2871	3627	1822
MEAN	50.9	53.9	131	167	74.8	117	108	101	59.4	92.6	117	60.7
MAX	174	353	725	1140	106	337	559	607	449	1010	942	625
MIN	31	29	33	64	61	60	54	37	34	31	26	27
CFSM	.80	.84	2.05	2.61	1.17	1.83	1.68	1.57	.93	1.45	1.83	.95
IN.	.92	.94	2.36	3.01	1.22	2.11	1.88	1.81	1.04	1.67	2.11	1.06

● Estimated.

SCHUYLKILL RIVER BASIN

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.6	85.9	110	118	126	143	142	122	91.8	84.8	77.3	76.3
MAX	176	265	275	378	266	275	410	229	244	230	171	245
(WY)	1980	1973	1984	1979	1979	1983	1983	1984	1989	1975	1973	1971
MIN	23.1	17.7	22.7	24.3	37.0	40.7	41.3	50.8	32.0	24.3	19.8	23.0
(WY)	1966	1966	1966	1981	1969	1985	1985	1986	1986	1966	1966	1968

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1966 - 1991	
ANNUAL TOTAL	37573		34615			
ANNUAL MEAN	103		94.8		103	
HIGHEST ANNUAL MEAN					160	
LOWEST ANNUAL MEAN					50.6	
HIGHEST DAILY MEAN	1280	May 30	1140	Jan 12	3320	Sep 27 1985
LOWEST DAILY MEAN	28	Aug 2	26	Aug 6	9.7	Sep 13 1966
ANNUAL SEVEN-DAY MINIMUM	29	Jul 29	30	Sep 12	12	Aug 27 1966
INSTANTANEOUS PEAK FLOW			3150	Aug 20	6870	Jun 29 1973
INSTANTANEOUS PEAK STAGE			5.62	Aug 20	7.92	Jun 29 1973
INSTANTANEOUS LOW FLOW			21	Aug 7	2.0	Jul 18 1905
ANNUAL RUNOFF (CFSM)	1.61		1.48		1.61	
ANNUAL RUNOFF (INCHES)	21.84		20.12		21.94	
10 PERCENT EXCEEDS	162		175		176	
50 PERCENT EXCEEDS	70		57		60	
90 PERCENT EXCEEDS	37		33		28	

a Minimum observed outside computed statistical period.

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National stream-quality accounting network station)

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from Spring Garden Street Bridge, in Philadelphia, and 8.7 mi upstream from mouth. Water-quality sampling site 1.6 mi upstream.

DRAINAGE AREA.--1,893 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 214, 261, 301, 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5.74 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft (12 m) upstream from Fairmount Dam at same datum.

REMARKS.--Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Reservoir (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee, capacity 518,600,000. Records of discharge do not include diversion above station by City of Philadelphia for municipal water supply. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869, reached a stage of 17.0 ft, discharge, 135,000 ft³/s, from rating extended above 46,000 ft³/s. Flood of Mar. 1, 1902, reached a stage of 14.8 ft, discharge, 98,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	863	1840	1330	8120	3000	1760	3570	2610	1320	577	570	363
2	788	1660	1120	6330	2450	1740	3280	2450	1350	564	501	344
3	905	1350	1270	5460	2240	2180	2970	2250	1180	578	495	407
4	904	1310	9380	4800	2210	4900	2670	2010	1130	582	552	378
5	876	1380	14200	4140	2210	5800	2470	1950	1020	768	552	428
6	1060	1280	9330	3670	2430	5100	2430	3380	987	846	508	418
7	952	1740	6490	3820	3260	5980	2400	5710	915	1380	501	384
8	875	1880	4690	3690	4360	5090	2280	4050	856	1500	496	427
9	1910	1320	3870	4530	3590	4070	2140	3150	799	922	1890	482
10	1720	2670	3420	5090	3230	3590	2000	2740	809	806	3000	443
11	1080	10100	3100	4000	3070	3310	1880	2610	766	623	1760	438
12	1020	6590	2860	11300	2870	3100	1690	2330	1200	524	884	424
13	1520	4660	2600	7250	2570	2910	1690	2280	1380	5120	651	341
14	3820	3640	2190	4760	2740	2740	2010	2080	1130	6190	590	294
15	2950	3060	2290	4010	3590	3190	2190	2040	812	1630	1090	330
16	2060	2600	3450	5000	3260	3480	2710	2870	734	988	627	364
17	1640	2130	3130	10700	2820	2950	2630	2260	799	835	520	321
18	1580	2200	3500	8260	2680	3740	2270	2360	2030	689	580	333
19	4010	2150	4910	6770	2660	6030	1900	2300	1830	570	946	417
20	5340	1900	3760	5610	3000	4390	1920	1870	1360	487	4980	699
21	3700	1870	3500	5630	3220	3740	3920	1710	977	481	3850	414
22	3070	1640	4840	5670	2730	3470	7280	1700	787	582	1370	356
23	2880	1650	4680	4130	2410	4470	4630	1520	781	720	849	376
24	7420	2050	8730	3780	2210	6950	3970	1270	844	708	630	337
25	6940	1930	9820	3400	2170	5230	5710	1250	770	785	598	3560
26	5060	1710	7770	3010	2150	4720	3810	1160	743	981	589	3180
27	3770	1430	6280	2820	2100	4530	3200	1120	634	1150	507	1060
28	3120	1320	4990	2780	1950	5210	2950	5520	598	749	485	617
29	2860	1380	4860	2650	---	4220	2800	2660	555	676	465	499
30	2300	1280	5130	2590	---	4160	2630	1590	486	662	406	506
31	1960	---	11100	3020	---	4120	---	1500	---	629	341	---
TOTAL	78953	71720	158590	156790	77180	126870	88000	74300	29582	34302	31783	18940
MEAN	2547	2391	5116	5058	2756	4093	2933	2397	986	1107	1025	631
MAX	7420	10100	14200	11300	4360	6950	7280	5710	2030	6190	4980	3560
MIN	788	1280	1120	2590	1950	1740	1690	1120	486	481	341	294
CFM	1.35	1.26	2.70	2.67	1.46	2.16	1.55	1.27	.52	.58	.54	.33
IN.	1.55	1.41	3.12	3.08	1.52	2.49	1.73	1.46	.58	.67	.62	.37

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued
(National stream-quality accounting network station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1324	2284	3064	3283	3678	4687	4203	3173	2121	1644	1395	1402
MAX	4771	6272	9569	11400	8136	13320	11620	9943	11640	6434	7980	4863
(WY)	1956	1973	1984	1979	1939	1936	1983	1989	1972	1984	1933	1960
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 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1932 - 1991	
ANNUAL TOTAL	1113972		947010			
ANNUAL MEAN	3052		2595		2683	
HIGHEST ANNUAL MEAN					4791	
LOWEST ANNUAL MEAN					1014	
HIGHEST DAILY MEAN	27800	May 30	14200	Dec 5	93400	Jun 23 1972
LOWEST DAILY MEAN	699	Jul 28	294	Sep 14	.60	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	782	Sep 8	343	Sep 13	24	Sep 28 1941
INSTANTANEOUS PEAK FLOW			16100	Dec 5	103000	Jun 23 1972
INSTANTANEOUS PEAK STAGE			8.48	Dec 5	14.65	Jun 23 1972
ANNUAL RUNOFF (CFSM)	1.61		1.37		1.42	
ANNUAL RUNOFF (INCHES)	21.89		18.61		19.25	
10 PERCENT EXCEEDS	5620		5160		5820	
50 PERCENT EXCEEDS	2290		2150		1650	
90 PERCENT EXCEEDS	935		507		402	

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA--Continued

PERIOD OF RECORD.--October 1945 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to November 1980, January 1986 to May 1990 (discontinued).

ph: January 1968 to November 1980 (discontinued).

WATER TEMPERATURE: October 1945 to November 1980, January 1986 to May 1990 (discontinued).

DISSOLVED OXYGEN: January 1966 to November 1980, January 1986 to May 1990 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 972 microsiemens, June 25, 1965; minimum, 92 microsiemens, Feb. 26, 1979.

DISSOLVED OXYGEN: Maximum, 18.3 mg/L, Jan. 11, 1978; minimum, 0.2 mg/L July 8, 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH (STAND-ARD (00400))	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML) (31616)	STREP-TOCOCCI, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	
DEC 12...	1000	2900	280	7.6	--	4.0	742	3.4	13.1	E750	0	100	
MAR 26...	1100	4830	266	7.3	13.0	7.5	745	5.4	11.2	7400	E110	100	
JUN 11...	1040	927	418	8.9	27.5	26.0	741	3.5	7.8	E880	0	140	
SEP 17...	1030	378	610	8.1	32.0	25.5	740	1.3	8.9	E110	E250	220	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER WH IT FIELD (MG/L AS HCO3) (00450)	CAR-BONATE WATER WH IT FIELD (MG/L AS CO3) (00447)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	ALKA-LINITY WAT WH TOT IT FIELD (MG/L AS CACO3) (00419)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
DEC 12...	26	8.9	13	0.6		21	2.6	83	0	67	--	37	17
MAR 26...	26	9.1	14	0.6		22	2.7	65	0	53	--	47	17
JUN 11...	32	15	26	1		28	3.5	95	--	77	--	65	35
SEP 17...	50	22	43	1		30	6.1	122	0	--	100	130	60
DATE		FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)
DEC 12...	0.30	8.7	171	168	1340		0.23	2.86	0.040	2.90	0.160	0.160	0.64
MAR 26...	<0.10	8.0	162	168	2110		0.22	2.57	0.030	2.60	0.160	0.160	1.0
JUN 11...	0.20	1.5	241	237	603		0.33	2.43	0.070	2.50	<0.010	0.020	1.3
SEP 17...	0.30	5.9	374	397	382		0.51	3.84	0.060	3.90	0.170	0.150	0.65
DATE		NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
DEC 12...	0.80	0.130	0.100	0.090		60	3	28	<0.5	<1.0	<1	<3	7
MAR 26...	1.2	0.130	0.090	0.050		70	3	32	<0.5	3.0	3	<3	8
JUN 11...	1.3	0.270	0.160	0.130		40	2	33	<0.5	<1.0	<1	<3	7
SEP 17...	0.80	0.340	0.520	0.470		20	1	44	<0.5	<1.0	1	<3	14

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC 12...	140	4	12	120	0.3	<10	7	<1	<1.0	130	<6	33
MAR 26...	80	2	40	170	0.2	<10	14	<1	<1.0	130	<6	34
JUN 11...	54	6	8	46	0.1	<10	5	<1	<1.0	200	<6	12
SEP 17...	9	<1	10	46	0.4	<10	7	<1	<1.0	260	<6	18

SCHUYLKILL RIVER BASIN

01474505 SCHUYLKILL RIVER ABOVE PASSYUNK AVENUE AT PHILADELPHIA, PA

LOCATION.--Lat 39°55'18", long 75°12'16", Philadelphia County, Hydrologic Unit 02040203, on west face of Philadelphia Fire Department dock in the embayment off the main channel of the Schuylkill River on left bank 1,200 feet upstream from Passyunk Avenue at Philadelphia.

DRAINAGE AREA.--1,900 mi².

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

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

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 8.03 ft, Oct. 25, 1980; minimum, -5.88 ft, Dec. 27, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 5.99 ft, Dec. 4; minimum, -3.97 ft, Feb. 1.

Summaries of tide elevations during current year are as follows:

	Maximum elevation	High tide date	Minimum elevation	Low tide date	Mean high tide	Mean water level	Mean low tide
Oct.	5.56	11	- 3.40	19	4.59	1.38	- 2.15
Nov.	5.49	5	- 3.83	14	4.18	1.07	- 2.39
Dec.	5.99	4	- 3.51	25	4.29	1.13	- 2.29
Jan.	5.76	16	- 3.87	31	4.34	1.29	- 2.17
Feb.	5.85	14	- 3.97	1	3.90	.95	- 2.37
Mar.	5.16	19	- 3.06	11	4.47	1.52	- 1.33
Apr.	5.76	19	- 3.30	11	4.49	1.36	- 2.04
May	5.55	19	- 2.70	22	4.71	1.41	- 2.14
June	5.34	23	- 2.93	12	4.82	1.51	- 2.00
July	5.58	14	- 2.48	18	4.76	1.56	- 1.93
Aug.	5.76	10	- 2.64	11	4.64	1.42	- 2.12
Sept.	5.03	7,8	- 2.88	30	4.36	1.20	- 2.27

SCHUYLKILL RIVER BASIN

LAKES AND RESERVOIRS IN SCHUYLKILL RIVER BASIN

01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30", Schuylkill County, Hydrologic Unit 02040106, at dam on Still Creek, 1 mi upstream from mouth and 2.3 mi north of Hometown, Pa. DRAINAGE AREA, 7.19 mi². PERIOD OF RECORD, January 1933 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Panther Valley Water Co.).

Reservoir formed by earthfill dam, with ungated concrete spillway at elevation of 1,182.00 ft. Storage began in February 1933. Capacity at elevation of 1,182.00 ft is 8,290 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam. Records furnished by the borough of Tamaqua.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 8,570 acre-ft, Oct. 15, 1955, at elevation of , 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, at elevation of, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 8,290 acre-ft, many days Sept. - May, at elevation of, 1182.0 ft; minimum contents, 6,730 acre-ft, Sept. 30, at elevation of, 1,176.5 ft.

01470870 BLUE MARSH LAKE.--Lat 40°22'45", long 76°01'59", Berks County, Hydrologic Unit 02040203, at dam on Tulpehocken Creek, 0.8 mi upstream from gaging station on Tulpehocken Creek, 1.0 mi northeast of Blue Marsh, 1.9 mi upstream from Reber's Bridge, and 5.1 mi southeast of Bernville. DRAINAGE AREA, 175 mi². PERIOD OF RECORD, April 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

Lake formed by earthfill dam, with concrete ungated spillway at elevation of 307.00 ft. Storage began April 23, 1979. Capacity at elevation of 307.00 ft is 50,000 acre-ft. Dead storage is 3,000 acre-ft. Reservoir is used for flood control, water supply, and recreation. Figures herein represent total contents. Records furnished by U. S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,480 acre-ft, Apr. 17, 1983, at elevation of, 301.65 ft; minimum contents (after first filling), 15,770 acre-ft, Mar. 21, 1986, at elevation of, 283.00 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 23,400 acre-ft, July 14, at elevation of, 290.44 ft; minimum contents, 16,180 acre-ft, Nov. 8, at elevation of, 283.46 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 mi². PERIOD OF RECORD, December 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Philadelphia Suburban Water Co.).

Reservoir formed by concrete, gravity-type dam, with ungated spillway at elevation of 286.00 ft. Storage began December 21, 1956. Capacity at elevation of 286.00 ft is 13,430 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam. Records furnished by Philadelphia Suburban Water Co.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 17,030 acre-ft, June 23, 1972, at elevation of, 290.05 ft; minimum contents (after first filling), 1,270 acre-ft, Aug. 25, 1957, at elevation of, 251.60 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 14,230 acre-ft, Dec. 4, at elevation of, 286.90 ft; minimum contents, 11,470 acre-ft, Sept. 24, at elevation of, 283.61 ft.

SCHUYLKILL RIVER BASIN

LAKES AND RESERVOIRS IN SCHUYLKILL RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>01469200 Still Creek Reservoir</u>				<u>01470870 Blue Marsh Lake</u>		
Sept. 30	1,182.0	8,290	--	289.93	22,820	--
Oct. 31	1,182.0	8,290	0	284.98	17,600	- 84.9
Nov. 30	1,182.0	8,290	0	285.10	17,720	+ 2.0
Dec. 31	1,182.0	8,290	0	285.18	17,800	+ 1.3
CAL YR 1990	--	--	+ 0.6	--	--	- 0.1
Jan. 31	1,182.0	8,290	0	285.12	17,740	+ 1.0
Feb. 28	1,182.0	8,290	0	285.08	17,700	+ 0.7
Mar. 31	1,182.0	8,290	0	286.32	18,930	+ 20.0
Apr. 30	1,182.0	8,290	0	290.06	22,970	+ 67.9
May 31	1,182.0	8,290	0	290.08	22,990	+ 0.3
June 30	1,180.9	7,960	- 5.5	290.08	22,990	0
July 31	1,179.8	7,650	- 5.1	290.05	22,950	- 0.7
Aug. 31	1,178.4	7,260	- 6.3	290.06	22,970	+ 0.3
Sept. 30	1,176.5	6,730	- 8.8	290.06	22,970	0
WTR YR 1991	--	--	- 2.2	--	--	+ 0.2
<u>01472200 Green Lane Reservoir</u>						
Sept. 30	285.87	13,310	--			
Oct. 31	285.95	13,390	+ 1.3			
Nov. 30	285.95	13,390	0			
Dec. 31	286.54	13,900	+ 8.3			
CAL YR 1990	--	--	+ 0.9			
Jan. 31	286.14	13,550	- 5.7			
Feb. 28	285.99	13,420	- 2.3			
Mar. 31	286.07	13,490	+ 1.1			
Apr. 30	286.03	13,460	- 0.5			
May 31	285.91	13,350	- 1.8			
June 30	285.73	13,190	- 2.7			
July 31	285.74	13,200	+ 0.2			
Aug. 31	285.03	12,570	- 10.2			
Sept. 30	284.50	12,140	- 7.2			
WTR YR 1991	--	--	- 1.6			

DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA

LOCATION.--Lat 39°52'45", long 75°12'11", Philadelphia County, Hydrologic Unit 02040202, on right bank at outer end of L-shaped pier at Fort Mifflin, 0.4 mi downstream from mouth of Schuylkill River, in Philadelphia.

DRAINAGE AREA.--10,000 mi², approximately.

PERIOD OF RECORD.--July 1970 to June 1976, February 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1970 to December 1971, February 1981 to current year.

WATER TEMPERATURE: June 1972 to September 1976, February 1981 to current year.

INSTRUMENTATION.--Water-quality monitor July 1970 to June 1976. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Station not operated Dec. 1 to Feb. 28. Other interruptions in the record were due to malfunctions of the instrument..

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,230 microsiemens Oct. 27, 1981; minimum, 90 microsiemens Apr. 11, 17, 19, 29, 1983, April 29, 1984.

WATER TEMPERATURE: Maximum, 31.0°C Aug. 4-6, 13, 1975; minimum, 0.5°C Feb. 5, 1981.

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	352	295	315	222	189	201	---	---	---	---	---	---
2	344	295	315	217	186	200	---	---	---	---	---	---
3	337	305	318	210	188	197	---	---	---	---	---	---
4	337	305	319	230	186	204	---	---	---	---	---	---
5	330	290	314	215	181	195	---	---	---	---	---	---
6	334	308	316	269	198	215	---	---	---	---	---	---
7	361	312	328	283	203	221	---	---	---	---	---	---
8	359	317	328	339	205	245	---	---	---	---	---	---
9	383	315	329	300	210	236	---	---	---	---	---	---
10	376	330	342	400	207	248	---	---	---	---	---	---
11	371	332	342	410	210	326	---	---	---	---	---	---
12	366	334	346	360	200	246	---	---	---	---	---	---
13	442	332	357	281	195	227	---	---	---	---	---	---
14	581	337	429	273	183	220	---	---	---	---	---	---
15	469	352	388	269	168	211	---	---	---	---	---	---
16	393	337	354	256	166	199	---	---	---	---	---	---
17	403	332	354	269	151	198	---	---	---	---	---	---
18	374	325	342	256	144	188	---	---	---	---	---	---
19	369	315	334	266	151	189	---	---	---	---	---	---
20	380	291	328	269	154	193	---	---	---	---	---	---
21	322	278	307	261	161	195	---	---	---	---	---	---
22	320	278	306	239	166	190	---	---	---	---	---	---
23	312	285	302	254	161	187	---	---	---	---	---	---
24	297	262	282	303	168	210	---	---	---	---	---	---
25	281	248	267	259	183	205	---	---	---	---	---	---
26	264	234	250	271	183	210	---	---	---	---	---	---
27	252	219	237	278	188	217	---	---	---	---	---	---
28	261	213	226	247	195	215	---	---	---	---	---	---
29	254	189	218	344	195	245	---	---	---	---	---	---
30	221	195	206	288	212	243	---	---	---	---	---	---
31	223	187	202	---	---	---	---	---	---	---	---	---
MONTH	581	187	310	410	144	216	---	---	---	---	---	---

DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	305	219	253	273	197	222
2	---	---	---	---	---	---	307	209	254	285	195	222
3	---	---	---	---	---	---	297	202	241	258	192	217
4	---	---	---	---	---	---	270	209	231	266	205	222
5	---	---	---	---	---	---	278	200	228	266	200	223
6	---	---	---	---	---	---	270	209	227	329	205	250
7	---	---	---	---	---	---	288	209	237	327	214	260
8	---	---	---	---	---	---	310	209	253	305	212	257
9	---	---	---	---	---	---	297	212	243	319	227	259
10	---	---	---	---	---	---	288	207	241	300	219	248
11	---	---	---	---	---	---	280	212	237	292	217	241
12	---	---	---	---	---	---	280	217	237	312	214	243
13	---	---	---	---	---	---	288	224	248	324	222	255
14	---	---	---	---	---	---	327	231	259	329	222	262
15	---	---	---	---	---	---	341	234	261	314	222	264
16	---	---	---	---	---	---	358	229	269	319	241	271
17	---	---	---	---	---	---	346	229	274	305	244	262
18	---	---	---	---	---	---	314	234	266	292	239	256
19	---	---	---	---	---	---	307	236	260	300	246	263
20	---	---	---	---	---	---	310	239	264	305	246	263
21	---	---	---	---	---	---	522	244	295	280	241	261
22	---	---	---	292	229	255	385	244	305	297	249	267
23	---	---	---	332	222	271	305	222	256	297	253	268
24	---	---	---	334	241	292	246	205	231	317	253	272
25	---	---	---	322	229	276	278	212	240	322	261	278
26	---	---	---	288	207	250	312	219	258	327	258	273
27	---	---	---	278	217	242	300	217	244	327	261	282
28	---	---	---	295	207	255	283	214	237	371	268	303
29	---	---	---	307	231	263	278	209	231	358	270	303
30	---	---	---	314	227	259	266	200	225	310	275	287
31	---	---	---	302	219	254	---	---	---	297	273	284
MONTH	---	---	---	334	207	262	522	200	250	371	192	259
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	292	270	282	339	312	323	346	314	325	346	312	323
2	285	270	278	332	314	323	344	319	327	351	312	324
3	280	268	275	358	317	331	351	322	330	341	317	326
4	283	266	276	356	319	332	354	327	331	346	312	327
5	280	263	273	371	324	338	368	324	337	341	317	329
6	292	268	277	373	324	345	397	332	344	351	322	333
7	297	273	281	415	332	353	388	329	348	358	327	340
8	300	278	285	415	344	371	390	339	351	375	332	347
9	307	278	287	410	344	367	532	332	372	373	334	350
10	302	280	286	437	341	366	480	327	387	383	339	356
11	341	280	292	429	346	367	361	314	340	395	351	365
12	363	285	303	397	341	359	356	307	333	405	351	367
13	412	290	323	520	344	397	339	319	327	402	361	376
14	358	295	313	380	302	338	346	312	331	402	363	381
15	341	297	308	336	297	313	346	319	337	427	361	384
16	332	295	305	324	290	305	356	327	338	422	373	390
17	349	297	311	319	288	300	351	329	338	415	371	393
18	388	292	322	314	288	299	346	322	336	427	375	394
19	441	300	348	314	288	301	393	319	339	434	380	400
20	385	305	328	314	292	302	461	336	362	437	383	401
21	330	300	318	317	292	303	463	344	392	437	385	406
22	320	300	311	329	300	309	358	310	332	437	385	411
23	330	300	308	327	305	314	336	292	314	444	385	408
24	320	300	311	329	310	317	324	295	310	439	393	409
25	330	310	316	341	312	320	324	300	310	583	397	473
26	330	310	316	329	307	319	324	295	309	483	380	434
27	340	310	320	332	310	318	327	295	311	417	366	397
28	346	302	318	334	307	317	327	297	310	405	356	382
29	361	312	322	334	310	317	324	300	311	397	351	372
30	366	312	322	334	312	318	332	305	316	397	341	367
31	---	---	---	336	305	321	334	305	320	---	---	---
MONTH	441	263	304	520	288	329	532	292	334	583	312	375

DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	20.5	20.0	20.5	13.0	12.5	13.0	---	---	---	---	---	---
2	20.5	20.0	20.0	13.0	12.0	13.0	---	---	---	---	---	---
3	20.0	19.5	20.0	13.5	12.5	13.0	---	---	---	---	---	---
4	20.0	19.5	20.0	---	---	---	---	---	---	---	---	---
5	20.0	19.0	19.5	13.5	12.5	13.0	---	---	---	---	---	---
6	20.0	19.5	19.5	13.5	12.5	13.0	---	---	---	---	---	---
7	20.0	19.5	19.5	13.0	12.5	13.0	---	---	---	---	---	---
8	20.5	19.5	20.0	13.0	12.5	12.5	---	---	---	---	---	---
9	21.0	20.0	20.0	13.0	12.0	12.5	---	---	---	---	---	---
10	21.0	20.0	20.5	13.0	12.0	12.5	---	---	---	---	---	---
11	21.0	20.5	20.5	12.5	10.5	11.5	---	---	---	---	---	---
12	21.0	20.5	20.5	---	---	---	---	---	---	---	---	---
13	21.5	20.5	21.0	10.0	8.5	9.0	---	---	---	---	---	---
14	22.5	21.0	21.5	8.5	8.0	8.5	---	---	---	---	---	---
15	22.0	21.0	21.5	8.5	7.5	8.0	---	---	---	---	---	---
16	21.5	21.0	21.0	8.5	8.0	8.0	---	---	---	---	---	---
17	21.5	20.5	21.0	8.5	7.5	8.0	---	---	---	---	---	---
18	21.0	20.5	21.0	8.0	7.5	7.5	---	---	---	---	---	---
19	20.5	19.5	20.0	8.0	7.0	7.5	---	---	---	---	---	---
20	19.5	18.5	19.0	8.0	7.0	7.5	---	---	---	---	---	---
21	19.0	18.5	18.5	8.0	7.0	7.0	---	---	---	---	---	---
22	19.0	18.0	18.5	7.5	7.0	7.0	---	---	---	---	---	---
23	19.0	18.0	18.5	7.5	7.0	7.0	---	---	---	---	---	---
24	18.5	17.0	18.0	7.5	7.0	7.0	---	---	---	---	---	---
25	18.0	16.5	17.5	7.5	7.0	7.5	---	---	---	---	---	---
26	17.5	14.5	16.5	7.5	7.0	7.5	---	---	---	---	---	---
27	15.5	15.0	15.0	8.0	7.5	7.5	---	---	---	---	---	---
28	15.0	13.5	14.5	8.5	7.5	8.0	---	---	---	---	---	---
29	13.5	12.5	13.5	8.5	8.0	8.0	---	---	---	---	---	---
30	13.5	12.5	13.0	8.0	8.0	8.0	---	---	---	---	---	---
31	13.0	12.5	13.0	---	---	---	---	---	---	---	---	---
MONTH	22.5	12.5	18.8	13.5	7.0	9.5	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	5.5	4.5	5.0	10.5	9.0	9.5	16.0	14.0	14.5
2	---	---	---	6.5	5.0	5.5	10.0	9.0	9.5	16.0	14.5	15.0
3	---	---	---	7.0	6.0	6.0	10.0	9.0	9.5	15.5	14.5	15.0
4	---	---	---	9.0	6.5	7.5	10.5	9.0	9.5	16.5	15.0	15.5
5	---	---	---	10.0	7.0	8.5	10.0	9.5	10.0	17.0	15.0	16.0
6	---	---	---	10.0	7.5	9.0	11.0	10.0	10.5	17.5	15.5	16.5
7	---	---	---	9.5	8.0	9.0	12.0	10.5	11.0	18.5	16.0	17.0
8	---	---	---	9.0	8.0	8.5	12.5	11.0	11.5	18.0	16.5	17.5
9	---	---	---	8.5	7.5	8.0	13.5	11.5	12.5	18.5	17.0	17.5
10	---	---	---	8.0	7.0	7.5	14.0	12.5	13.0	18.0	17.0	17.5
11	---	---	---	7.0	6.5	7.0	14.0	12.5	13.0	18.0	17.5	17.5
12	---	---	---	7.0	6.0	6.5	14.0	12.5	13.0	18.5	17.5	18.0
13	---	---	---	6.5	6.0	6.5	14.0	12.5	13.0	19.5	18.0	18.5
14	---	---	---	6.5	6.0	6.0	14.0	12.5	13.0	19.5	18.5	19.0
15	---	---	---	6.0	5.5	6.0	14.0	12.5	13.0	20.5	19.0	20.0
16	---	---	---	6.0	5.5	6.0	13.5	12.5	13.0	21.5	19.5	20.5
17	---	---	---	7.0	5.5	6.0	13.5	13.0	13.0	21.5	20.0	20.5
18	---	---	---	6.5	5.5	6.0	13.5	13.0	13.0	21.5	20.5	21.0
19	---	---	---	7.5	6.0	7.0	13.5	13.0	13.0	22.0	20.0	21.0
20	---	---	---	8.0	6.5	7.5	13.5	13.0	13.0	22.0	20.0	21.0
21	---	---	---	8.0	7.0	7.5	13.0	13.0	13.0	21.5	20.5	21.0
22	---	---	---	8.5	7.0	7.5	13.0	12.0	12.5	22.5	20.5	21.5
23	---	---	---	8.5	7.0	8.0	13.0	12.0	12.5	23.0	21.0	22.0
24	---	---	---	8.5	7.5	8.0	12.5	12.0	12.0	22.5	21.5	22.0
25	---	---	---	8.0	7.5	7.5	12.5	11.0	12.0	23.0	22.0	22.5
26	---	---	---	8.0	7.0	7.5	13.5	12.5	13.0	23.5	22.5	23.0
27	---	---	---	8.0	7.5	8.0	14.0	12.5	13.0	24.0	23.0	23.0
28	---	---	---	9.0	8.0	8.5	14.5	13.0	13.5	25.5	23.5	24.0
29	---	---	---	10.0	9.0	9.0	15.0	13.5	14.0	25.5	24.0	24.5
30	---	---	---	10.0	9.0	9.5	15.0	13.5	14.0	25.5	24.5	25.0
31	---	---	---	10.5	8.5	9.5	---	---	---	26.0	25.0	25.5
MONTH	---	---	---	10.5	4.5	7.4	15.0	9.0	12.2	26.0	14.0	19.8

DELAWARE RIVER BASIN

01474703 DELAWARE RIVER AT FORT MIFFLIN AT PHILADELPHIA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.0	25.0	25.5	26.0	25.5	25.5	27.5	26.5	27.0	26.5	26.0	26.5
2	26.0	25.0	25.5	26.0	25.5	26.0	27.5	26.5	27.0	26.5	25.5	26.0
3	26.5	25.5	26.0	26.0	25.5	25.5	28.0	27.0	27.5	26.5	25.5	26.0
4	26.0	25.5	25.5	26.0	25.0	25.5	27.5	27.0	27.5	25.5	25.5	25.5
5	25.5	24.5	25.0	25.5	25.0	25.5	27.5	27.0	27.5	26.0	25.5	25.5
6	25.0	24.5	24.5	26.0	25.0	25.5	27.5	27.0	27.0	25.5	25.5	25.5
7	25.5	24.0	24.5	26.0	25.5	25.5	27.5	27.0	27.0	25.5	25.0	25.5
8	26.0	24.0	24.5	26.0	25.5	25.5	27.5	27.0	27.0	25.5	25.0	25.5
9	26.0	24.5	25.0	26.0	25.5	26.0	27.5	26.5	27.0	26.0	25.0	25.5
10	25.5	24.5	25.0	26.0	25.5	26.0	27.0	26.5	26.5	25.5	25.0	25.5
11	25.5	24.5	25.0	26.5	25.5	26.0	26.5	26.0	26.0	25.5	25.0	25.5
12	25.5	25.0	25.0	26.5	25.5	26.0	26.5	26.0	26.0	25.0	24.5	25.0
13	25.0	24.5	25.0	26.5	25.5	26.0	27.0	26.0	26.0	25.0	24.5	25.0
14	25.5	24.0	24.5	26.0	25.5	25.5	27.0	26.0	26.5	25.0	24.5	24.5
15	25.5	24.0	25.0	26.0	25.5	25.5	26.5	26.0	26.5	24.5	24.0	24.5
16	26.0	24.5	25.0	26.5	25.5	26.0	27.0	26.0	26.5	25.0	24.5	24.5
17	25.5	25.0	25.5	26.5	25.5	26.0	26.5	26.0	26.5	25.5	24.5	25.0
18	25.5	24.5	25.0	27.0	26.0	26.5	27.0	26.5	26.5	25.5	25.0	25.0
19	25.0	24.5	24.5	27.5	26.0	26.5	27.0	26.5	26.5	25.0	24.5	25.0
20	25.5	24.5	24.5	27.5	26.5	27.0	26.5	26.0	26.5	24.5	24.0	24.5
21	---	---	---	28.0	27.0	27.5	27.0	26.5	26.5	24.0	23.5	23.5
22	---	---	---	28.0	27.5	27.5	26.5	26.0	26.0	23.5	23.0	23.5
23	---	---	---	28.5	27.5	28.0	26.5	25.5	26.0	23.0	23.0	23.0
24	---	---	---	28.5	27.5	28.0	27.0	26.0	26.0	23.0	23.0	23.0
25	---	---	---	28.5	28.0	28.0	26.5	26.0	26.0	24.5	22.5	23.0
26	---	---	---	28.0	27.5	28.0	26.5	25.5	26.0	23.5	22.0	22.5
27	---	---	---	28.0	27.5	27.5	26.5	25.5	26.0	22.0	21.5	22.0
28	25.5	24.5	25.0	28.0	27.0	27.5	26.5	26.0	26.0	21.5	21.0	21.5
29	26.0	25.0	25.0	27.5	27.0	27.0	27.0	26.0	26.5	21.5	21.0	21.0
30	26.0	25.5	25.5	27.0	26.5	27.0	27.5	26.5	27.0	21.0	20.5	21.0
31	---	---	---	27.0	26.5	27.0	27.0	26.5	27.0	---	---	---
MONTH	26.5	24.0	25.0	28.5	25.0	26.5	28.0*	25.5	26.6	26.5	20.5	24.3

DARBY CREEK BASIN

01475300 DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA

LOCATION.--40°01'21", long 75°25'20", Chester County, Hydrologic Unit 02040202, on left bank 125 ft upstream from bridge on Waterloo Road, 2 mi south of Devon, and 2.5 mi northwest of Newtown Square.

DRAINAGE AREA.--5.15 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 310 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.8	3.7	8.6	●8.0	5.4	9.6	7.6	4.3	3.9	3.3	3.5
2	2.2	3.8	3.8	7.4	●6.6	7.7	9.2	6.3	4.1	●1.7	3.0	3.1
3	2.1	3.9	11	6.9	●6.5	16	8.1	4.7	4.0	●1.9	3.8	3.0
4	2.3	3.9	48	6.5	●6.3	16	7.4	5.0	4.1	●1.8	3.9	2.8
5	2.5	4.1	7.3	6.2	●6.1	7.9	7.4	5.7	3.9	●1.7	3.0	4.3
6	2.4	5.0	5.3	6.5	7.4	10	7.3	37	3.8	●1.6	2.7	3.5
7	2.3	5.2	4.7	7.2	9.0	12	7.1	15	3.8	35	2.6	3.1
8	2.5	5.3	4.6	6.3	7.6	7.1	7.1	8.5	3.7	6.0	2.6	3.1
9	3.2	5.3	4.4	20	7.1	6.7	7.1	7.5	3.4	4.2	18	3.0
10	3.1	36	4.3	14	6.8	6.4	6.7	7.3	3.3	3.7	12	3.1
11	3.5	7.1	4.1	16	6.6	6.3	6.9	6.7	3.2	3.4	3.9	3.2
12	4.8	4.6	4.2	86	6.1	6.1	6.7	6.4	4.8	3.2	3.3	2.9
13	7.0	4.3	4.2	13	5.8	5.7	7.9	6.4	3.6	●170	3.1	2.8
14	4.4	4.1	4.0	9.5	9.4	7.9	10	6.1	2.7	●31	8.8	3.9
15	4.1	4.1	9.9	9.2	6.9	14	13	5.9	2.2	●8.0	13	3.3
16	4.0	4.1	6.4	●30	7.2	10	8.7	5.4	9.1	●5.9	4.4	3.1
17	4.0	4.2	5.8	●18	6.1	7.8	7.8	5.4	7.4	●4.8	3.6	3.9
18	37	4.0	13	●11	6.1	26	8.0	5.4	51	●4.1	3.3	3.7
19	10	4.0	7.2	●9.0	7.4	11	7.4	5.4	11	●3.9	8.2	3.9
20	4.4	3.9	5.0	●8.4	7.8	8.2	7.4	5.4	4.2	●3.7	78	4.0
21	3.8	3.8	11	●12	6.5	7.4	●38	5.0	2.2	●3.4	9.5	3.1
22	3.7	3.8	7.9	●9.5	6.1	7.4	●18	4.8	●2.0	●3.1	5.8	2.9
23	13	5.9	9.6	8.1	6.1	27	●8.7	4.6	●3.0	●2.9	4.7	2.8
24	6.8	4.5	29	7.4	6.1	14	●15	4.4	●2.5	●2.8	4.4	3.0
25	4.3	4.0	9.2	●7.0	6.1	10	9.6	4.4	●2.1	●2.7	4.2	48
26	4.1	3.9	6.2	●6.7	5.8	9.0	9.0	4.4	●1.8	4.2	4.1	12
27	4.0	3.8	5.8	●6.3	5.4	11	8.6	4.4	●1.7	3.7	3.9	4.4
28	4.0	3.8	●5.4	●5.8	5.4	9.1	8.0	15	●1.6	2.7	3.7	3.6
29	3.8	3.8	●5.0	●5.3	---	8.1	7.8	5.0	●1.5	2.7	3.6	3.2
30	3.8	3.7	29	●5.0	---	16	7.8	5.2	●1.4	2.7	4.1	3.0
31	3.8	---	24	●11	---	9.8	---	5.3	---	3.1	3.7	---
TOTAL	163.2	161.7	303.0	383.8	188.3	327.0	291.3	225.6	157.4	333.5	236.2	153.2
MEAN	5.26	5.39	9.77	12.4	6.72	10.5	9.71	7.28	5.25	10.8	7.62	5.11
MAX	37	36	48	86	9.4	27	38	37	51	170	78	48
MIN	2.1	3.7	3.7	5.0	5.4	5.4	6.7	4.4	1.4	1.6	2.6	2.8
CFSM	1.02	1.05	1.90	2.40	1.31	2.05	1.89	1.41	1.02	2.09	1.48	.99
IN.	1.18	1.17	2.19	2.77	1.36	2.36	2.10	1.63	1.14	2.41	1.71	1.11

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1991, BY WATER YEAR

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	5.34	8.18	9.27	10.8	10.9	12.2	12.4	10.9	9.15	7.21	5.32	5.97								
MAX	15.9	22.2	18.9	30.2	27.4	28.5	26.4	18.8	20.4	16.6	8.70	26.4								
(WY)	1980	1973	1974	1979	1979	1978	1983	1984	1982	1975	1978	1979								
MIN	2.34	2.90	1.92	1.71	5.52	4.15	3.67	4.90	2.50	2.67	2.12	1.62								
(WY)	1986	1981	1981	1981	1980	1985	1985	1986	1985	1985	1980	1980								

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1972 - 1991

ANNUAL TOTAL	3107.5	2924.2	
ANNUAL MEAN	8.51	8.01	8.89
HIGHEST ANNUAL MEAN			14.3
LOWEST ANNUAL MEAN			4.53
HIGHEST DAILY MEAN	164	May 29	268
LOWEST DAILY MEAN	2.1	Sep 29	.83
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 27	1.0
INSTANTANEOUS PEAK FLOW			1800
INSTANTANEOUS PEAK STAGE			6.71
INSTANTANEOUS LOW FLOW			.21
ANNUAL RUNOFF (CFSM)	1.65		1.73
ANNUAL RUNOFF (INCHES)	22.45		23.46
10 PERCENT EXCEEDS	13		15
50 PERCENT EXCEEDS	6.0		6.0
90 PERCENT EXCEEDS	2.8		2.4

DARBY CREEK BASIN

01475300 DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

PERIOD OF RECORD.--November 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 02...	1245	2.7	262	6.7	22.0	12.5	0.60	11.8	97	33	23
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
NOV 02...	9.6	12	0.5	21	2.4	64	21	24	17	155	1.58
DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 02...	0.020	1.60	<0.010	0.40	0.40	0.020	<0.010	0.020	<10	50	8

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 Geist Reservoir and 2.0 mi west of Newtown Square.

DRAINAGE AREA.--15.8 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1932, 1949, 1970-1977, and annual maximum 1977-1981. October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 225.75 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.8	6.8	28	22	15	24	21	9.1	9.0	4.7	5.5
2	3.4	5.8	5.8	24	21	19	25	19	7.4	2.0	3.0	4.9
3	3.2	5.8	18	22	21	28	22	18	6.5	2.6	2.3	4.8
4	3.8	5.8	134	21	20	56	21	18	7.3	2.4	6.6	5.3
5	4.9	6.7	27	19	20	26	21	17	6.4	2.1	2.3	9.6
6	4.3	10	18	20	22	23	21	68	5.9	2.9	1.2	6.5
7	4.0	11	15	23	27	37	20	43	5.4	42	.72	5.5
8	4.2	11	14	20	23	22	19	23	4.5	18	.64	4.8
9	5.8	11	13	51	21	19	19	21	4.3	11	37	4.1
10	6.0	76	12	42	20	19	18	21	3.7	8.1	39	3.7
11	6.9	25	11	35	19	17	16	19	3.6	7.3	6.4	4.0
12	11	13	10	199	18	16	16	18	7.3	6.1	3.8	2.9
13	18	11	11	41	18	17	19	18	4.6	416	2.8	3.2
14	11	10	9.5	29	26	22	28	17	3.6	126	4.3	9.5
15	9.4	9.3	24	27	21	38	33	16	2.2	22	75	6.0
16	9.1	9.3	23	84	17	29	26	15	8.3	15	14	5.4
17	8.9	9.7	15	48	17	22	21	15	30	12	5.8	6.2
18	50	7.6	36	30	18	64	19	15	96	10	4.5	13
19	31	6.7	24	27	22	33	18	14	30	8.7	17	9.3
20	6.4	6.8	17	26	23	24	17	13	12	7.2	199	13
21	4.6	6.7	29	37	19	22	116	13	7.3	6.5	41	6.4
22	4.3	6.4	29	26	18	21	51	12	5.5	6.0	20	6.3
23	23	15	24	24	16	70	28	11	6.8	5.5	14	6.1
24	20	12	82	24	16	42	40	11	5.5	4.7	12	6.5
25	8.0	8.3	26	22	16	30	34	11	4.0	4.5	11	99
26	5.6	7.1	20	20	16	25	25	9.9	3.1	20	9.6	37
27	5.3	6.7	18	19	16	30	23	9.3	1.9	17	9.2	12
28	5.8	6.7	17	18	15	26	22	14	1.4	6.2	8.6	7.9
29	5.4	6.7	16	17	---	24	22	8.6	1.0	6.2	7.8	6.7
30	5.3	6.2	75	17	---	40	22	11	1.4	6.8	7.1	5.8
31	5.8	---	75	33	---	27	---	15	---	5.2	6.9	---
TOTAL	298.5	339.1	855.1	1073	548	903	806	554.8	296.0	819.0	577.26	320.9
MEAN	9.63	11.3	27.6	34.6	19.6	29.1	26.9	17.9	9.87	26.4	18.6	10.7
MAX	50	76	134	199	27	70	116	68	96	416	199	99
MIN	3.2	5.8	5.8	17	15	15	16	8.6	1.0	2.0	.64	2.9
CFSM	.61	.72	1.75	2.19	1.24	1.84	1.70	1.13	.62	1.67	1.18	.68
IN.	.70	.80	2.01	2.53	1.29	2.13	1.90	1.31	.70	1.93	1.36	.76

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1991, BY WATER YEAR

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	12.7	20.6	21.8	24.4	28.6	28.6	33.3	28.3	21.1	17.1
MAX	27.5	37.3	55.6	37.0	42.7	63.7	76.8	58.9	43.8	36.2
(WY)	1990	1987	1984	1990	1984	1983	1983	1984	1982	1989
MIN	8.57	7.98	10.3	7.45	19.3	11.7	9.45	13.8	5.85	6.99
(WY)	1982	1982	1990	1985	1989	1985	1985	1985	1985	1985

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	FOR 1991 WATER YEAR	FOR 1991 WATER YEAR
ANNUAL TOTAL	8209.7	7390.66		
ANNUAL MEAN	22.5	20.2		
HIGHEST ANNUAL MEAN			21.8	
LOWEST ANNUAL MEAN			34.7	1984
HIGHEST DAILY MEAN	289	May 29	12.3	1985
LOWEST DAILY MEAN	2.3	Aug 4	.64	Aug 8 1991
ANNUAL SEVEN-DAY MINIMUM	3.9	Sep 28	2.4	Aug 2 1991
INSTANTANEOUS PEAK FLOW			1350	Jul 13 1991
INSTANTANEOUS PEAK STAGE			7.79	Jul 13 1991
ANNUAL RUNOFF (CFSM)	1.42		1.28	
ANNUAL RUNOFF (INCHES)	19.33		17.40	
10 PERCENT EXCEEDS	35		36	
50 PERCENT EXCEEDS	19		15	
90 PERCENT EXCEEDS	5.4		4.3	

a From rating curve extended above 830 ft³/s.

RIDLEY CREEK BASIN

01476480 RIDLEY CREEK AT MEDIA, PA

LOCATION.--Lat 39°54'58", long 75°24'13", Delaware County, Hydrologic Unit 02040202, on right bank 400 ft downstream from Route 1 bridge (Baltimore Pike) at Media.

DRAINAGE AREA.--30.50 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	●13	15	75	32	30	46	31	29	43	22	13
2	11	●13	15	61	28	35	46	33	31	19	19	11
3	10	●12	39	58	28	55	40	29	29	20	18	11
4	16	●12	263	56	29	111	38	27	28	21	19	12
5	22	●12	73	48	28	52	39	28	23	22	18	14
6	18	14	49	46	29	48	36	110	23	22	16	14
7	18	14	41	54	37	73	34	77	19	114	16	13
8	17	12	39	55	38	41	35	44	16	51	17	12
9	17	12	36	128	32	34	34	38	18	27	121	11
10	17	131	35	108	30	32	33	35	19	30	73	11
11	17	60	33	96	30	32	31	29	16	22	24	12
12	17	26	25	378	29	31	29	27	28	17	18	10
13	19	21	21	106	32	31	33	28	21	629	17	9.6
14	17	20	17	70	49	39	59	29	19	244	16	18
15	14	20	32	62	38	59	59	28	18	37	46	17
16	15	18	42	156	28	48	53	27	18	32	31	16
17	17	15	23	134	30	36	39	26	68	28	18	15
18	35	15	50	75	31	107	38	24	165	26	16	24
19	●80	15	39	66	38	65	35	23	93	23	32	23
20	●26	15	24	65	42	44	32	24	38	21	138	25
21	●17	14	36	82	35	41	175	24	22	21	76	14
22	●14	14	55	71	34	39	96	26	22	24	29	14
23	●49	20	33	50	29	133	49	24	26	24	26	14
24	●46	25	141	46	29	91	62	23	24	20	23	16
25	●29	21	47	44	30	57	74	23	20	23	23	162
26	●21	17	31	36	31	46	73	23	19	58	21	73
27	●17	15	27	36	30	56	71	23	17	44	21	26
28	●16	15	27	35	30	52	67	21	16	24	18	20
29	●14	15	37	35	---	43	60	20	16	24	16	18
30	●13	15	68	39	---	69	36	27	18	25	15	16
31	●13	---	189	51	---	49	---	45	---	23	17	---
TOTAL	663	641	1602	2422	906	1679	1552	996	919	1758	980	664.6
MEAN	21.4	21.4	51.7	78.1	32.4	54.2	51.7	32.1	30.6	56.7	31.6	22.2
MAX	80	131	263	378	49	133	175	110	165	629	138	162
MIN	10	12	15	35	28	30	29	20	16	17	15	9.6
CFSM	.70	.70	1.69	2.56	1.06	1.78	1.70	1.05	1.00	1.86	1.04	.73
IN.	.81	.78	1.95	2.95	1.11	2.05	1.89	1.21	1.12	2.14	1.20	.81

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR

	MEAN	21.9	40.6	40.0	55.5	48.3	48.7	50.3	54.5	42.7	46.6	30.2	25.4
MAX	49.3	62.4	84.0	82.7	74.3	60.3	67.4	87.8	68.7	89.6	46.3	51.5	
(WY)	1990	1987	1987	1990	1988	1987	1987	1989	1989	1989	1989	1989	
MIN	9.11	21.4	19.5	28.9	32.4	32.3	32.0	32.1	17.3	27.9	15.2	16.1	
(WY)	1987	1991	1989	1988	1991	1988	1988	1991	1988	1990	1987	1988	

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1987 - 1991
ANNUAL TOTAL	15565	14782.6	
ANNUAL MEAN	42.6	40.5	42.0
HIGHEST ANNUAL MEAN			50.4
LOWEST ANNUAL MEAN			31.0
HIGHEST DAILY MEAN	329 Jan 26	629 Jul 13	693 Jul 5 1989
LOWEST DAILY MEAN	10 Sep 8	9.6 Sep 13	5.7 Oct 7 1986
ANNUAL SEVEN-DAY MINIMUM	12 Sep 7	11 Sep 7	6.3 Oct 6 1986
INSTANTANEOUS PEAK FLOW		1490 Jul 13	1940 Jul 5 1989
INSTANTANEOUS PEAK STAGE		7.10 Jul 13	7.78 Jul 5 1989
ANNUAL RUNOFF (CFSM)	1.40	1.33	1.38
ANNUAL RUNOFF (INCHES)	18.98	18.03	18.72
10 PERCENT EXCEEDS	71	73	73
50 PERCENT EXCEEDS	36	29	32
90 PERCENT EXCEEDS	14	15	12

CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA

LOCATION.--Lat 39°52'08", long 75°24'31", Delaware County, Hydrologic Unit 02040202, on right bank 30 ft downstream from Dutton Mill Bridge and 3 mi northwest of Chester.

DRAINAGE AREA.--61.1 mi².

PERIOD OF RECORDS.--August 1931 to current year. Monthly discharges only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR PA-72-1: 1971.

GAGE.--Water-stage recorder. Datum of gage is 23.41 ft above Penn Central Railroad datum. Prior to June 27, 1966, water-stage recorder at site 50 ft upstream and June 28, 1966, to Oct. 4, 1967, nonrecording gage 150 ft upstream, all at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	40	41	●140	85	68	97	90	46	73	36	28
2	38	41	42	●100	82	85	99	84	46	40	35	28
3	36	41	103	●82	82	112	88	81	45	40	33	30
4	35	●41	623	●79	81	224	84	82	49	39	38	30
5	40	40	122	●77	80	120	86	80	46	37	31	36
6	39	43	78	●72	86	100	88	245	42	38	29	34
7	37	41	67	●80	113	152	84	160	45	139	28	32
8	38	41	61	●72	107	99	80	99	44	76	29	30
9	39	40	57	●130	98	90	80	87	43	48	343	30
10	36	286	55	●120	94	86	79	84	41	39	177	29
11	36	●520	53	●110	89	82	73	82	39	38	59	28
12	39	●144	51	822	85	73	69	80	48	38	45	28
13	53	54	51	177	73	74	80	83	42	795	41	28
14	49	49	49	123	108	88	143	105	37	370	38	44
15	40	46	92	109	86	114	134	73	36	70	50	36
16	37	46	96	310	75	91	119	70	38	51	49	32
17	34	48	63	227	72	79	93	70	129	44	37	35
18	70	47	118	126	75	208	85	72	273	41	35	56
19	168	45	95	110	85	131	80	68	190	38	66	49
20	51	45	67	103	94	94	80	64	73	39	164	64
21	44	43	118	139	82	84	373	60	57	37	122	33
22	41	43	128	108	77	85	212	61	48	39	52	29
23	79	60	91	90	74	296	127	57	55	41	41	28
24	85	55	308	89	71	180	141	57	50	36	40	30
25	47	46	111	85	73	126	153	56	42	38	37	325
26	43	45	81	79	71	105	109	55	38	138	36	151
27	43	45	73	82	69	120	102	53	39	102	37	54
28	42	44	●70	86	67	108	97	52	37	47	35	39
29	40	45	87	83	---	99	92	51	36	45	35	35
30	38	42	300	85	---	145	92	52	46	44	33	32
31	39	---	738	116	---	107	---	60	---	37	30	---
TOTAL	1496	2166	4089	4211	2334	3625	3319	2473	1800	2697	1861	1463
MEAN	48.3	72.2	132	136	83.4	117	111	79.8	60.0	87.0	60.0	48.8
MAX	168	520	738	822	113	296	373	245	273	795	343	325
MIN	34	40	41	72	67	68	69	51	36	36	28	28
CFSM	.79	1.18	2.16	2.22	1.36	1.91	1.81	1.31	.98	1.42	.98	.80
IN.	.91	1.32	2.49	2.56	1.42	2.21	2.02	1.51	1.10	1.64	1.13	.89

● Estimated.

CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.8	77.6	86.6	101	115	131	127	102	77.7	69.8	63.1	64.6
MAX	234	233	232	326	326	297	413	224	176	254	217	543
(WY)	1980	1951	1984	1979	1979	1980	1980	1983	1982	1975	1955	1971
MIN	13.7	18.2	24.3	23.4	41.4	53.1	41.9	34.8	28.3	17.4	13.7	10.4
(WY)	1942	1932	1932	1981	1932	1981	1963	1942	1966	1932	1966	1932

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1932 - 1991
ANNUAL TOTAL	35856	31534	
ANNUAL MEAN	98.2	86.4	88.9
HIGHEST ANNUAL MEAN			168
LOWEST ANNUAL MEAN			39.3
HIGHEST DAILY MEAN	738	822	6510
LOWEST DAILY MEAN	31	28	6.5
ANNUAL SEVEN-DAY MINIMUM	38	29	8.3
INSTANTANEOUS PEAK FLOW		1800	b1000
INSTANTANEOUS PEAK STAGE		7.00	c24.59
INSTANTANEOUS LOW FLOW		25	.30
ANNUAL RUNOFF (CFSM)	1.61	1.41	1.46
ANNUAL RUNOFF (INCHES)	21.83	19.20	19.78
10 PERCENT EXCEEDS	155	139	150
50 PERCENT EXCEEDS	82	67	60
90 PERCENT EXCEEDS	40	36	27

a Also Sept. 1, 2, 11-13, 23.

b From rating curve extended above 2,400 ft³/s, on basis of contracted-opening measurement at gage height 13.57 ft and slope-area measurement of peak flow.

c From floodmark.

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA

LOCATION.--Lat 39°50'33", long 75°21'28", Delaware County, Hydrologic Unit 02040202, in the pumping house of Scott Paper Company.

DRAINAGE AREA.--10,300 mi².

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

pH: January 1968 to current year.

WATER TEMPERATURE: December 1961 to current year.

DISSOLVED OXYGEN: December 1961 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1961. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Prior to April 1981, sampling site was located at (latitude 39°50'12", longitude 75°22'00") auxiliary tidal-gaging station at the end of Reynolds Aluminum Company pier, 0.5 mi downstream from Chester Creek in Chester. Station not operated Dec. 1 to Feb. 28. Other interruptions in the record were due to malfunctions of the instrument. Subsequent to water year 1980, station not operated during winter months.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 5,900 microsiemens, Oct. 7, 1965; minimum, 103 microsiemens, June 2, 1984, Apr. 9, 1987.

pH: Maximum, 8.7, Sept. 13, 14, 1971 and Oct. 16, 1979; minimum, 5.5, Dec. 10, 11, 1969.

WATER TEMPERATURE: Maximum, 33.0°C, July 21, 1977; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 16.2 mg/l, Nov. 20, 1990; minimum, 0.0 mg/L, on many days.

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	398	319	351	254	225	242	---	---	---	---	---	---
2	396	329	356	245	224	235	---	---	---	---	---	---
3	411	337	362	243	221	232	---	---	---	---	---	---
4	484	342	389	242	222	234	---	---	---	---	---	---
5	479	337	380	239	219	230	---	---	---	---	---	---
6	510	336	386	241	219	229	---	---	---	---	---	---
7	489	344	393	235	221	228	---	---	---	---	---	---
8	502	348	400	234	223	228	---	---	---	---	---	---
9	538	345	414	239	224	231	---	---	---	---	---	---
10	502	346	408	244	226	235	---	---	---	---	---	---
11	593	353	436	236	226	231	---	---	---	---	---	---
12	514	358	427	262	242	253	---	---	---	---	---	---
13	508	363	426	251	222	235	---	---	---	---	---	---
14	512	365	424	229	211	218	---	---	---	---	---	---
15	465	366	407	225	212	216	---	---	---	---	---	---
16	448	370	402	221	197	213	---	---	---	---	---	---
17	456	371	404	211	184	203	---	---	---	---	---	---
18	461	366	408	205	181	196	---	---	---	---	---	---
19	430	345	379	202	173	192	---	---	---	---	---	---
20	392	341	366	196	171	185	---	---	---	---	---	---
21	383	333	362	188	168	181	---	---	---	---	---	---
22	368	322	351	188	171	180	---	---	---	---	---	---
23	355	318	342	190	175	182	---	---	---	---	---	---
24	343	298	324	192	179	183	---	---	---	---	---	---
25	325	285	308	194	179	185	---	---	---	---	---	---
26	309	283	295	206	182	190	---	---	---	---	---	---
27	299	271	287	218	191	201	---	---	---	---	---	---
28	295	261	278	215	194	201	---	---	---	---	---	---
29	264	239	251	216	197	206	---	---	---	---	---	---
30	261	234	248	218	200	208	---	---	---	---	---	---
31	260	224	244	---	---	---	---	---	---	---	---	---
MONTH	593	224	362	262	168	213	---	---	---	---	---	---

DELAWARE RIVRR BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	253	238	246	244	229	237	237	223	231
2	---	---	---	257	241	248	239	226	233	231	219	226
3	---	---	---	262	243	252	237	222	229	227	219	222
4	---	---	---	263	249	254	239	218	230	226	219	223
5	---	---	---	259	247	252	233	216	226	226	217	220
6	---	---	---	262	246	257	229	218	224	236	203	220
7	---	---	---	261	222	242	233	218	224	221	203	211
8	---	---	---	238	217	226	233	222	226	230	212	215
9	---	---	---	231	219	225	231	223	226	255	220	233
10	---	---	---	231	216	223	233	223	228	249	227	235
11	---	---	---	223	202	212	228	221	225	239	228	232
12	---	---	---	233	201	212	239	222	230	238	226	231
13	---	---	---	222	196	211	244	230	237	231	224	228
14	---	---	---	217	199	209	247	232	240	236	226	230
15	---	---	---	218	207	212	247	236	242	240	228	233
16	---	---	---	222	208	214	---	---	---	245	231	238
17	---	---	---	226	208	217	---	---	---	250	234	243
18	---	---	---	222	212	217	248	237	243	252	236	244
19	---	---	---	223	211	217	256	238	249	250	238	244
20	---	---	---	230	211	218	266	246	256	253	242	248
21	---	---	---	236	211	226	263	247	256	255	242	249
22	---	---	---	238	222	231	255	243	249	256	246	251
23	---	---	---	239	224	232	267	250	257	256	244	249
24	---	---	---	254	229	233	275	260	264	267	247	258
25	---	---	---	241	229	235	271	243	255	271	260	267
26	---	---	---	259	235	243	249	235	243	270	260	266
27	---	---	---	252	241	245	242	232	237	270	263	267
28	---	---	---	251	237	244	244	230	235	272	263	268
29	---	---	---	248	237	241	240	230	235	276	267	272
30	---	---	---	245	236	241	236	229	233	280	268	275
31	---	---	---	245	233	240	---	---	---	290	271	281
MONTH	---	---	---	263	196	231	275	216	238	290	203	242
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	289	280	285	533	343	417	437	306	368	619	304	400
2	296	283	290	543	343	433	465	329	400	690	316	439
3	299	286	293	573	343	444	502	356	416	940	331	508
4	301	287	293	620	348	464	577	348	436	838	409	554
5	295	286	290	644	364	487	489	298	388	911	406	559
6	294	285	289	732	377	511	617	277	382	1210	433	658
7	303	286	295	656	358	496	662	317	417	1170	441	722
8	304	291	297	606	349	461	663	306	421	1250	471	755
9	299	285	294	702	367	462	721	272	414	1240	476	785
10	301	286	294	699	357	472	511	269	333	1230	531	820
11	302	288	296	736	363	499	415	265	318	1190	528	804
12	312	290	300	839	402	550	466	295	383	1580	570	888
13	338	290	305	915	324	520	515	323	406	1500	618	939
14	358	306	325	500	322	383	510	324	401	1510	632	943
15	440	310	346	427	334	370	498	334	408	1620	614	964
16	418	312	354	426	339	377	582	333	441	1420	635	940
17	452	319	369	424	349	384	608	373	465	1380	634	929
18	449	306	368	412	347	380	627	372	472	1590	650	960
19	407	300	333	422	348	388	748	377	492	1260	650	946
20	355	301	327	438	344	383	547	362	447	1350	609	900
21	361	310	331	455	340	386	459	336	390	1440	640	958
22	366	316	337	547	345	400	427	334	370	1420	618	954
23	451	319	349	493	350	409	430	329	384	1450	642	963
24	441	319	360	531	348	416	430	343	385	1430	638	950
25	413	325	359	601	360	441	446	342	388	1430	555	929
26	421	322	361	541	348	438	478	343	395	1040	513	721
27	421	322	362	491	332	395	459	333	387	872	484	643
28	414	328	366	458	324	380	437	322	374	852	484	637
29	427	330	366	458	310	370	438	320	374	813	486	618
30	469	331	387	477	311	376	514	326	403	922	476	627
31	---	---	---	448	292	364	481	316	386	---	---	---
MONTH	469	280	327	915	292	428	748	265	401	1620	304	780

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	6.8	6.6	6.7	6.9	6.8	6.8	---	---	---	---	---	---
2	6.8	6.7	6.8	6.9	6.7	6.8	---	---	---	---	---	---
3	6.8	6.7	6.8	6.8	6.7	6.8	---	---	---	---	---	---
4	6.9	6.7	6.8	6.8	6.7	6.8	---	---	---	---	---	---
5	6.9	6.7	6.8	6.8	6.7	6.7	---	---	---	---	---	---
6	6.9	6.7	6.8	6.8	6.8	6.8	---	---	---	---	---	---
7	6.9	6.7	6.8	6.8	6.7	6.8	---	---	---	---	---	---
8	6.9	6.7	6.8	6.8	6.7	6.8	---	---	---	---	---	---
9	6.9	6.7	6.8	6.8	6.8	6.8	---	---	---	---	---	---
10	6.9	6.7	6.8	6.9	6.8	6.8	---	---	---	---	---	---
11	6.9	6.7	6.8	6.8	6.8	6.8	---	---	---	---	---	---
12	6.9	6.7	6.8	7.0	6.9	6.9	---	---	---	---	---	---
13	6.8	6.7	6.8	7.0	7.0	7.0	---	---	---	---	---	---
14	6.8	6.7	6.7	7.0	7.0	7.0	---	---	---	---	---	---
15	6.7	6.7	6.7	7.0	6.9	7.0	---	---	---	---	---	---
16	6.8	6.7	6.7	7.0	6.9	6.9	---	---	---	---	---	---
17	6.8	6.7	6.8	6.9	6.8	6.9	---	---	---	---	---	---
18	6.9	6.8	6.8	6.9	6.8	6.9	---	---	---	---	---	---
19	6.9	6.9	6.9	6.9	6.8	6.9	---	---	---	---	---	---
20	6.9	6.8	6.9	6.9	6.8	6.8	---	---	---	---	---	---
21	6.9	6.8	6.9	6.8	6.7	6.8	---	---	---	---	---	---
22	6.9	6.8	6.9	6.8	6.7	6.8	---	---	---	---	---	---
23	6.9	6.8	6.8	6.8	6.7	6.7	---	---	---	---	---	---
24	6.8	6.8	6.8	6.8	6.7	6.7	---	---	---	---	---	---
25	6.8	6.8	6.8	6.8	6.7	6.7	---	---	---	---	---	---
26	6.9	6.7	6.8	6.8	6.7	6.8	---	---	---	---	---	---
27	6.9	6.8	6.9	6.8	6.7	6.7	---	---	---	---	---	---
28	6.9	6.9	6.9	6.7	6.7	6.7	---	---	---	---	---	---
29	6.9	6.9	6.9	6.8	6.7	6.7	---	---	---	---	---	---
30	6.9	6.9	6.9	6.8	6.7	6.8	---	---	---	---	---	---
31	6.9	6.8	6.9	---	---	---	---	---	---	---	---	---
MONTH	6.9	6.6	6.8	7.0	6.7	6.8	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.8	6.8
2	---	---	---	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.7	6.8
3	---	---	---	7.0	7.0	7.0	7.0	6.9	6.9	6.8	6.8	6.8
4	---	---	---	7.0	6.9	7.0	6.9	6.8	6.8	6.9	6.8	6.8
5	---	---	---	7.0	7.0	7.0	6.9	6.8	6.8	6.9	6.7	6.8
6	---	---	---	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.8
7	---	---	---	7.1	7.0	7.1	6.8	6.8	6.8	6.8	6.7	6.7
8	---	---	---	7.1	7.0	7.1	6.8	6.7	6.8	6.8	6.7	6.7
9	---	---	---	7.1	7.0	7.1	6.8	6.7	6.8	6.8	6.7	6.7
10	---	---	---	7.0	7.0	7.0	6.8	6.7	6.8	6.8	6.7	6.8
11	---	---	---	7.0	6.9	7.0	6.9	6.8	6.8	6.9	6.7	6.8
12	---	---	---	7.0	6.9	7.0	6.9	6.8	6.8	6.9	6.7	6.8
13	---	---	---	7.0	6.9	6.9	6.9	6.7	6.8	7.0	6.7	6.9
14	---	---	---	7.0	6.9	6.9	6.9	6.8	6.8	7.0	6.8	6.9
15	---	---	---	6.9	6.9	6.9	6.9	6.8	6.9	7.1	6.8	6.9
16	---	---	---	6.9	6.8	6.9	---	---	---	7.1	6.9	6.9
17	---	---	---	6.9	6.8	6.8	---	---	---	6.9	6.8	6.9
18	---	---	---	6.8	6.8	6.8	6.8	6.6	6.8	6.9	6.8	6.8
19	---	---	---	6.9	6.8	6.8	6.8	6.7	6.8	6.9	6.8	6.8
20	---	---	---	6.9	6.8	6.8	6.9	6.8	6.8	6.9	6.8	6.8
21	---	---	---	6.9	6.8	6.8	6.9	6.8	6.8	6.9	6.8	6.8
22	---	---	---	6.9	6.8	6.9	6.9	6.8	6.8	6.9	6.8	6.8
23	---	---	---	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.7	6.8
24	---	---	---	6.9	6.9	6.9	6.9	6.8	6.9	6.8	6.7	6.8
25	---	---	---	6.9	6.9	6.9	6.9	6.8	6.8	6.8	6.7	6.7
26	---	---	---	6.9	6.9	6.9	6.9	6.8	6.8	6.8	6.7	6.7
27	---	---	---	6.9	6.8	6.9	6.9	6.8	6.9	6.7	6.6	6.7
28	---	---	---	6.9	6.8	6.8	6.9	6.8	6.9	6.7	6.6	6.7
29	---	---	---	6.9	6.9	6.9	6.9	6.8	6.9	6.6	6.6	6.6
30	---	---	---	7.0	6.9	6.9	6.9	6.8	6.8	6.6	6.6	6.6
31	---	---	---	6.9	6.9	6.9	---	---	---	6.6	6.6	6.6
MONTH	---	---	---	7.1	6.8	6.9	7.0	6.6	6.8	7.1	6.6	6.8

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.6	6.5	6.6	6.9	6.7	6.8	6.7	6.6	6.7	7.0	6.9	6.9
2	6.6	6.5	6.6	6.9	6.7	6.8	6.8	6.6	6.7	7.1	6.9	7.0
3	6.6	6.6	6.6	6.9	6.7	6.8	6.8	6.7	6.7	7.1	6.8	7.0
4	6.7	6.6	6.6	6.8	6.7	6.8	6.8	6.6	6.7	7.0	6.8	6.9
5	6.7	6.6	6.7	6.8	6.7	6.7	6.8	6.7	6.8	6.9	6.8	6.9
6	6.8	6.7	6.7	6.8	6.6	6.7	6.8	6.7	6.8	6.9	6.7	6.8
7	6.8	6.7	6.7	6.8	6.6	6.7	6.9	6.7	6.8	6.9	6.7	6.8
8	6.8	6.7	6.7	6.8	6.6	6.7	6.9	6.7	6.8	6.9	6.7	6.8
9	6.8	6.7	6.7	6.8	6.6	6.7	6.9	6.7	6.8	6.9	6.7	6.8
10	6.8	6.7	6.7	6.8	6.6	6.7	6.9	6.7	6.7	6.9	6.7	6.8
11	6.8	6.7	6.8	6.8	6.6	6.7	6.8	6.7	6.7	6.9	6.7	6.8
12	6.8	6.7	6.7	6.9	6.7	6.8	6.7	6.6	6.7	6.9	6.8	6.8
13	6.8	6.7	6.8	6.9	6.6	6.8	6.8	6.7	6.7	6.9	6.7	6.8
14	6.8	6.6	6.7	6.7	6.6	6.6	6.8	6.7	6.7	6.9	6.7	6.8
15	6.8	6.6	6.7	6.6	6.6	6.6	6.8	6.7	6.8	6.9	6.7	6.8
16	6.8	6.7	6.7	6.7	6.6	6.6	6.8	6.7	6.8	6.9	6.7	6.8
17	6.8	6.7	6.7	6.8	6.6	6.7	6.9	6.7	6.8	6.9	6.7	6.8
18	6.8	6.7	6.8	6.8	6.7	6.7	6.9	6.8	6.8	6.9	6.7	6.8
19	6.8	6.6	6.7	6.8	6.7	6.8	6.9	6.8	6.8	6.9	6.8	6.8
20	6.7	6.7	6.7	6.8	6.7	6.8	6.9	6.7	6.8	6.9	6.8	6.8
21	6.7	6.6	6.6	6.8	6.7	6.8	6.8	6.7	6.7	7.0	6.8	6.9
22	6.7	6.6	6.6	6.8	6.7	6.7	6.8	6.6	6.7	7.0	6.8	6.9
23	6.8	6.6	6.7	6.8	6.7	6.8	6.8	6.7	6.7	7.0	6.8	6.9
24	6.8	6.6	6.7	6.8	6.7	6.8	6.8	6.7	6.8	6.9	6.8	6.9
25	6.8	6.7	6.8	6.8	6.7	6.8	7.0	6.8	6.9	7.0	6.7	6.9
26	6.9	6.7	6.8	6.8	6.6	6.7	7.0	6.8	6.9	6.9	6.7	6.8
27	6.9	6.7	6.8	6.7	6.6	6.7	7.0	6.9	7.0	6.9	6.7	6.8
28	6.9	6.7	6.8	6.7	6.6	6.7	7.0	6.9	6.9	6.9	6.7	6.8
29	6.9	6.7	6.8	6.7	6.6	6.7	7.0	6.8	6.9	6.9	6.7	6.8
30	6.9	6.7	6.8	6.7	6.6	6.7	7.0	6.8	6.9	6.9	6.8	6.8
31	---	---	---	6.7	6.6	6.7	7.0	6.8	6.9	---	---	---
MONTH	6.9	6.5	6.7	6.9	6.6	6.7	7.0	6.6	6.8	7.1	6.7	6.8

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	20.5	20.0	20.5	14.5	14.0	14.5	---	---	---	---	---	---
2	20.5	20.0	20.0	14.5	14.0	14.5	---	---	---	---	---	---
3	20.0	19.5	20.0	14.5	14.0	14.5	---	---	---	---	---	---
4	20.0	19.5	20.0	14.5	14.0	14.5	---	---	---	---	---	---
5	20.0	19.0	19.5	15.0	14.0	14.5	---	---	---	---	---	---
6	20.0	19.0	19.5	15.0	13.5	14.5	---	---	---	---	---	---
7	20.0	19.5	20.0	14.0	13.5	14.0	---	---	---	---	---	---
8	20.5	20.0	20.0	14.0	13.0	13.5	---	---	---	---	---	---
9	21.0	20.0	20.5	13.5	12.5	13.0	---	---	---	---	---	---
10	21.0	20.5	20.5	13.0	12.5	13.0	---	---	---	---	---	---
11	21.0	20.5	21.0	12.5	12.0	12.5	---	---	---	---	---	---
12	21.5	21.0	21.0	11.5	11.0	11.5	---	---	---	---	---	---
13	21.5	21.0	21.5	11.0	10.0	10.5	---	---	---	---	---	---
14	22.0	21.5	21.5	10.5	9.5	10.0	---	---	---	---	---	---
15	22.0	21.0	21.5	10.5	9.5	10.0	---	---	---	---	---	---
16	21.5	20.5	21.0	10.0	9.0	10.0	---	---	---	---	---	---
17	21.0	20.5	21.0	10.0	8.5	9.5	---	---	---	---	---	---
18	21.0	20.5	21.0	9.0	8.0	8.5	---	---	---	---	---	---
19	20.5	19.0	19.5	9.0	7.5	8.5	---	---	---	---	---	---
20	19.5	18.5	19.0	8.5	7.5	8.0	---	---	---	---	---	---
21	19.0	18.5	18.5	8.5	7.5	8.0	---	---	---	---	---	---
22	19.0	18.5	19.0	8.5	8.0	8.0	---	---	---	---	---	---
23	19.0	18.5	19.0	8.5	8.0	8.5	---	---	---	---	---	---
24	19.0	18.0	18.5	8.5	8.0	8.0	---	---	---	---	---	---
25	18.5	17.5	18.0	9.0	8.0	8.5	---	---	---	---	---	---
26	17.5	16.0	17.0	9.0	8.5	8.5	---	---	---	---	---	---
27	16.5	16.0	16.0	9.0	8.5	9.0	---	---	---	---	---	---
28	16.0	15.5	15.5	9.5	8.5	9.0	---	---	---	---	---	---
29	15.0	14.5	15.0	9.5	9.0	9.0	---	---	---	---	---	---
30	15.0	14.0	14.5	9.0	8.5	8.5	---	---	---	---	---	---
31	14.5	13.5	14.5	---	---	---	---	---	---	---	---	---
MONTH	22.0	13.5	19.2	15.0	7.5	10.8	---	---	---	---	---	---

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	6.5	5.5	6.0	9.5	9.0	9.5	16.0	14.5	15.0
2	---	---	---	8.0	6.0	7.0	9.5	9.5	9.5	16.0	15.0	15.5
3	---	---	---	8.5	7.0	7.5	10.0	9.0	9.5	16.0	15.0	15.5
4	---	---	---	9.0	7.5	8.0	10.5	9.5	10.0	16.5	15.0	15.5
5	---	---	---	8.0	7.5	8.0	11.0	10.0	10.5	16.5	15.5	16.0
6	---	---	---	8.5	7.5	8.0	11.5	10.5	11.0	16.5	16.0	16.5
7	---	---	---	9.0	8.0	8.5	12.0	10.5	11.5	17.0	16.0	16.5
8	---	---	---	8.5	7.5	8.0	12.5	11.5	12.0	17.5	16.5	17.0
9	---	---	---	8.5	8.0	8.0	13.5	12.0	13.0	18.0	17.0	17.0
10	---	---	---	8.5	8.0	8.5	13.5	13.0	13.0	18.0	17.0	17.5
11	---	---	---	8.0	7.5	8.0	13.0	12.5	13.0	18.5	17.5	18.0
12	---	---	---	8.0	7.0	7.5	13.5	12.0	13.0	19.5	18.0	18.5
13	---	---	---	7.5	7.0	7.5	13.0	12.5	12.5	20.0	18.5	19.0
14	---	---	---	7.5	6.5	7.0	12.5	12.0	12.5	20.5	19.0	20.0
15	---	---	---	7.0	6.5	7.0	12.5	12.0	12.0	21.0	19.5	20.5
16	---	---	---	7.5	6.5	7.0	---	---	---	21.5	20.0	21.0
17	---	---	---	7.5	6.5	7.5	---	---	---	21.5	20.5	21.0
18	---	---	---	8.0	7.5	7.5	13.5	13.0	13.0	21.5	20.0	21.0
19	---	---	---	8.0	7.0	7.5	13.5	12.5	13.0	20.5	20.0	20.5
20	---	---	---	8.0	7.0	7.5	13.5	13.0	13.0	20.5	20.0	20.5
21	---	---	---	8.0	7.5	7.5	13.0	12.0	12.5	21.0	20.0	20.5
22	---	---	---	8.0	7.5	8.0	13.5	12.0	12.5	21.5	20.5	21.0
23	---	---	---	8.0	7.5	7.5	14.0	12.5	13.0	22.5	21.5	22.0
24	---	---	---	8.0	7.5	8.0	14.0	13.0	13.5	23.0	21.5	22.0
25	---	---	---	8.0	7.5	8.0	15.0	13.0	13.5	23.5	22.0	23.0
26	---	---	---	8.5	7.5	8.0	15.0	13.5	14.0	24.0	22.5	23.5
27	---	---	---	9.0	8.0	8.5	15.5	14.0	14.5	24.5	23.0	23.5
28	---	---	---	10.0	8.5	9.5	16.0	14.5	14.5	25.0	23.5	24.0
29	---	---	---	10.0	9.5	9.5	15.5	14.0	14.5	25.5	24.0	24.5
30	---	---	---	9.5	9.0	9.5	15.0	14.0	14.5	26.0	24.5	25.0
31	---	---	---	9.5	9.0	9.5	---	---	---	26.0	25.0	25.5
MONTH	---	---	---	10.0	5.5	7.9	16.0	9.0	12.4	26.0	14.5	19.9
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.5	25.5	26.0	27.0	26.0	26.5	28.0	27.0	27.5	27.5	26.5	27.0
2	26.5	25.5	26.0	27.0	26.5	26.5	28.5	27.5	28.0	27.0	26.0	26.5
3	26.5	25.5	26.0	26.5	26.0	26.5	28.5	28.0	28.0	26.5	25.5	26.0
4	26.0	25.0	26.0	26.5	26.0	26.0	28.5	28.0	28.0	26.0	25.5	26.0
5	25.0	24.5	25.0	26.0	25.5	26.0	28.5	27.5	28.0	26.0	25.5	26.0
6	25.0	24.5	24.5	26.5	25.5	26.0	28.0	27.5	28.0	26.0	25.5	26.0
7	25.0	24.0	24.5	26.5	26.0	26.0	28.0	27.0	27.5	26.0	25.5	26.0
8	25.0	24.0	24.5	27.0	25.5	26.0	28.5	27.5	28.0	26.5	25.5	26.0
9	25.5	24.0	24.5	27.0	26.0	26.5	27.5	26.5	27.0	26.5	25.5	26.0
10	26.0	24.5	25.0	27.0	26.0	26.5	27.0	26.5	27.0	26.0	25.5	26.0
11	26.0	25.0	25.5	27.0	26.0	26.5	27.0	26.5	27.0	26.0	25.5	26.0
12	26.0	25.0	25.5	27.0	26.5	26.5	27.5	26.5	27.0	26.0	25.0	25.5
13	25.0	24.5	25.0	26.5	26.0	26.5	27.5	26.5	27.0	25.5	25.0	25.5
14	26.0	24.5	25.0	26.5	26.0	26.5	27.5	27.0	27.0	25.5	24.5	25.0
15	26.5	25.0	25.5	27.0	26.0	26.5	27.0	27.0	27.0	25.0	24.5	25.0
16	26.5	25.5	26.0	27.0	26.5	27.0	27.5	27.0	27.0	26.0	24.5	25.5
17	27.0	26.0	26.5	27.5	26.5	27.0	28.0	27.0	27.5	26.5	25.5	26.0
18	26.5	24.5	25.5	28.0	27.0	27.5	28.0	27.0	27.5	26.5	25.5	26.0
19	25.0	24.5	24.5	28.5	27.5	28.0	27.5	27.0	27.5	26.0	25.0	25.5
20	25.5	24.5	25.0	29.0	28.0	28.5	27.5	27.0	27.0	25.0	24.5	24.5
21	26.5	25.5	26.0	29.5	28.5	28.5	27.0	26.5	27.0	24.5	23.5	24.0
22	26.0	25.5	26.0	29.5	28.5	29.0	27.5	26.5	27.0	24.0	23.0	23.5
23	25.5	24.5	25.0	30.0	28.5	29.0	27.5	26.5	27.0	23.5	23.0	23.0
24	25.0	24.0	25.0	30.0	29.0	29.0	27.5	27.0	27.0	23.5	23.0	23.0
25	25.5	24.5	25.0	29.5	29.0	29.0	27.5	26.5	27.0	23.0	22.5	23.0
26	26.0	25.0	25.0	29.0	28.0	28.5	27.5	26.5	26.5	23.0	22.0	22.5
27	26.5	25.0	25.5	28.5	27.5	28.0	27.5	26.5	27.0	22.5	22.0	22.0
28	27.0	25.5	26.0	28.0	27.0	27.5	28.0	27.0	27.0	22.0	21.5	22.0
29	27.0	26.0	26.5	28.0	27.0	27.5	28.0	27.0	27.5	22.0	21.0	21.5
30	27.0	26.0	26.5	27.5	27.0	27.0	28.5	27.5	28.0	21.5	21.0	21.0
31	---	---	---	27.5	27.0	27.0	28.5	28.0	28.0	---	---	---
MONTH	27.0	24.0	25.4	30.0	25.5	27.2	28.5	26.5	27.3	27.5	21.0	24.7

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	5.7	5.0	5.4	7.8	7.4	7.6	---	---	---	---	---	---
2	6.1	5.4	5.7	7.7	7.4	7.5	---	---	---	---	---	---
3	5.9	5.4	5.7	7.6	7.3	7.5	---	---	---	---	---	---
4	6.0	5.5	5.8	7.4	7.3	7.3	---	---	---	---	---	---
5	6.3	5.6	6.0	7.4	7.3	7.3	---	---	---	---	---	---
6	6.2	5.7	6.0	7.9	7.3	7.5	---	---	---	---	---	---
7	6.1	5.5	5.9	7.9	7.6	7.7	---	---	---	---	---	---
8	5.9	5.3	5.6	8.0	7.6	7.8	---	---	---	---	---	---
9	5.9	5.3	5.6	12.2	8.1	9.9	---	---	---	---	---	---
10	5.8	5.4	5.6	8.6	7.8	8.0	---	---	---	---	---	---
11	6.2	5.4	5.8	8.2	7.8	7.9	---	---	---	---	---	---
12	6.0	5.5	5.8	8.9	8.3	8.6	---	---	---	---	---	---
13	5.7	5.2	5.5	9.1	8.7	8.9	---	---	---	---	---	---
14	5.4	4.9	5.1	11.3	8.9	9.7	---	---	---	---	---	---
15	5.1	4.7	5.0	14.3	9.5	11.4	---	---	---	---	---	---
16	5.4	4.9	5.1	9.7	8.9	9.3	---	---	---	---	---	---
17	5.7	4.9	5.3	9.2	8.8	8.9	---	---	---	---	---	---
18	6.2	5.4	5.8	9.7	9.1	9.3	---	---	---	---	---	---
19	6.6	6.1	6.3	14.3	9.2	11.2	---	---	---	---	---	---
20	6.4	6.1	6.2	16.2	14.6	15.8	---	---	---	---	---	---
21	6.2	6.0	6.1	15.9	15.2	15.6	---	---	---	---	---	---
22	6.1	5.9	6.1	15.1	11.0	13.4	---	---	---	---	---	---
23	6.1	5.8	6.0	11.0	9.2	10.1	---	---	---	---	---	---
24	6.0	5.7	5.9	9.3	9.0	9.1	---	---	---	---	---	---
25	5.9	5.7	5.8	9.3	9.0	9.1	---	---	---	---	---	---
26	6.6	5.7	6.1	9.3	9.1	9.2	---	---	---	---	---	---
27	6.9	6.2	6.5	9.6	9.1	9.3	---	---	---	---	---	---
28	7.2	6.4	6.8	9.4	9.0	9.2	---	---	---	---	---	---
29	7.9	7.0	7.4	9.4	9.0	9.0	---	---	---	---	---	---
30	8.0	7.1	7.5	15.9	9.3	13.1	---	---	---	---	---	---
31	8.0	7.5	7.7	---	---	---	---	---	---	---	---	---
MONTH	8.0	4.7	6.0	16.2	7.3	9.5	---	---	---	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	10.9	10.2	10.5	9.2	8.7	8.9
2	---	---	---	---	---	---	10.9	10.5	10.7	9.2	8.8	9.0
3	---	---	---	---	---	---	11.0	10.3	10.6	9.4	8.6	9.0
4	---	---	---	---	---	---	11.1	9.9	10.3	9.4	8.9	9.2
5	---	---	---	10.6	10.1	10.4	10.5	9.8	10.0	9.4	8.7	9.2
6	---	---	---	10.1	9.5	9.8	10.3	9.3	9.7	9.3	8.2	8.8
7	---	---	---	9.7	9.3	9.5	7.8	7.1	7.4	8.6	7.7	8.1
8	---	---	---	9.9	9.6	9.7	8.9	6.9	8.1	7.9	6.7	7.5
9	---	---	---	9.8	9.5	9.6	8.9	8.4	8.6	6.8	6.4	6.6
10	---	---	---	9.6	9.4	9.5	8.6	8.2	8.3	8.8	6.2	7.9
11	---	---	---	9.8	9.4	9.6	8.5	8.1	8.3	9.2	8.0	8.6
12	---	---	---	10.0	9.5	9.7	10.0	8.4	9.2	9.3	8.0	8.7
13	---	---	---	10.0	9.5	9.8	9.7	9.3	9.5	9.5	8.1	8.8
14	---	---	---	10.0	9.7	9.9	9.9	9.4	9.6	9.7	8.3	9.1
15	---	---	---	10.1	9.7	9.9	10.4	9.1	9.6	9.8	8.6	9.1
16	---	---	---	10.2	9.7	10.0	---	---	---	9.6	8.9	9.1
17	---	---	---	10.2	9.8	10.0	---	---	---	9.1	8.6	8.9
18	---	---	---	10.1	9.8	9.9	9.9	8.3	9.0	8.7	8.4	8.5
19	---	---	---	10.2	9.8	10.0	9.5	8.6	9.1	8.6	8.0	8.3
20	---	---	---	10.3	9.9	10.1	9.5	9.1	9.3	8.8	7.8	8.2
21	---	---	---	10.2	9.9	10.0	9.4	9.1	9.3	8.8	7.7	8.2
22	---	---	---	10.7	9.9	10.3	9.6	8.9	9.3	8.6	7.5	8.0
23	---	---	---	10.8	10.6	10.7	9.5	9.1	9.3	8.2	7.1	7.7
24	---	---	---	10.7	10.5	10.6	9.4	9.0	9.2	8.0	7.1	7.4
25	---	---	---	10.6	10.5	10.6	9.5	8.8	9.1	7.5	6.7	7.2
26	---	---	---	10.6	10.4	10.5	9.6	8.8	9.2	7.2	6.1	6.7
27	---	---	---	10.5	10.3	10.4	9.5	9.0	9.3	7.0	6.1	6.5
28	---	---	---	10.3	10.1	10.2	9.5	8.8	9.2	6.8	5.7	6.2
29	---	---	---	10.2	10.0	10.1	9.5	8.9	9.2	6.2	5.5	5.8
30	---	---	---	10.4	10.0	10.2	9.2	8.9	9.0	5.7	5.0	5.4
31	---	---	---	10.5	10.2	10.3	---	---	---	6.2	4.9	5.4
MONTH	---	---	---	10.8	9.3	10.0	11.1	6.9	9.3	9.8	4.9	7.9

DELAWARE RIVER BASIN

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	5.9	4.7	5.2	6.3	5.3	5.8	5.7	4.6	5.1	7.0	5.6	6.2
2	5.6	4.8	5.2	6.1	5.2	5.7	5.7	4.7	5.3	7.0	5.7	6.3
3	5.6	4.7	5.2	6.1	5.3	5.5	5.4	5.0	5.3	6.8	5.5	6.2
4	6.1	5.0	5.5	5.7	4.8	5.2	6.0	4.9	5.4	6.7	5.7	6.2
5	6.3	5.1	5.7	5.9	4.9	5.4	6.4	4.9	5.5	6.6	5.5	6.1
6	6.8	5.2	5.9	5.6	4.5	5.0	6.0	5.4	5.7	6.0	5.3	5.7
7	7.0	5.7	6.2	5.4	4.5	5.1	6.3	5.3	5.7	5.8	5.2	5.5
8	7.0	5.7	6.4	5.5	4.9	5.1	6.3	5.1	5.7	5.7	5.0	5.3
9	6.9	5.8	6.2	6.3	4.3	5.1	6.0	5.5	5.7	5.5	4.9	5.2
10	6.4	5.5	6.0	5.9	4.3	5.2	6.1	4.8	5.5	5.6	4.9	5.3
11	6.3	5.7	6.0	5.7	4.8	5.4	5.8	4.9	5.2	5.5	5.1	5.3
12	6.4	5.9	6.1	5.9	5.0	5.6	5.9	4.6	5.5	5.5	4.9	5.2
13	6.4	5.5	6.0	5.8	4.9	5.5	6.5	5.2	5.7	5.5	5.1	5.3
14	6.6	5.2	5.8	5.5	4.8	5.1	5.8	4.9	5.4	5.4	5.0	5.2
15	5.8	5.2	5.4	5.0	4.3	4.7	5.9	4.8	5.4	5.4	5.0	5.2
16	5.7	5.2	5.4	5.6	4.6	4.9	5.7	4.8	5.4	5.4	5.1	5.2
17	5.4	4.9	5.2	5.7	4.6	5.2	5.8	5.2	5.6	5.5	5.0	5.2
18	5.7	4.9	5.4	6.3	5.3	5.8	6.4	5.5	5.9	5.4	4.9	5.2
19	5.7	4.9	5.3	6.2	5.2	5.7	6.4	5.4	5.8	5.4	5.0	5.3
20	5.7	4.7	5.1	6.1	5.5	5.7	5.7	5.1	5.4	5.8	4.9	5.4
21	5.4	4.7	5.1	5.9	5.3	5.6	5.8	4.9	5.3	6.0	5.2	5.6
22	5.4	4.3	5.0	5.9	5.2	5.4	5.9	4.3	5.3	6.1	5.5	5.8
23	5.7	4.8	5.3	5.8	5.0	5.3	6.0	4.8	5.6	6.1	5.6	5.9
24	6.0	5.1	5.5	5.6	5.0	5.3	6.7	5.3	5.7	6.2	5.7	6.0
25	6.0	5.3	5.6	5.2	4.7	5.0	6.9	5.9	6.3	6.2	5.7	6.0
26	6.2	5.4	5.7	5.4	4.5	5.0	6.8	5.7	6.3	5.9	5.3	5.7
27	6.3	5.5	5.8	5.6	4.6	5.1	7.1	5.9	6.5	5.7	5.0	5.5
28	6.3	5.6	5.9	5.3	4.5	4.9	6.7	5.9	6.5	5.7	5.0	5.4
29	6.2	5.4	5.8	5.3	4.5	5.0	6.8	5.8	6.3	5.8	5.1	5.5
30	6.4	5.5	5.8	5.7	4.7	5.1	6.9	5.9	6.2	5.9	5.5	5.7
31	---	---	---	5.6	4.6	5.0	6.4	5.3	6.1	---	---	---
MONTH	7.0	4.3	5.6	6.3	4.3	5.3	7.1	4.3	5.7	7.0	4.9	5.6

CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA

LOCATION.--Lat 39°49'00", long 75°41'31", Chester County, Hydrologic Unit 02040205, on left bank 3 mile south of the intersection of Route 1 and Route 82 (at Kennett Square) on Route 82 (Creek Road).

DRAINAGE AREA.--28.33 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	27	16	54	31	24	49	36	16	23	9.4	5.3
2	14	27	15	47	30	32	48	35	14	17	8.0	5.8
3	13	25	60	44	30	47	42	33	14	22	7.3	7.6
4	14	25	231	40	31	93	40	32	14	18	8.3	8.4
5	17	25	50	37	31	43	42	30	13	18	5.9	16
6	14	31	37	39	33	41	41	83	13	18	5.1	10
7	14	31	32	47	47	55	38	57	12	65	5.1	9.6
8	16	30	29	41	37	35	37	39	11	34	5.4	8.0
9	20	27	26	130	32	32	37	36	9.3	22	80	8.2
10	19	139	26	81	30	31	36	35	8.9	18	70	10
11	20	46	24	71	28	29	33	32	9.0	16	20	11
12	22	32	24	378	26	28	33	31	13	14	15	8.6
13	49	30	24	77	27	28	39	32	11	113	14	9.0
14	30	27	22	52	47	37	53	32	7.5	39	13	44
15	19	25	52	48	33	47	61	29	5.2	25	15	14
16	17	25	42	129	25	35	49	27	33	20	15	11
17	17	24	31	86	26	30	40	27	43	19	11	16
18	72	22	59	53	29	96	38	28	168	17	9.8	21
19	62	22	45	47	36	51	36	26	96	15	16	18
20	26	22	34	46	39	37	36	25	41	12	53	22
21	22	22	62	59	32	34	158	25	32	11	26	12
22	22	20	56	44	30	35	84	25	27	12	15	9.9
23	41	34	50	39	27	138	52	24	32	11	13	11
24	41	28	152	36	25	77	60	23	28	9.8	10	13
25	28	23	50	33	27	55	56	39	23	11	9.8	124
26	25	20	40	31	26	47	44	30	21	18	10	63
27	24	20	36	30	25	59	41	21	20	17	9.9	24
28	24	19	44	30	25	50	39	21	18	10	9.9	17
29	25	18	48	30	---	47	38	20	16	12	9.0	14
30	26	16	150	30	---	75	38	20	20	13	8.4	13
31	27	---	130	44	---	51	---	19	---	11	7.3	---
TOTAL	796	882	1697	1953	865	1519	1438	972	788.9	680.8	514.6	564.4
MEAN	25.7	29.4	54.7	63.0	30.9	49.0	47.9	31.4	26.3	22.0	16.6	18.8
MAX	72	139	231	378	47	138	158	83	168	113	80	124
MIN	13	16	15	30	25	24	33	19	5.2	9.8	5.1	5.3
CFSM	.91	1.04	1.93	2.22	1.09	1.73	1.69	1.11	.93	.78	.59	.66
IN.	1.05	1.16	2.23	2.56	1.14	1.99	1.89	1.28	1.04	.89	.68	.74

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1991, BY WATER YEAR

	1988	1989	1990	1991
MEAN	33.0	38.6	33.9	51.8
MAX	55.3	44.8	54.7	66.9
(WY)	1990	1989	1991	1990
MIN	17.9	29.4	20.0	32.4
(WY)	1989	1991	1989	1991

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1988 - 1991
ANNUAL TOTAL	15090.9	12670.7	
ANNUAL MEAN	41.3	34.7	41.5
HIGHEST ANNUAL MEAN			47.3
LOWEST ANNUAL MEAN			34.7
HIGHEST DAILY MEAN	413	378	922
LOWEST DAILY MEAN	9.9	5.1	5.1
ANNUAL SEVEN-DAY MINIMUM	11	6.4	6.4
INSTANTANEOUS PEAK FLOW		989	2730
INSTANTANEOUS PEAK STAGE		6.09	7.96
ANNUAL RUNOFF (CFSM)	1.46	1.23	1.46
ANNUAL RUNOFF (INCHES)	19.82	16.64	19.90
10 PERCENT EXCEEDS	63	59	62
50 PERCENT EXCEEDS	34	28	32
90 PERCENT EXCEEDS	16	11	14

CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA

LOCATION.--Lat 40°04'22", long 75°51'40", Chester County, Hydrologic Unit 02040205, at right upstream end of bridge on Legislative Route 15185, at Birdell, 0.4 mi downstream from Two Log Run, and 3.0 mi southeast of Honey Brook.

DRAINAGE AREA.--18.7 mi².

PERIOD OF RECORD.--June 1960 to current year.

REVISED RECORDS.--WDR PA-73-1: 1972(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 591.20 ft above National Geodetic Vertical Datum of 1929

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	12	33	21	17	23	17	10	8.1	7.7	6.2
2	9.7	13	12	29	20	19	22	16	9.8	7.9	7.4	6.2
3	9.5	12	34	25	20	27	20	15	9.8	8.1	7.0	6.4
4	10	12	210	23	21	67	19	14	10	8.2	7.0	6.5
5	10	13	35	21	20	29	20	14	10	9.0	6.8	6.7
6	9.5	16	23	23	27	25	20	29	9.9	9.2	6.6	6.6
7	9.5	13	20	27	47	39	18	30	9.9	11	6.7	6.4
8	9.9	13	18	23	31	21	18	18	9.7	12	6.6	6.2
9	62	13	17	24	24	19	18	16	9.5	8.9	7.4	6.2
10	14	208	17	29	21	18	16	16	9.5	8.2	31	6.3
11	12	64	16	26	20	17	15	15	9.5	8.0	8.4	6.3
12	13	23	16	138	19	17	15	14	11	7.7	7.7	6.2
13	15	19	16	46	19	18	17	14	9.6	49	7.5	6.0
14	15	17	14	30	33	20	30	15	8.5	26	7.3	6.1
15	12	16	33	27	25	29	37	14	8.3	9.9	15	6.2
16	11	16	35	97	17	26	29	14	8.1	8.8	8.5	6.4
17	11	17	21	74	18	20	20	14	8.6	8.6	7.4	6.3
18	50	16	69	34	18	55	19	13	13	8.3	7.1	7.0
19	69	15	41	28	24	34	17	13	18	7.6	7.2	17
20	16	15	23	26	32	24	16	13	11	7.2	36	9.4
21	14	14	39	37	22	21	82	12	9.8	7.0	16	6.8
22	14	14	38	30	20	21	63	12	9.2	15	9.5	6.5
23	92	20	38	25	17	77	29	12	9.2	11	8.5	6.6
24	69	17	108	22	17	48	34	12	9.5	9.0	7.8	6.7
25	21	15	27	20	18	30	33	12	9.2	7.9	7.4	82
26	17	14	22	19	18	25	22	11	8.9	11	7.3	23
27	14	14	20	19	17	32	19	11	8.8	10	7.1	10
28	14	14	21	21	17	28	18	16	8.4	7.9	7.1	8.2
29	14	14	23	21	---	23	18	12	8.2	9.8	7.0	7.7
30	14	13	154	23	---	35	19	11	8.0	9.4	6.7	7.7
31	14	---	111	37	---	26	---	11	---	8.3	6.5	---
TOTAL	675.1	693	1283	1057	623	907	746	456	292.9	338.0	297.2	305.8
MEAN	21.8	23.1	41.4	34.1	22.2	29.3	24.9	14.7	9.76	10.9	9.59	10.2
MAX	92	208	210	138	47	77	82	30	18	49	36	82
MIN	9.5	12	12	19	17	17	15	11	8.0	7.0	6.5	6.0
CFSM	1.16	1.24	2.21	1.82	1.19	1.56	1.33	.79	.52	.58	.51	.55
IN.	1.34	1.38	2.55	2.10	1.24	1.80	1.48	.91	.58	.67	.59	.61

• Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	15.8	24.4	28.1	33.5	39.6	38.0	32.5	26.9	23.8	22.5	13.0	16.																				
MAX	50.9	58.6	84.3	131	85.1	90.2	83.8	74.6	134	106	25.8	63.1																				
(WY)	1977	1973	1984	1979	1979	1978	1983	1989	1972	1984	1990	1960																				
MIN	5.74	7.35	8.23	7.03	14.3	15.3	11.7	8.84	6.46	3.79	3.31	3.62																				
(WY)	1965	1982	1981	1981	1969	1981	1963	1963	1963	1963	1963	1964																				

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1960 - 1991
ANNUAL TOTAL	8916.0	7674.0	
ANNUAL MEAN	24.4	21.0	26.1
HIGHEST ANNUAL MEAN			46.3
LOWEST ANNUAL MEAN			12.8
HIGHEST DAILY MEAN	238	210	2520
LOWEST DAILY MEAN	7.9	6.0	1.7
ANNUAL SEVEN-DAY MINIMUM	8.7	6.2	2.1
INSTANTANEOUS PEAK FLOW		511	8140
INSTANTANEOUS PEAK STAGE		6.74	11.41
INSTANTANEOUS LOW FLOW		6.0	1.7
ANNUAL RUNOFF (CFSM)	1.31	1.12	1.39
ANNUAL RUNOFF (INCHES)	17.74	15.27	18.93
10 PERCENT EXCEEDS	39	35	40
50 PERCENT EXCEEDS	15	16	15
90 PERCENT EXCEEDS	10	7.2	6.7

a From rating curve extended above 1,900 ft³/s, on basis of slope-area measurement of peak flow.

b Also July 1, 1984.

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 mi².

PERIOD OF RECORD.--October 1943 to December 1951, January 1970 to current year.

GAGE.--Water-stage recorder and V-notch sharp crested weir. Elevation of gage is 305 ft above National Geodetic Vertical Datum, from topographic map. Sept. 10, 1943, to Dec. 31, 1951, nonrecording gage at site 1,100 ft downstream at different datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Diversion above station from Rock Run Reservoir, capacity, 320 mil. gal, 2.6 mi upstream for municipal supply of City of Coatesville. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	28	23	81	54	42	66	52	●24	19	15	10
2	20	27	23	67	51	49	64	48	●23	17	13	9.7
3	19	26	46	61	51	65	57	46	●22	17	13	9.8
4	19	24	333	55	51	171	55	44	●23	18	13	10
5	21	24	82	50	51	83	54	44	●22	17	12	12
6	19	31	51	54	61	66	55	68	●21	20	12	11
7	18	29	44	62	97	96	52	80	●21	19	11	11
8	18	26	41	52	75	62	50	51	●20	24	11	9.9
9	60	25	39	58	61	55	51	47	●19	17	15	9.5
10	31	298	38	66	56	52	48	46	●19	15	51	9.7
11	24	179	36	66	52	50	44	44	●19	15	20	9.8
12	23	52	35	276	47	48	43	40	●24	14	14	9.6
13	27	41	35	111	48	48	47	39	●23	99	14	9.2
14	37	37	34	73	79	52	79	41	●20	66	13	12
15	25	35	53	65	67	69	81	39	●19	25	21	10
16	22	34	91	168	45	69	79	37	●30	19	17	9.8
17	21	35	49	153	46	54	56	35	●26	17	13	13
18	41	35	109	82	46	133	52	36	●69	16	12	14
19	117	30	85	69	57	89	49	35	●61	15	12	16
20	36	30	53	67	71	65	47	34	31	15	77	23
21	29	29	67	83	58	56	151	34	25	14	45	13
22	28	28	86	66	51	57	148	34	22	14	20	11
23	102	39	70	55	46	151	77	33	23	28	16	11
24	139	41	190	●51	44	119	94	●30	22	18	14	11
25	45	30	71	●50	45	81	90	●29	20	15	13	120
26	36	27	53	50	45	67	66	●26	19	19	13	50
27	32	26	48	51	44	77	58	●27	18	26	13	26
28	31	26	53	53	43	76	54	●28	17	16	12	17
29	29	25	59	53	---	61	52	●27	16	17	12	14
30	28	23	199	56	---	90	54	●26	18	20	12	14
31	28	---	261	83	---	76	---	●25	---	17	11	---
TOTAL	1145	1340	2457	2387	1542	2329	1973	1225	736	688	560	516.0
MEAN	36.9	44.7	79.3	77.0	55.1	75.1	65.8	39.5	24.5	22.2	18.1	17.2
MAX	139	298	333	276	97	171	151	80	69	99	77	120
MIN	18	23	23	50	43	42	43	25	16	14	11	9.2
†	3.8	4.9	3.2	2.6	2.4	2.6	3.3	2.6	3.4	3.6	5.0	5.6
MEAN†	40.7	49.6	82.5	79.6	57.5	77.7	69.1	42.1	27.9	25.8	23.1	22.8
CFSM†	.89	1.08	1.80	1.74	1.26	1.70	1.51	.92	.61	.56	.50	.50
IN.†	1.02	1.21	2.08	2.00	1.31	1.96	1.68	1.06	.68	.55	.58	.56

† Diversion from Rock Run Reservoir.

‡ Adjusted for diversion from Rock Run Reservoir, furnished by City of Coatesville.

● Estimated.

CHRISTINA RIVER BASIN

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1951, 1970 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.3	58.2	69.0	80.1	92.1	87.3	84.6	76.7	64.1	55.1	34.5	38.3
MAX	118	114	152	262	179	199	197	159	236	176	82.9	136
(WY)	1980	1973	1984	1979	1971	1978	1983	1989	1972	1984	1971	1979
MIN	11.8	14.9	18.9	15.5	40.2	33.3	28.9	33.5	19.8	14.5	10.6	10.1
(WY)	1987	1982	1981	1981	1944	1985	1985	1977	1986	1944	1944	1986

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1944 - 1951
1970 - 1991

ANNUAL TOTAL	20601		16898.0									
ANNUAL MEAN	56.4	‡61.6	46.3	‡49.9					64.8	‡ 68.9		
HIGHEST ANNUAL MEAN									98.6	‡103	1979	
LOWEST ANNUAL MEAN									28.1	‡ 33.1	1981	
HIGHEST DAILY MEAN	497	Jan 30	333	Dec 4					3400	Jun 22	1972	
LOWEST DAILY MEAN	17	Jul 28	9.2	Sep 13					4.6	Sep 10	1944	
ANNUAL SEVEN-DAY MINIMUM	19	Jul 24	9.8	Sep 7					6.3	Sep 5	1944	
INSTANTANEOUS PEAK FLOW			687	Nov 10					‡8100	Jun 29	1973	
INSTANTANEOUS PEAK STAGE			5.47	Nov 10					10.08	Jun 29	1973	
ANNUAL RUNOFF (CFSM)	1.23	‡ 1.34	1.01	‡ 1.09					1.41	‡ 1.50		
ANNUAL RUNOFF (INCHES)	16.73	‡18.26	13.73	‡14.80					19.22	‡20.43		
10 PERCENT EXCEEDS	93		81						112			
50 PERCENT EXCEEDS	43		37						44			
90 PERCENT EXCEEDS	23		13						16			

‡ Adjusted for diversion from Rock Run Reservoir, furnished by City of Coatesville.

‡ From rating curve extended above 2,200 ft³/s, on basis of slope-area measurement at gage height 9.92 ft.

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA

LOCATION.--Lat 39°57'42", long 75°48'06", Chester County, Hydrologic Unit 02040205, on left bank at bridge on Legislative Route 15068 at Modena, and 300 ft upstream from Dennis Run.

DRAINAGE AREA.--55.0 mi².

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. Elevation of gage is 265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for periods of estimated discharges, which are poor. Flow regulated by Rock Run Reservoir, capacity, 320 Mgal, 5.6 mi upstream and by Lukens Steel Company. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	32	33	126	77	52	107	75	35	35	27	18
2	27	31	32	104	71	69	108	72	33	30	23	19
3	25	30	74	92	73	98	89	62	32	28	27	17
4	28	29	455	84	70	244	84	59	34	29	23	20
5	27	30	124	73	69	124	87	59	33	29	23	21
6	25	36	69	72	84	100	89	105	32	32	22	20
7	24	33	57	94	143	140	76	112	31	39	24	18
8	24	31	51	73	108	86	77	71	30	36	21	17
9	79	30	47	92	84	77	73	63	29	30	31	18
10	39	399	44	102	78	73	74	60	28	27	87	18
11	28	245	42	98	68	66	61	61	29	26	31	18
12	28	67	42	421	62	67	64	51	35	26	26	17
13	34	49	41	215	62	62	68	53	33	215	25	18
14	42	44	40	120	108	75	124	51	29	111	●24	24
15	31	42	75	108	94	103	130	53	28	40	●38	17
16	28	41	135	183	58	105	124	47	45	33	●30	18
17	27	41	64	236	59	74	89	48	38	29	●24	23
18	59	42	157	128	61	204	73	46	102	28	●22	25
19	154	39	124	112	76	135	73	46	93	29	●23	22
20	41	38	73	101	98	98	63	44	48	28	●130	28
21	33	36	95	129	80	87	228	41	39	27	●80	22
22	32	37	126	103	67	85	229	41	36	27	30	17
23	135	52	101	80	61	244	116	43	36	43	26	17
24	196	52	270	●76	57	191	149	39	36	29	22	18
25	53	40	107	●74	58	123	144	40	33	26	22	204
26	41	37	75	74	56	110	108	36	31	45	21	78
27	35	35	63	72	59	121	87	38	31	36	21	32
28	33	36	71	77	56	117	83	40	30	28	22	24
29	32	35	88	78	---	100	79	39	31	27	21	22
30	31	33	256	79	---	146	78	38	31	30	22	20
31	32	---	378	128	---	116	---	37	---	26	20	---
TOTAL	1450	1722	3409	3604	2097	3492	3034	1670	1131	1224	988	850
MEAN	46.8	57.4	110	116	74.9	113	101	53.9	37.7	39.5	31.9	28.3
MAX	196	399	455	421	143	244	229	112	102	215	130	204
MIN	24	29	32	72	56	52	61	36	28	26	20	17
†	3.8	4.9	3.2	2.6	2.4	2.6	3.3	2.6	3.4	3.6	5.0	5.6
MEAN†	50.6	62.3	113	119	77.3	116	104	56.5	41.1	43.1	36.9	33.9
CFSM†	.92	1.13	2.05	2.16	1.41	2.11	1.89	1.03	.75	.78	.67	.62
IN.†	1.06	1.26	2.37	2.50	1.46	2.43	2.11	1.18	.83	.90	.77	.69

† Diversion, equivalent in cubic feet per second, from Rock Run Reservoir.

‡ Adjusted for diversion from Rock Run Reservoir, furnished by City of Coatesville.

● Estimated.

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.3	76.0	92.8	106	117	113	116	102	91.0	80.5	52.1	56.6
MAX	147	139	207	330	235	250	241	213	302	236	123	186
(WY)	1980	1973	1984	1979	1971	1978	1983	1989	1972	1984	1971	1979
MIN	22.0	28.7	25.6	20.1	63.5	43.0	39.9	52.2	32.6	30.8	25.6	21.4
(WY)	1987	1982	1981	1981	1980	1985	1985	1985	1985	1986	1981	1981

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1970 - 1991
ANNUAL TOTAL	28297	24671	
ANNUAL MEAN	77.5	67.6	89.3
HIGHEST ANNUAL MEAN		\$82.7	\$71.1
LOWEST ANNUAL MEAN			130
HIGHEST DAILY MEAN	637	Jan 30	455
LOWEST DAILY MEAN	24	Oct 7	17
ANNUAL SEVEN-DAY MINIMUM	26	Oct 2	18
INSTANTANEOUS PEAK FLOW			855
INSTANTANEOUS PEAK STAGE			4.99
INSTANTANEOUS LOW FLOW			4.4
ANNUAL RUNOFF (CFSM)	1.41	\$ 1.50	1.23
ANNUAL RUNOFF (INCHES)	19.14	\$20.42	16.69
10 PERCENT EXCEEDS	135		125
50 PERCENT EXCEEDS	58		47
90 PERCENT EXCEEDS	32		23

‡ Adjusted for diversion from Rock Run Reservoir, furnished by City of Coatesville.

a Also Sept. 15, 22, 23.

b From rating curve extended above 920 ft³/s, on basis of slope-area measurement at gage height 11.48 ft.

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to October 1978, August 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1971 to October 1978, August 1981 to current year.

pH: May 1971 to October 1978, August 1981 to current year.

WATER TEMPERATURE: May 1971 to October 1978, August 1981 to current year.

DISSOLVED OXYGEN: May 1971 to October 1978, August 1981 to current year.

INSTRUMENTATION.--Water-quality monitor May 1971 to October 1978, August 1981 to current year. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Not operated Dec. 4 to Feb. 19. Other interruptions in the daily record were due to malfunctions of the instrument. Subsequent to water year 1981, station not operated during winter months.

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 on many days during winter months.

DISSOLVED OXYGEN: Maximum, 19.5 mg/L, Sept. 2, 1990; minimum, 0.6 mg/L, Nov. 1, 3, 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	GAGE HEIGHT (FEET) (00065)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)
OCT 1990								
01...	0840	345	9.6	2.91	7.2	30	16.0	500
09...	0900	302	8.6	2.92	7.0	31	19.5	24000
15...	1225	308	11.0	2.93	7.5	33	19.0	2100
22...	1200	307	11.5	2.77	7.4	14	14.0	3800
29...	0920	316	12.0	2.95	7.3	36	9.0	490
NOV								
08...	1240	322	13.2	2.76	7.9	13	9.5	K830
14...	0920	283	12.2	3.02	7.1	49	5.0	K660
MAR 1991								
05...	1345	240	12.6	3.24	8.1	115	9.5	5200
20...	1240	255	14.1	3.18	8.4	93	9.0	510
25...	1155	245	12.3	3.27	7.8	120	8.0	2800
APR								
01...	1515	259	13.0	3.20	8.5	106	8.5	500
09...	0935	274	11.7	3.03	7.5	79	15.0	220
17...	0600	237	10.3	--	6.9	90	12.5	2000
23...	0615	223	--	3.27	6.9	120	8.5	2900
MAY								
15...	0600	280	8.7	3.05	7.0	54	19.5	K1300
28...	1236	320	10.0	3.01	7.9	47	25.5	K1400
JUN								
05...	0550	312	8.8	--	7.0	36	17.0	3000
13...	0835	306	8.8	2.94	7.1	35	19.0	4500
20...	0600	304	8.6	2.98	7.0	45	18.5	2600
27...	0600	364	8.7	2.91	7.0	31	19.5	2000
JUL								
18...	1335	378	15.4	--	7.0	31	21.5	K8900
23...	0825	381	8.6	3.06	7.2	59	24.5	5300
AUG								
01...	0725	337	8.2	--	7.0	27	22.0	11000
28...	0555	407	6.7	--	7.0	21	22.5	3600
SEP								
12...	0745	413	6.5	--	6.5	17	19.0	K1800
19...	0615	390	6.9	2.65	6.7	8.9	22.5	2300
25...	0620	165	9.2	--	6.7	298	18.0	--

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	383	322	347	334	308	323	317	297	308	---	---	---
2	389	342	363	336	309	321	313	296	304	---	---	---
3	411	344	366	340	316	325	305	185	276	---	---	---
4	374	328	355	348	305	323	---	---	---	---	---	---
5	353	326	340	338	314	323	---	---	---	---	---	---
6	356	328	341	324	293	306	---	---	---	---	---	---
7	361	323	346	320	291	304	---	---	---	---	---	---
8	359	336	347	350	152	314	---	---	---	---	---	---
9	350	218	288	330	309	317	---	---	---	---	---	---
10	326	263	292	326	137	214	---	---	---	---	---	---
11	353	331	339	219	148	184	---	---	---	---	---	---
12	347	319	331	---	---	---	---	---	---	---	---	---
13	355	241	316	273	244	260	---	---	---	---	---	---
14	321	276	294	313	238	283	---	---	---	---	---	---
15	323	301	309	302	281	293	---	---	---	---	---	---
16	341	314	322	300	283	291	---	---	---	---	---	---
17	391	312	342	304	286	298	---	---	---	---	---	---
18	352	181	310	302	278	294	---	---	---	---	---	---
19	253	179	210	308	287	293	---	---	---	---	---	---
20	292	255	276	312	286	293	---	---	---	---	---	---
21	317	296	306	334	303	314	---	---	---	---	---	---
22	326	307	314	306	280	296	---	---	---	---	---	---
23	324	181	271	304	252	280	---	---	---	---	---	---
24	251	189	220	279	231	262	---	---	---	---	---	---
25	290	253	273	297	278	287	---	---	---	---	---	---
26	315	286	298	301	284	288	---	---	---	---	---	---
27	319	300	310	299	283	290	---	---	---	---	---	---
28	319	289	307	330	281	301	---	---	---	---	---	---
29	321	300	312	327	294	305	---	---	---	---	---	---
30	327	308	317	309	289	300	---	---	---	---	---	---
31	365	306	326	---	---	---	---	---	---	---	---	---
MONTH	411	179	313	350	137	292	317	185	296	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	286	258	268	270	241	253	301	258	283
2	---	---	---	270	252	261	267	241	252	305	267	292
3	---	---	---	263	184	248	276	260	267	322	264	294
4	---	---	---	202	172	191	288	263	271	306	285	294
5	---	---	---	255	206	233	278	255	266	299	265	280
6	---	---	---	264	232	250	262	250	254	267	211	237
7	---	---	---	249	210	229	260	252	256	239	200	221
8	---	---	---	265	241	252	283	253	266	282	239	252
9	---	---	---	277	246	257	284	257	275	298	249	262
10	---	---	---	267	248	257	291	267	279	281	253	263
11	---	---	---	---	---	---	293	264	277	288	269	275
12	---	---	---	277	260	267	296	270	283	279	267	272
13	---	---	---	273	261	267	283	234	268	302	264	276
14	---	---	---	695	259	375	243	210	223	306	284	293
15	---	---	---	305	226	271	243	200	228	296	272	283
16	---	---	---	258	217	238	247	193	226	310	280	294
17	---	---	---	262	239	251	260	232	246	325	282	304
18	---	---	---	259	165	209	275	241	258	346	289	321
19	---	---	---	242	207	226	281	256	271	291	276	284
20	262	240	248	266	227	245	276	259	263	359	277	303
21	275	242	255	282	260	267	260	146	205	364	329	351
22	287	257	270	274	255	261	213	166	184	379	313	356
23	296	264	277	257	169	206	253	215	234	368	345	356
24	291	268	279	225	191	208	258	186	228	354	300	334
25	287	270	279	252	219	237	252	191	225	356	295	329
26	290	271	278	267	243	255	256	233	245	358	318	338
27	279	262	268	268	242	252	250	241	244	321	289	308
28	274	262	269	262	243	253	253	246	250	335	296	315
29	---	---	---	270	258	261	292	246	260	366	311	332
30	---	---	---	258	218	233	296	259	279	375	323	354
31	---	---	---	255	218	237	---	---	---	378	318	353
MONTH	296	240	269	695	165	249	296	146	251	379	200	300

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	322	299	312	344	282	319	353	325	339	408	353	389
2	327	314	322	353	324	341	362	325	343	425	382	402
3	332	306	320	384	329	363	377	335	351	460	369	405
4	326	302	315	383	352	371	346	317	335	414	363	384
5	325	299	310	378	337	367	367	332	351	401	320	363
6	326	296	311	361	321	338	363	320	348	378	357	369
7	334	317	325	341	251	316	368	331	349	410	359	383
8	329	312	323	340	310	323	392	357	374	442	352	386
9	334	314	327	382	329	354	395	329	364	421	361	379
10	335	293	313	388	334	365	304	192	258	427	368	384
11	341	319	329	387	349	371	343	277	304	455	347	411
12	340	310	320	433	392	413	374	328	354	439	381	412
13	311	295	305	442	110	240	387	343	369	422	389	411
14	322	301	312	295	196	240	398	366	376	426	254	361
15	359	306	328	359	298	324	---	---	---	401	353	381
16	353	210	313	398	338	371	---	---	---	458	386	423
17	331	240	300	401	362	389	---	---	---	433	204	380
18	335	134	265	407	367	390	---	---	---	383	282	349
19	298	209	248	429	391	407	---	---	---	397	331	378
20	335	299	315	406	370	384	---	---	---	406	297	331
21	354	317	341	396	341	376	316	273	284	435	370	397
22	357	309	325	389	360	374	347	320	334	445	368	404
23	333	306	319	412	314	356	371	345	350	440	382	406
24	351	302	312	385	359	375	395	346	367	431	377	389
25	369	330	350	409	364	385	406	360	391	392	151	214
26	365	313	336	387	168	331	406	371	383	307	226	260
27	365	314	343	319	289	301	417	348	379	359	286	320
28	379	344	364	354	323	335	407	360	383	403	362	372
29	363	332	345	360	326	343	403	356	385	444	379	390
30	365	317	342	327	302	315	411	383	395	452	369	395
31	---	---	---	342	318	327	423	371	393	---	---	---
MONTH	379	134	320	442	110	349	423	192	354	460	151	374

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.8	7.2	7.9	8.2	7.3	7.6	7.8	6.9	7.3	---	---	---
2	8.7	7.2	7.9	8.2	7.3	7.7	8.0	7.0	7.4	---	---	---
3	8.7	7.2	7.9	8.1	7.4	7.7	7.4	7.1	7.2	---	---	---
4	8.1	7.2	7.6	8.4	7.4	7.9	---	---	---	---	---	---
5	8.7	7.2	7.8	8.7	7.4	8.0	---	---	---	---	---	---
6	8.7	7.2	7.8	8.6	7.5	7.9	---	---	---	---	---	---
7	8.4	7.2	7.7	8.6	7.4	7.9	---	---	---	---	---	---
8	8.6	7.2	7.8	8.1	7.2	7.8	---	---	---	---	---	---
9	7.7	7.1	7.4	8.0	7.0	7.5	---	---	---	---	---	---
10	7.8	7.2	7.4	7.2	6.9	7.1	---	---	---	---	---	---
11	7.6	7.2	7.3	7.3	6.9	7.1	---	---	---	---	---	---
12	8.0	7.2	7.5	---	---	---	---	---	---	---	---	---
13	7.9	7.2	7.4	7.4	7.2	7.3	---	---	---	---	---	---
14	8.1	7.3	7.5	7.5	7.2	7.3	---	---	---	---	---	---
15	8.2	7.1	7.5	7.5	7.1	7.3	---	---	---	---	---	---
16	8.2	7.2	7.6	7.6	7.2	7.4	---	---	---	---	---	---
17	8.3	7.1	7.6	7.4	7.2	7.3	---	---	---	---	---	---
18	8.0	7.2	7.5	7.5	7.1	7.2	---	---	---	---	---	---
19	7.2	7.0	7.1	7.5	7.0	7.3	---	---	---	---	---	---
20	7.4	7.1	7.2	7.6	7.1	7.3	---	---	---	---	---	---
21	7.7	7.1	7.3	7.6	7.0	7.3	---	---	---	---	---	---
22	7.8	7.2	7.4	7.6	7.0	7.3	---	---	---	---	---	---
23	7.4	7.1	7.3	7.4	7.1	7.2	---	---	---	---	---	---
24	7.4	7.1	7.2	7.6	7.2	7.3	---	---	---	---	---	---
25	7.5	7.2	7.3	7.8	7.0	7.4	---	---	---	---	---	---
26	7.7	7.3	7.4	7.7	7.1	7.4	---	---	---	---	---	---
27	7.6	7.1	7.3	7.9	7.1	7.4	---	---	---	---	---	---
28	7.7	7.2	7.4	7.5	7.1	7.3	---	---	---	---	---	---
29	7.8	7.2	7.5	7.9	7.1	7.4	---	---	---	---	---	---
30	7.8	7.2	7.5	7.8	6.9	7.3	---	---	---	---	---	---
31	7.8	7.3	7.5	---	---	---	---	---	---	---	---	---
MONTH	8.8	7.0	7.5	8.7	6.9	7.4	8.0	6.9	7.3	---	---	---

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	9.0	6.9	7.9	8.5	6.9	7.5	8.9	7.0	7.8
2	---	---	---	9.1	7.2	8.0	8.6	6.9	7.7	8.8	7.0	7.8
3	---	---	---	9.1	7.4	8.1	8.8	6.9	7.7	8.6	6.9	7.7
4	---	---	---	7.7	7.4	7.6	8.8	<7.0	●7.7	8.7	6.9	7.7
5	---	---	---	8.2	7.2	7.7	8.6	<7.0	●7.7	8.8	6.9	7.8
6	---	---	---	8.3	7.0	7.5	9.1	<7.0	●7.9	7.7	6.9	7.1
7	---	---	---	8.4	7.1	7.6	9.1	7.0	7.9	8.3	6.9	7.4
8	---	---	---	8.5	7.0	7.6	9.2	7.0	8.0	8.5	6.9	7.6
9	---	---	---	8.6	7.0	7.6	9.1	7.0	7.9	8.4	6.9	7.5
10	---	---	---	8.7	7.0	7.7	9.0	7.0	7.9	8.7	6.9	7.6
11	---	---	---	---	---	---	9.1	<7.1	●7.9	8.6	6.9	7.7
12	---	---	---	8.6	7.0	7.7	9.0	6.9	7.9	8.7	6.9	7.7
13	---	---	---	8.4	7.0	7.6	8.4	6.8	7.4	8.7	7.0	7.7
14	---	---	---	8.2	7.0	7.5	8.5	6.8	7.4	8.6	7.0	7.7
15	---	---	---	8.6	7.1	7.6	7.4	6.9	7.0	8.6	7.0	7.7
16	---	---	---	8.7	7.0	7.7	8.7	6.9	7.6	8.6	6.9	7.6
17	---	---	---	8.9	7.0	7.8	8.9	6.9	7.7	8.2	7.0	7.4
18	---	---	---	7.2	7.1	7.1	8.7	6.9	7.6	8.0	7.0	7.4
19	8.2	7.1	7.9	8.3	7.1	7.5	8.9	6.9	7.8	8.1	6.9	7.4
20	8.6	7.0	7.5	8.7	7.1	7.7	8.4	6.8	7.4	8.0	6.9	7.4
21	8.7	6.8	7.6	8.8	6.9	7.6	7.0	6.8	6.9	8.2	7.0	7.5
22	8.7	6.8	7.6	8.4	6.9	7.5	7.2	6.8	7.0	8.1	7.1	7.5
23	8.5	6.8	7.5	7.0	6.8	6.9	8.4	6.9	7.4	8.1	7.1	7.5
24	8.5	6.6	7.5	7.5	6.9	7.1	7.3	7.0	7.1	8.1	7.1	7.5
25	8.6	6.7	7.5	8.3	6.9	7.4	8.4	6.9	7.5	8.1	7.1	7.5
26	8.5	6.8	7.5	8.5	7.0	7.6	8.7	6.9	7.7	8.3	7.1	7.6
27	8.7	6.7	7.6	8.4	7.0	7.5	8.9	7.0	7.8	8.2	7.1	7.6
28	8.9	7.0	7.8	8.9	7.2	7.9	8.9	7.0	7.7	8.3	7.1	7.6
29	---	---	---	8.5	7.1	7.6	8.5	6.9	7.5	8.3	7.1	7.6
30	---	---	---	8.3	7.0	7.5	8.9	6.9	7.6	8.3	7.1	7.6
31	---	---	---	8.6	6.9	7.6	---	---	---	8.4	7.1	7.7
MONTH	8.9	6.6	7.6	9.1	6.8	7.6	9.2	6.8	7.6	8.9	6.9	7.6
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	8.4	7.1	7.7	8.8	6.9	7.8	9.2	7.0	8.3	8.7	6.9	8.0
2	8.4	7.1	7.7	8.3	6.9	7.6	9.4	7.1	8.4	8.8	6.8	8.0
3	8.5	7.0	7.7	7.9	7.0	7.3	9.3	7.1	8.4	8.9	6.9	8.1
4	8.1	7.0	7.5	8.7	7.1	7.9	9.0	6.9	8.0	8.9	7.0	8.1
5	8.4	7.0	7.7	8.1	7.1	7.4	9.3	7.0	8.4	9.0	7.0	8.1
6	8.3	7.0	7.7	8.9	7.1	8.0	9.4	7.0	8.4	9.0	7.0	8.1
7	8.5	7.0	7.8	8.4	7.0	7.5	9.4	7.0	8.5	9.2	7.1	8.3
8	8.7	7.1	7.9	8.7	7.0	7.8	9.5	7.0	8.5	8.8	7.1	8.1
9	8.7	7.1	7.9	9.0	7.1	8.0	8.8	7.0	7.7	8.7	7.0	8.0
10	8.8	7.1	8.0	9.1	7.0	8.1	8.3	6.9	7.5	8.1	6.3	7.4
11	8.9	7.0	8.0	9.1	7.0	8.2	8.8	6.9	7.8	8.5	6.4	7.6
12	8.5	6.9	7.7	9.1	7.1	8.3	9.1	6.8	8.0	8.4	6.5	7.5
13	8.6	6.9	7.7	8.2	6.9	7.2	9.2	6.9	8.2	8.4	6.5	7.5
14	8.7	6.9	7.9	7.7	5.9	7.1	9.0	6.9	8.2	7.8	6.7	7.2
15	8.9	7.0	8.0	8.4	7.0	7.6	---	---	---	8.1	6.6	7.3
16	8.8	7.0	7.7	8.7	7.1	7.8	---	---	---	8.6	6.6	7.5
17	8.3	6.9	7.5	9.1	7.1	8.1	---	---	---	8.4	6.5	7.4
18	7.2	7.0	7.0	9.3	7.1	8.3	---	---	---	7.2	6.4	6.8
19	7.4	6.9	7.1	9.3	7.2	8.4	---	---	---	7.3	6.7	7.0
20	8.3	7.0	7.6	9.3	7.1	8.4	---	---	---	7.8	6.8	7.3
21	8.5	7.0	7.8	9.3	7.1	8.4	---	---	---	8.2	6.9	7.5
22	8.3	7.0	7.6	9.2	7.1	8.3	8.0	6.9	7.4	8.6	7.1	7.8
23	8.0	7.0	7.4	9.2	7.0	8.2	8.4	6.9	7.7	8.6	7.4	8.0
24	8.7	6.9	7.8	9.2	7.1	8.2	8.7	6.9	7.9	8.0	7.1	7.6
25	8.9	7.0	8.0	8.9	7.0	8.0	9.0	7.0	8.1	7.1	6.6	6.7
26	9.1	7.0	8.2	8.5	7.1	7.6	9.1	7.0	8.3	6.9	6.6	6.8
27	9.1	7.0	8.2	8.6	7.0	7.7	9.1	6.9	8.2	7.1	6.6	6.8
28	9.2	7.1	8.3	8.9	7.1	8.1	9.3	6.9	8.3	7.1	6.5	6.8
29	9.2	7.1	8.3	8.3	7.2	7.6	9.2	6.9	8.3	7.4	6.6	7.0
30	9.1	7.0	8.1	8.9	7.1	8.0	9.1	6.9	8.3	8.2	6.9	7.4
31	---	---	---	9.0	7.1	8.1	9.0	6.9	8.2	---	---	---
MONTH	9.2	6.9	7.8	9.3	5.9	7.9	9.5	6.8	8.1	9.2	6.3	7.5

< Actual value is known to be less than value shown
 ● Estimated.

CHRISTINA RIVER BASIN

01480617 WEST BRANDYWINE CREEK AT MODENA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.5	16.0	17.5	12.5	10.0	11.0	7.0	5.5	6.0	---	---	---
2	18.0	15.5	16.5	13.0	10.5	11.5	7.5	5.5	6.5	---	---	---
3	17.5	14.0	15.5	13.5	11.5	12.5	8.0	6.0	7.0	---	---	---
4	17.0	15.0	16.0	14.0	12.0	12.5	---	---	---	---	---	---
5	18.5	15.0	16.5	14.0	11.5	13.0	---	---	---	---	---	---
6	19.5	16.0	17.5	13.5	11.5	12.5	---	---	---	---	---	---
7	19.5	16.5	18.0	11.5	10.0	11.0	---	---	---	---	---	---
8	20.5	17.5	19.0	10.5	7.5	9.5	---	---	---	---	---	---
9	20.5	19.5	20.0	7.5	6.0	7.0	---	---	---	---	---	---
10	22.0	19.5	20.5	9.0	6.5	8.0	---	---	---	---	---	---
11	21.0	20.5	21.0	8.5	7.5	8.0	---	---	---	---	---	---
12	22.0	20.5	21.0	---	---	---	---	---	---	---	---	---
13	22.5	21.0	22.0	7.5	6.0	6.5	---	---	---	---	---	---
14	22.5	20.0	21.5	7.5	5.0	6.5	---	---	---	---	---	---
15	21.0	18.5	19.5	8.5	5.5	7.0	---	---	---	---	---	---
16	18.5	16.5	17.5	9.5	7.0	8.0	---	---	---	---	---	---
17	18.5	15.0	17.0	9.5	8.0	9.0	---	---	---	---	---	---
18	19.0	16.5	18.0	7.5	6.0	7.0	---	---	---	---	---	---
19	16.0	14.0	15.0	7.0	5.0	6.0	---	---	---	---	---	---
20	15.0	12.0	13.5	7.0	5.5	6.5	---	---	---	---	---	---
21	15.0	11.5	13.0	8.0	5.5	6.5	---	---	---	---	---	---
22	16.0	13.0	14.5	8.0	5.0	5.0	---	---	---	---	---	---
23	16.5	15.0	15.5	9.0	7.5	8.0	---	---	---	---	---	---
24	16.0	14.5	15.5	9.0	7.5	8.0	---	---	---	---	---	---
25	14.5	12.5	13.5	9.5	7.0	8.0	---	---	---	---	---	---
26	13.0	10.0	12.0	9.5	7.5	8.5	---	---	---	---	---	---
27	11.5	9.0	10.0	10.5	8.5	9.0	---	---	---	---	---	---
28	11.5	9.5	10.0	13.0	9.0	10.5	---	---	---	---	---	---
29	10.5	9.0	9.5	13.0	8.5	11.0	---	---	---	---	---	---
30	10.5	8.0	9.0	8.0	6.0	7.0	---	---	---	---	---	---
31	11.5	8.0	9.5	---	---	---	---	---	---	---	---	---
MONTH	22.5	8.0	16.0	14.0	5.0	8.8	8.0	5.5	6.5	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	8.0	4.5	6.0	9.0	6.5	8.0	19.5	14.5	17.0
2	---	---	---	11.5	7.5	9.5	9.5	6.5	8.0	18.0	15.5	17.0
3	---	---	---	12.5	9.5	11.0	11.0	6.5	8.5	17.0	14.0	15.5
4	---	---	---	11.0	8.5	10.0	12.0	7.5	10.0	17.5	13.0	15.5
5	---	---	---	10.0	7.0	8.5	11.0	9.5	10.5	17.5	13.5	15.5
6	---	---	---	9.0	6.5	8.0	14.5	9.5	12.0	17.0	15.0	16.0
7	---	---	---	9.5	7.5	8.5	16.5	11.5	14.0	17.0	13.5	15.5
8	---	---	---	8.0	5.5	6.5	17.0	13.5	15.5	18.0	13.0	15.5
9	---	---	---	7.5	4.5	6.0	18.5	15.0	16.5	16.0	14.5	15.5
10	---	---	---	8.0	5.0	6.5	17.5	14.0	16.5	19.0	14.0	16.5
11	---	---	---	---	---	---	14.5	10.5	12.5	19.5	15.0	17.0
12	---	---	---	7.5	3.5	5.5	14.0	10.0	12.0	21.0	15.5	18.5
13	---	---	---	6.0	4.0	5.0	11.5	9.5	10.0	22.5	18.0	20.0
14	---	---	---	5.0	4.0	4.5	11.0	8.5	9.5	23.0	19.0	21.0
15	---	---	---	7.0	4.5	5.5	10.5	9.5	10.0	24.0	19.5	21.5
16	---	---	---	8.0	4.0	6.0	15.0	9.5	12.0	23.5	19.0	21.0
17	---	---	---	9.0	5.0	7.5	15.5	12.0	13.5	21.5	19.0	20.0
18	---	---	---	8.0	7.0	7.5	14.0	12.0	13.0	20.0	17.5	19.0
19	---	---	---	9.0	7.0	8.0	14.5	11.0	12.5	20.0	15.5	17.5
20	9.0	7.0	8.0	10.0	6.5	8.5	12.5	10.5	11.0	20.0	14.5	17.0
21	8.0	5.5	7.0	9.5	7.5	8.5	10.5	9.0	9.5	21.0	15.5	18.5
22	9.0	6.0	7.5	9.0	8.0	8.5	10.0	8.5	9.5	23.0	18.0	20.5
23	7.5	5.0	6.0	8.0	6.5	7.0	14.0	8.5	11.0	24.5	19.5	22.0
24	6.0	3.5	5.0	9.0	6.5	7.5	12.5	11.0	12.0	24.5	20.0	22.0
25	6.5	5.0	6.0	8.5	7.0	8.0	16.0	10.5	13.0	25.5	21.0	23.0
26	7.0	5.0	6.0	9.5	6.5	8.5	17.0	12.5	15.0	26.5	22.0	24.0
27	5.0	3.0	4.5	10.5	8.5	9.5	18.5	14.0	16.5	26.5	22.0	24.0
28	6.5	3.5	5.0	14.5	10.0	12.0	17.5	15.5	16.5	27.5	23.5	25.0
29	---	---	---	12.0	10.5	11.0	15.5	14.0	14.5	27.5	22.5	25.0
30	---	---	---	10.5	7.5	9.0	17.5	14.0	15.5	27.0	23.0	24.5
31	---	---	---	10.0	6.0	8.0	---	---	---	27.5	23.0	25.0
MONTH	9.0	3.0	6.1	14.5	3.5	7.9	18.5	6.5	12.3	27.5	13.0	19.5

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.0	22.5	24.0	26.0	22.0	23.5	27.5	22.0	25.0	23.5	20.0	22.0
2	25.0	21.0	23.0	23.0	21.5	22.5	28.0	23.0	25.5	21.5	18.0	20.0
3	23.5	20.5	22.0	21.5	21.0	21.5	27.5	23.5	25.5	21.5	17.0	19.5
4	21.5	19.0	20.5	22.5	20.0	21.5	26.5	24.0	25.5	21.0	18.0	19.5
5	20.0	17.0	18.5	21.5	20.5	20.5	26.0	22.5	24.5	23.5	20.0	21.5
6	19.0	15.5	17.0	25.0	20.0	22.5	25.0	21.0	23.0	21.5	19.5	20.5
7	20.5	15.5	18.0	23.5	22.0	22.5	24.5	20.5	23.0	22.5	18.5	20.5
8	22.0	16.0	19.0	24.5	21.0	22.5	25.5	21.0	23.5	22.0	18.5	20.5
9	23.5	17.5	20.5	26.0	21.5	23.5	24.5	22.5	23.0	22.5	18.5	21.0
10	24.0	18.5	21.5	24.5	20.5	22.5	24.5	21.0	22.5	22.5	19.5	21.0
11	24.5	19.5	22.0	25.0	20.5	23.0	24.0	20.5	22.0	22.5	20.0	21.5
12	23.5	21.0	22.0	25.0	21.0	23.5	24.5	20.0	22.5	21.5	18.5	20.5
13	23.0	19.0	21.0	23.5	21.0	22.5	25.0	20.5	23.0	21.0	17.0	19.5
14	23.0	17.5	20.0	24.5	21.0	22.5	24.5	21.0	23.0	21.0	19.0	20.5
15	25.0	18.0	21.5	25.5	20.5	23.0	---	---	---	21.5	19.5	20.5
16	25.5	21.0	23.0	26.0	20.5	23.0	---	---	---	24.5	20.0	22.5
17	25.5	22.0	23.5	26.5	21.0	23.5	---	---	---	26.0	22.0	24.0
18	23.5	18.5	20.5	27.0	22.0	24.5	---	---	---	23.5	22.5	23.0
19	19.5	18.0	18.5	28.0	23.0	25.5	---	---	---	23.0	19.5	21.5
20	24.5	18.5	21.5	27.5	23.5	25.5	---	---	---	19.0	17.5	18.5
21	26.0	20.5	23.0	28.0	24.0	26.0	---	---	---	18.0	15.0	16.5
22	23.0	21.0	22.0	27.5	24.0	26.0	24.5	20.5	22.5	18.0	14.0	16.0
23	20.5	19.0	19.5	28.5	24.5	26.0	25.5	20.5	23.0	17.5	15.0	16.0
24	22.0	17.0	19.5	28.0	24.5	26.0	25.0	21.5	23.5	19.0	16.0	17.5
25	23.5	18.5	21.0	25.5	24.0	25.0	25.0	22.0	23.5	18.5	17.0	17.5
26	24.0	18.5	21.0	24.5	23.0	24.0	25.0	20.5	23.0	19.0	16.5	17.5
27	25.0	19.0	22.0	24.5	22.0	23.0	25.0	21.0	23.0	17.5	15.0	16.0
28	26.0	20.5	23.5	25.5	21.0	23.5	26.5	22.0	24.5	16.5	13.5	15.0
29	26.5	22.0	24.5	23.5	21.5	22.5	27.5	23.0	25.0	17.5	13.0	15.0
30	26.5	22.5	24.5	24.0	20.5	22.0	27.0	23.0	25.5	17.0	14.0	15.5
31	---	---	---	26.5	22.0	24.0	26.0	23.5	25.0	---	---	---
MONTH	26.5	15.5	21.3	28.5	20.0	23.5	28.0	20.0	23.7	26.0	13.0	19.3

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	15.4	9.0	11.0	14.7	12.2	13.3	15.1	13.0	13.7	---	---	---
2	16.4	9.4	11.6	14.6	11.7	13.0	14.6	12.9	13.5	---	---	---
3	15.6	10.0	12.4	13.8	11.3	12.3	13.5	11.8	12.8	---	---	---
4	12.9	9.4	11.1	14.3	11.0	12.4	---	---	---	---	---	---
5	14.9	9.5	11.4	13.9	10.4	11.9	---	---	---	---	---	---
6	14.4	8.9	11.1	12.6	9.7	11.1	---	---	---	---	---	---
7	13.2	8.5	10.3	13.2	10.5	11.5	---	---	---	---	---	---
8	12.9	8.1	10.0	13.4	10.3	11.2	---	---	---	---	---	---
9	11.1	7.2	8.8	13.7	10.6	11.8	---	---	---	---	---	---
10	10.0	7.6	8.8	13.0	10.0	10.5	---	---	---	---	---	---
11	9.4	7.6	8.3	12.7	10.5	10.9	---	---	---	---	---	---
12	10.7	7.7	8.9	---	---	---	---	---	---	---	---	---
13	10.0	7.0	8.2	12.0	11.3	11.7	---	---	---	---	---	---
14	10.5	7.7	8.8	12.6	11.9	12.3	---	---	---	---	---	---
15	11.3	7.9	9.2	12.9	11.6	12.3	---	---	---	---	---	---
16	11.5	8.3	9.6	13.0	11.2	12.0	---	---	---	---	---	---
17	12.5	8.2	9.7	11.8	11.2	11.5	---	---	---	---	---	---
18	10.8	8.0	8.9	13.1	11.7	12.4	---	---	---	---	---	---
19	9.6	9.0	9.3	13.5	12.4	12.9	---	---	---	---	---	---
20	10.4	9.5	9.9	13.8	12.3	12.9	---	---	---	---	---	---
21	11.2	9.5	10.1	14.0	12.2	12.9	---	---	---	---	---	---
22	12.1	9.2	10.0	14.0	12.3	13.0	---	---	---	---	---	---
23	9.3	8.9	9.1	12.5	11.8	12.2	---	---	---	---	---	---
24	9.5	9.0	9.2	13.2	11.6	12.4	---	---	---	---	---	---
25	10.7	9.6	10.1	13.6	11.1	12.6	---	---	---	---	---	---
26	11.4	9.9	10.6	13.8	12.0	12.6	---	---	---	---	---	---
27	12.0	10.6	11.2	14.0	11.7	12.6	---	---	---	---	---	---
28	11.9	10.5	11.1	13.1	10.9	12.0	---	---	---	---	---	---
29	12.9	10.5	11.7	13.3	10.7	12.0	---	---	---	---	---	---
30	14.2	12.0	13.1	14.6	12.3	13.4	---	---	---	---	---	---
31	15.1	12.7	13.8	---	---	---	---	---	---	---	---	---
MONTH	16.4	7.0	10.2	14.7	9.7	12.2	15.1	11.8	13.3	---	---	---

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	15.3	11.0	13.0	13.8	10.8	12.1	13.7	8.5	10.9
2	---	---	---	13.3	9.4	11.3	14.6	11.0	12.7	13.9	8.5	10.8
3	---	---	---	13.9	8.8	10.8	15.1	11.1	13.2	13.5	8.6	10.7
4	---	---	---	11.1	10.5	10.7	>17.4	10.5	14.1	13.7	8.7	10.9
5	---	---	---	12.7	10.7	11.5	16.1	10.6	13.0	14.6	8.7	11.2
6	---	---	---	13.1	10.5	11.6	>17.1	9.1	13.0	11.6	9.3	10.2
7	---	---	---	12.7	10.7	11.4	16.7	8.3	12.0	12.8	9.9	11.3
8	---	---	---	14.1	11.1	12.3	16.9	8.0	11.6	14.1	9.4	11.6
9	---	---	---	14.4	11.2	12.6	15.8	7.6	10.9	14.3	9.5	11.4
10	---	---	---	14.4	11.1	12.5	15.7	7.4	10.8	14.7	9.2	11.5
11	---	---	---	---	---	---	>16.2	8.4	12.1	14.4	9.0	11.3
12	---	---	---	13.8	10.8	12.2	17.4	10.6	13.6	14.6	8.4	11.1
13	---	---	---	14.2	10.9	12.4	16.0	10.7	13.2	14.0	6.2	10.2
14	---	---	---	14.2	11.9	13.0	15.7	11.9	13.6	13.2	7.3	10.1
15	---	---	---	15.1	12.5	13.6	13.7	11.2	12.4	12.9	8.1	10.0
16	---	---	---	15.5	12.5	14.0	14.2	9.9	12.3	13.2	8.2	10.3
17	---	---	---	16.5	12.7	14.2	14.1	9.4	11.4	12.6	8.7	10.1
18	---	---	---	13.7	11.8	12.7	13.4	9.3	11.5	12.1	8.5	10.3
19	14.2	10.7	13.2	12.9	11.1	11.9	---	---	---	12.5	7.3	10.8
20	13.1	10.2	11.2	14.5	10.8	12.4	---	---	---	12.5	9.7	10.9
21	14.1	9.8	11.7	15.8	11.1	12.9	---	---	---	12.1	8.3	10.2
22	14.1	9.8	11.5	14.7	11.4	12.7	---	---	---	10.2	7.7	9.0
23	14.6	9.9	11.9	12.5	11.1	11.9	---	---	---	10.1	7.8	8.7
24	15.1	10.6	12.5	12.1	10.8	11.5	11.8	10.0	11.0	10.0	7.7	8.7
25	14.9	10.3	12.1	12.6	10.6	11.5	13.5	10.1	11.9	9.9	7.2	8.6
26	14.7	10.3	12.0	12.9	10.0	11.4	14.0	9.4	11.6	10.2	7.7	8.7
27	14.5	10.8	12.5	12.3	9.9	10.7	14.3	8.9	11.4	10.2	7.3	8.7
28	15.6	11.7	13.3	12.3	9.1	10.6	14.2	8.4	11.1	10.1	7.6	8.7
29	---	---	---	12.7	9.2	10.5	13.9	9.5	11.2	10.7	7.0	8.7
30	---	---	---	13.1	10.0	11.4	14.4	8.9	11.2	10.0	7.5	8.4
31	---	---	---	13.9	10.5	12.3	---	---	---	10.7	7.2	8.8
MONTH	15.6	9.8	12.2	16.5	8.8	12.0	17.4	7.4	12.1	14.7	6.2	10.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	10.6	7.2	8.8	14.2	6.3	9.1	16.5	7.5	11.2	14.7	6.2	9.9
2	11.0	7.5	9.1	11.1	6.2	8.5	17.3	6.6	11.3	14.3	6.8	10.1
3	11.2	7.6	9.3	9.4	6.4	8.0	17.5	6.1	10.6	14.1	6.2	10.3
4	10.7	7.7	9.1	11.7	7.4	9.1	16.9	5.0	9.7	14.2	6.8	9.6
5	12.0	8.5	10.1	10.3	7.1	8.2	17.6	5.3	10.9	12.9	6.3	9.2
6	12.2	8.8	10.5	12.0	6.9	9.0	18.9	6.1	11.5	13.1	6.4	9.3
7	12.6	9.0	10.4	11.3	6.3	7.7	18.3	6.2	11.2	13.4	6.7	9.7
8	12.9	8.4	10.3	10.9	6.4	8.6	17.4	5.8	11.3	13.3	6.6	9.7
9	12.4	8.1	10.0	11.9	6.6	8.8	12.4	6.5	8.9	14.4	6.7	10.1
10	12.5	7.5	9.8	14.8	6.3	10.1	11.2	8.2	9.5	14.2	6.2	9.5
11	12.3	7.2	9.4	16.6	7.7	11.5	14.0	7.8	10.4	13.5	6.2	9.6
12	11.6	6.6	8.8	16.9	6.9	10.6	15.5	7.4	10.7	14.5	6.5	9.9
13	12.0	7.2	9.4	9.2	5.5	8.3	16.3	7.2	11.0	14.7	7.0	10.1
14	12.7	7.5	9.7	9.6	7.9	8.8	17.5	6.7	12.9	10.1	5.9	8.3
15	13.7	6.9	9.5	10.9	6.9	8.9	---	---	---	12.4	7.0	9.1
16	12.8	6.2	8.3	11.9	6.8	9.0	---	---	---	13.5	7.2	9.7
17	10.2	6.1	8.0	13.0	5.9	9.5	---	---	---	14.4	6.4	9.0
18	9.6	6.5	8.1	16.3	7.7	11.3	---	---	---	9.8	6.5	7.9
19	10.1	8.9	9.6	16.4	7.1	10.9	---	---	---	10.1	6.6	8.2
20	11.0	7.9	9.5	16.9	6.4	10.5	---	---	---	11.5	8.4	9.9
21	12.1	7.5	9.2	16.7	6.1	10.3	9.3	7.1	8.6	12.4	8.9	10.3
22	11.2	7.4	9.1	16.1	5.6	9.5	10.3	7.1	8.3	13.0	9.0	10.7
23	11.2	8.2	9.5	13.3	5.7	8.9	11.7	7.0	8.7	12.2	8.5	10.1
24	12.9	6.5	10.4	15.1	5.2	9.8	12.8	6.7	9.0	13.3	8.7	10.4
25	13.6	8.3	10.6	13.1	5.8	9.2	13.5	6.5	9.5	9.7	8.8	9.4
26	14.9	8.1	11.3	13.0	6.8	8.6	14.6	6.3	10.3	10.2	9.2	9.5
27	17.5	8.2	11.7	11.8	7.4	9.4	16.2	7.2	10.9	11.4	9.2	10.0
28	18.1	7.5	11.1	13.9	7.9	10.2	16.9	6.6	10.8	11.9	9.5	10.5
29	14.6	6.9	10.1	12.1	7.4	9.0	17.5	6.1	10.5	12.1	9.2	10.4
30	14.0	5.9	9.1	13.5	8.3	10.5	15.9	5.8	9.9	12.4	8.8	10.5
31	---	---	---	16.5	7.7	10.7	14.6	5.2	9.4	---	---	---
MONTH	18.1	5.9	9.7	16.9	5.2	9.4	18.9	5.0	10.3	14.7	5.9	9.7

< Actual value is known to be greater than value shown.

● Estimated.

CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, PA

LOCATION.--Lat 40°05'52", long 75°44'31", Chester County, Hydrologic Unit 02040205, on left bank, 200 ft north of Pennsylvania Turnpike, 1.2 mi downstream from Lyons Run, 1.8 mi upstream from Black Horse Creek, and 3 mi northeast of Glenmoore.

DRAINAGE AREA.--8.57 mi².

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

REVISED RECORDS.--WDR PA-74-1: 1967(M), 1971-72(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 450 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	4.2	3.8	25	13	9.0	13	9.7	7.0	1.8	2.8	1.8
2	2.1	4.2	3.9	13	11	11	12	9.0	4.7	1.7	2.4	1.7
3	1.9	4.1	9.6	12	12	17	11	8.5	4.0	2.0	2.1	1.6
4	2.0	4.0	73	10	12	43	11	8.2	3.8	2.1	1.9	1.7
5	2.4	3.9	43	8.9	12	25	11	7.9	3.6	2.4	1.8	1.9
6	2.2	5.8	12	10	15	14	11	13	3.6	2.7	1.6	1.8
7	2.1	5.6	9.0	13	25	23	11	16	3.2	5.8	1.6	1.8
8	2.0	4.5	8.3	11	22	15	10	11	3.1	7.8	1.7	1.7
9	8.9	3.8	7.5	13	14	11	9.8	8.8	2.9	4.8	3.1	1.6
10	11	34	7.3	18	12	11	9.6	8.6	2.8	2.4	19	1.6
11	5.6	70	6.5	16	11	9.6	8.7	8.0	2.9	1.8	16	1.6
12	3.6	17	6.0	55	9.1	9.1	8.3	7.5	7.8	1.5	5.2	1.6
13	12	8.4	6.7	40	9.3	9.4	9.6	6.9	5.9	46	2.6	1.5
14	63	6.3	6.3	16	17	11	15	6.6	3.7	90	2.1	1.5
15	16	5.7	9.7	13	17	18	17	6.1	2.9	30	3.8	1.7
16	6.2	5.7	19	26	9.1	19	20	5.5	3.2	7.1	4.8	1.6
17	3.9	6.2	12	53	8.3	12	12	5.5	3.5	3.7	3.1	1.6
18	8.7	6.1	16	22	9.2	26	10	6.8	14	2.8	2.3	1.7
19	32	5.2	21	14	13	30	9.6	6.1	24	2.5	2.4	3.2
20	17	4.9	11	14	19	14	9.2	5.4	13	2.4	15	2.7
21	7.2	4.5	13	18	14	12	29	5.0	6.1	2.2	37	2.0
22	5.3	4.6	21	15	12	12	42	4.9	3.6	5.8	15	1.7
23	12	7.4	16	9.9	9.6	27	17	4.5	3.9	5.9	5.4	1.7
24	31	9.0	35	99.0	9.0	38	18	4.3	3.8	3.5	3.1	1.7
25	16	6.4	22	88.4	9.7	18	23	4.5	2.9	2.6	6.3	25
26	8.1	5.1	10	88.3	9.8	14	14	4.4	2.3	3.8	3.4	29
27	5.7	4.5	8.5	88.2	9.3	15	11	4.1	2.1	7.9	2.5	11
28	5.0	4.6	7.7	88.1	8.9	15	10	16	2.0	5.0	2.3	4.6
29	4.6	5.0	10	88.0	---	13	9.8	11	1.9	4.3	2.2	2.8
30	4.2	4.1	24	13	---	19	10	7.8	1.8	4.5	2.1	2.3
31	4.1	---	79	22	---	17	---	9.5	---	3.7	1.9	---
TOTAL	308.1	264.8	537.8	530.8	352.3	537.1	412.6	241.1	150.0	270.5	176.5	117.7
MEAN	9.94	8.83	17.3	17.1	12.6	17.3	13.8	7.78	5.00	8.73	5.69	3.92
MAX	63	70	79	55	25	43	42	16	24	90	37	29
MIN	1.9	3.8	3.8	8.0	8.3	9.0	8.3	4.1	1.8	1.5	1.6	1.5
CFSM	1.16	1.03	2.02	2.00	1.47	2.02	1.60	.91	.58	1.02	.66	.46
IN.	1.34	1.15	2.33	2.30	1.53	2.33	1.79	1.05	.65	1.17	.77	.51

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR (SINCE REGULATION)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	7.17	11.1	13.8	13.9	17.7	18.8	18.4	15.7	11.7	9.63	6.15	6.30														
MAX	21.2	21.8	43.4	35.9	44.8	38.4	47.4	36.7	42.2	34.0	22.1	21.4														
(WY)	1980	1973	1984	1978	1971	1978	1983	1989	1972	1984	1971	1979														
MIN	2.33	3.18	2.07	1.19	5.09	6.58	4.84	4.97	2.81	2.28	1.15	.88														
(WY)	1982	1982	1981	1981	1980	1981	1985	1969	1986	1987	1966	1980														

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1966 - 1991
ANNUAL TOTAL	4128.1	3899.3	
ANNUAL MEAN	11.3	10.7	12.5
HIGHEST ANNUAL MEAN			23.2
LOWEST ANNUAL MEAN			4.99
HIGHEST DAILY MEAN	130	May 30	444
LOWEST DAILY MEAN	1.9	Oct 3	.40
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 2	.41
INSTANTANEOUS PEAK FLOW			946
INSTANTANEOUS PEAK STAGE			4.68
INSTANTANEOUS LOW FLOW			.30
ANNUAL RUNOFF (CFSM)	1.32		1.46
ANNUAL RUNOFF (INCHES)	17.92		19.86
10 PERCENT EXCEEDS	21		24
50 PERCENT EXCEEDS	8.0		7.8
90 PERCENT EXCEEDS	2.7		2.2

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 mi².

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 280 ft above National Geodetic Vertical Datum, from topographic map.

REMARKS.--Records good. Flow completely regulated since November 1973.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	11	12	54	10	12	80	22	17	9.9	11	10
2	8.4	11	5.3	52	12	12	73	22	15	9.3	10	9.5
3	7.7	10	8.2	49	14	13	53	21	14	9.0	9.8	8.7
4	7.4	10	15	47	15	13	13	20	12	8.7	9.3	8.1
5	7.4	10	22	45	18	13	14	19	11	8.5	8.6	8.8
6	7.0	8.7	24	44	20	13	17	23	10	8.4	14	10
7	6.9	8.0	26	43	21	12	20	27	10	8.8	22	16
8	6.8	8.0	27	51	20	12	20	27	9.9	9.8	13	21
9	8.1	7.5	25	57	20	12	21	25	9.7	9.9	11	17
10	8.9	14	23	57	20	12	21	24	9.5	9.3	13	11
11	9.5	28	22	28	20	12	20	22	9.3	8.8	14	11
12	9.7	30	21	15	41	12	18	21	10	8.2	9.8	11
13	11	26	20	48	61	12	17	21	10	22	4.8	11
14	18	22	19	200	61	12	20	20	9.7	59	4.5	12
15	22	20	20	298	61	12	24	19	9.3	97	4.9	13
16	20	28	26	172	35	12	28	17	9.0	67	5.1	12
17	17	38	32	40	12	12	28	15	9.2	34	5.2	11
18	17	33	33	55	12	13	27	15	17	19	5.1	9.8
19	22	30	34	55	12	16	26	14	28	17	5.5	9.8
20	24	28	37	55	12	18	25	13	28	15	14	9.8
21	22	27	53	59	12	16	32	13	25	13	23	9.8
22	20	26	52	62	12	13	60	13	22	13	25	9.8
23	21	26	50	61	12	19	88	13	19	13	23	9.8
24	26	26	53	61	12	30	79	12	18	11	20	9.8
25	27	25	53	61	12	34	56	12	16	9.8	16	8.8
26	20	24	50	61	12	34	22	13	14	10	14	6.1
27	13	24	48	38	12	35	23	13	13	11	17	6.3
28	13	23	47	4.5	12	36	23	16	12	11	17	6.4
29	13	22	46	4.5	---	36	22	17	11	12	13	6.4
30	12	22	45	6.8	---	37	22	17	11	12	13	7.5
31	11	---	52	10	---	60	---	18	---	12	12	---
TOTAL	445.8	626.2	1000.5	1893.8	593	605	992	564	418.6	566.4	387.6	311.2
MEAN	14.4	20.9	32.3	61.1	21.2	19.5	33.1	18.2	14.0	18.3	12.5	10.4
MAX	27	38	53	298	61	60	88	27	28	97	25	21
MIN	6.8	7.5	5.3	4.5	10	12	13	12	9.0	8.2	4.5	6.1
MEAN†	16.2	16.5	36.7	37.4	27.1	41.1	29.2	18.0	12.7	18.3	12.7	7.2
CFSM‡	.80	.81	1.81	1.84	1.33	2.02	1.44	.89	.63	.90	.63	.35
IN.‡	.92	.91	2.09	2.12	1.39	2.33	1.61	1.02	.70	1.04	.72	.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1991, BY WATER YEAR (SINCE REGULATION)

	MEAN	20.8	22.9	39.3	46.4	34.8	35.8	39.3	36.2	25.7	25.2	15.1	16.8
MAX	52.5	60.0	87.4	128	72.3	83.7	140	83.4	71.2	81.6	31.4	54.3	
(WY)	1979	1989	1984	1979	1984	1978	1983	1989	1982	1984	1989	1979	
MIN	3.39	3.50	3.01	7.30	.86	.83	.84	.72	4.06	5.18	6.42	6.47	
(WY)	1981	1979	1974	1981	1989	1974	1974	1974	1976	1983	1981	1981	

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1973 - 1991
ANNUAL TOTAL	8648.8	8404.1	
ANNUAL MEAN	23.7	23.0	29.7
HIGHEST ANNUAL MEAN		22.8	52.9
LOWEST ANNUAL MEAN			11.6
HIGHEST DAILY MEAN	236	298	462
LOWEST DAILY MEAN	5.3	4.5	.31
ANNUAL SEVEN-DAY MINIMUM	5.8	5.0	.40
INSTANTANEOUS PEAK FLOW		431	560
INSTANTANEOUS PEAK STAGE		3.48	3.70
ANNUAL RUNOFF (CFSM)	1.17	1.13	1.46
ANNUAL RUNOFF (INCHES)	15.85	15.40	19.86
10 PERCENT EXCEEDS	51	50	63
50 PERCENT EXCEEDS	18	16	16
90 PERCENT EXCEEDS	7.8	8.8	4.8

† Adjusted for change in contents in Marsh Creek Reservoir.

‡ From rating curve extended above 200 ft³/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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948-57, October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 30, 1966, norecording gage at same site and datum.

REMARKS.--Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	38	38	134	72	62	151	69	46	27	27	18
2	27	39	28	115	70	68	141	66	42	25	24	16
3	25	38	69	105	72	85	116	64	39	26	23	15
4	26	38	374	97	72	211	71	62	38	26	22	14
5	29	37	111	90	75	99	72	61	35	26	19	18
6	27	41	83	91	90	81	74	88	34	27	22	19
7	26	38	76	97	143	123	75	95	33	33	36	25
8	25	36	73	98	108	78	74	73	31	35	24	31
9	57	32	69	129	90	70	74	68	29	27	26	27
10	37	296	66	133	83	67	73	67	28	24	91	17
11	34	152	64	101	79	64	69	63	28	22	38	18
12	36	72	62	379	96	62	66	62	41	20	27	18
13	80	62	62	177	118	62	69	60	36	176	17	18
14	71	56	58	300	152	67	99	68	30	153	14	21
15	51	53	83	387	141	91	111	59	28	128	25	23
16	45	58	120	368	93	83	108	54	27	90	21	21
17	42	68	82	206	66	69	88	50	29	55	17	19
18	71	63	148	153	68	168	82	52	123	39	14	19
19	129	58	116	140	75	110	78	50	115	35	15	26
20	58	57	89	136	90	85	75	47	64	32	175	27
21	51	55	129	161	76	76	207	46	55	29	79	21
22	48	54	140	140	71	71	181	45	49	32	50	19
23	112	60	124	130	67	181	160	43	48	43	43	18
24	143	63	243	132	64	151	174	42	45	31	38	19
25	66	55	126	127	66	116	146	43	39	26	33	133
26	54	53	103	123	66	101	83	46	36	33	28	55
27	43	52	96	104	64	113	78	42	33	46	30	31
28	42	51	95	66	62	110	74	61	30	31	31	24
29	41	51	105	65	---	99	71	50	29	33	26	20
30	38	49	241	69	---	134	72	51	27	36	24	19
31	38	---	310	105	---	137	---	51	---	30	22	---
TOTAL	1600	1875	3583	4658	2389	3094	3012	1798	1267	1396	1081	769
MEAN	51.6	62.5	116	150	85.3	99.8	100	58.0	42.2	45.0	34.9	25.6
MAX	143	296	374	387	152	211	207	95	123	176	175	133
MIN	25	32	28	65	62	62	66	42	27	20	14	14
MEAN*	53.4	58.1	120	126	91.2	121	96.1	57.8	40.9	45.0	35.1	22.4
CFSM*	.88	.96	1.98	2.08	1.50	2.00	1.59	.95	.67	.74	.58	.37
IN.*	1.01	1.07	2.28	2.40	1.56	2.31	1.77	1.10	.75	.86	.67	.41

* Adjusted for change in contents in Marsh Creek Reservoir.

CHRISTINA RIVER BASIN

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.7	75.8	106	127	119	123	124	113	76.3	76.3	46.1	56.1
MAX	150	148	217	361	242	286	365	246	181	257	90.9	191
(WY)	1980	1989	1978	1979	1979	1978	1983	1989	1982	1984	1989	1979
MIN	23.2	25.2	23.5	17.5	50.6	35.7	28.9	49.2	29.6	22.9	18.8	17.1
(WY)	1981	1982	1981	1981	1980	1985	1985	1976	1985	1977	1981	1980

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1974 - 1991
ANNUAL TOTAL	29416	26522	
ANNUAL MEAN	80.6	72.7	91.8
HIGHEST ANNUAL MEAN		\$72.2	150
LOWEST ANNUAL MEAN			39.3
HIGHEST DAILY MEAN	572	Jan 30	2020
LOWEST DAILY MEAN	23	Aug 4	12
ANNUAL SEVEN-DAY MINIMUM	26	Oct 2	14
INSTANTANEOUS PEAK FLOW		754	4750
INSTANTANEOUS PEAK STAGE		4.18	8.95
INSTANTANEOUS LOW FLOW		13	12
ANNUAL RUNOFF (CFSM)	1.33	\$ 1.37	1.52
ANNUAL RUNOFF (INCHES)	18.06	\$18.64	20.59
10 PERCENT EXCEEDS	141	138	172
50 PERCENT EXCEEDS	62	62	61
90 PERCENT EXCEEDS	34	24	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1973, BY WATER YEAR (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
LOWEST ANNUAL MEAN	51.6
HIGHEST DAILY MEAN	3220
LOWEST DAILY MEAN	7.2
ANNUAL SEVEN-DAY MINIMUM	8.0
INSTANTANEOUS PEAK FLOW	a8070
INSTANTANEOUS PEAK STAGE	b12.06
INSTANTANEOUS LOW FLOW	7.2
ANNUAL RUNOFF (CFSM)	1.44
ANNUAL RUNOFF (INCHES)	19.51
10 PERCENT EXCEEDS	163
90 PERCENT EXCEEDS	56
90 PERCENT EXCEEDS	23

‡ Adjusted for change in contents in Marsh Creek Reservoir.

a From rating curve extended above 5,000 ft³/s.

b From floodmark.

CHRISTINA RIVER BASIN

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

PERIOD OF RECORD.--November 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (µS/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
OCT 16...	0845	45	186	7.8	11.5	15.0	1.5	9.3	62	6	16	
DATE		MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS STO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 16...	5.4	8.7	0.5	22	2.5	56	14	16	11	111	<0.010	
DATE		NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	
OCT 16...	0.900	0.020	0.30	0.60	0.020	<0.010	<0.010	20	87	34		

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA

LOCATION.--Lat 39°58'07", long 75°40'25", Chester County, Hydrologic Unit 02040205, on left bank at downstream side of Sugars Bridge (State Highway 322), 2,000 ft upstream from Valley Creek, 1.5 mi north of Marshallton, and 3.3 mi southeast of Downingtown.

DRAINAGE AREA.--89.9 mi².

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. Elevation of gage is 195 ft above National Geodetic Vertical Datum of 1929, from topographic map. Feb. 1 to Apr. 10, June 25 to Nov. 17, 1972, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 7.5 mi upstream. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	50	57	211	114	91	218	121	79	54	44	37
2	44	50	44	175	109	103	203	115	74	47	42	36
3	43	49	102	159	112	134	175	112	72	47	42	37
4	43	48	691	147	112	391	120	108	72	47	44	36
5	44	48	163	137	113	157	121	105	67	46	39	40
6	42	55	102	138	130	129	124	169	66	48	36	38
7	41	50	100	152	213	192	123	162	64	56	49	40
8	42	46	94	143	158	125	122	122	61	59	41	44
9	73	45	87	229	130	113	121	114	59	47	47	44
10	51	510	84	199	122	109	118	113	59	44	197	35
11	46	253	79	168	117	105	111	107	58	43	56	37
12	47	105	76	811	124	103	108	103	73	41	46	36
13	109	90	76	303	151	102	115	102	68	478	38	36
14	119	80	72	406	195	115	169	110	60	281	36	43
15	65	75	112	557	180	146	179	97	57	172	42	41
16	59	78	180	617	134	137	174	92	85	126	41	41
17	53	95	110	369	99	112	137	88	84	78	38	62
18	91	86	231	221	99	329	128	90	365	56	36	52
19	220	79	165	196	111	183	123	85	265	52	38	43
20	76	76	119	188	129	136	119	82	102	48	508	44
21	66	74	178	242	111	124	405	81	83	46	146	40
22	60	72	203	192	104	118	327	80	73	47	66	38
23	151	92	168	171	98	370	252	78	74	63	61	38
24	240	96	411	175	95	271	288	76	70	46	54	39
25	89	76	177	170	96	181	258	76	63	43	50	316
26	73	72	145	166	96	159	144	80	59	72	47	99
27	57	69	134	154	94	176	136	75	55	71	45	53
28	54	68	132	109	91	174	133	95	52	47	47	44
29	53	68	152	108	---	157	125	84	50	49	44	41
30	50	65	371	111	---	225	125	88	57	52	43	39
31	49	---	599	163	---	204	---	87	---	47	41	---
TOTAL	2296	2720	5414	7287	3437	5171	5001	3097	2526	2453	2104	1569
MEAN	74.1	90.7	175	235	123	167	167	99.9	84.2	79.1	67.9	52.3
MAX	240	510	691	811	213	391	405	169	365	478	508	316
MIN	41	45	44	108	91	91	108	75	50	41	36	35
MEAN†	75.9	86.3	179	211	129	189	163	99.7	82.9	79.1	68.1	49.1
CFSM†	.84	.96	1.99	2.35	1.43	2.10	1.81	1.11	.92	.88	.76	.55
IN.†	.97	1.07	2.30	2.71	1.49	2.42	2.02	1.28	1.03	1.02	.87	.61

† Adjusted for change in contents in Marsh Creek Reservoir.

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.0	116	163	191	190	194	202	184	129	126	77.9	93.3
MAX	224	214	449	527	409	444	594	410	315	421	132	292
(WY)	1980	1989	1984	1979	1979	1978	1983	1989	1982	1984	1989	1979
MIN	41.2	43.6	40.8	30.9	74.6	61.6	53.1	81.9	47.0	41.1	38.2	29.5
(WY)	1987	1974	1981	1981	1980	1985	1985	1976	1985	1977	1980	1980

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1974 - 1991	
ANNUAL TOTAL	47719		43075			
ANNUAL MEAN	131		118		146	
HIGHEST ANNUAL MEAN	#128		#118		257	
LOWEST ANNUAL MEAN					59.7	
HIGHEST DAILY MEAN	1060	May 30	811	Jan 12	3040	Jan 26 1978
LOWEST DAILY MEAN	41	Aug 4	35	Sep 10	25	Sep 17 1980
ANNUAL SEVEN-DAY MINIMUM	43	Oct 2	38	Sep 1	26	Sep 16 1980
INSTANTANEOUS PEAK FLOW			1470	Jan 12	bc8160	Jun 22 1972
INSTANTANEOUS PEAK STAGE			6.16	Jan 12	bc13.40	Jun 22 1972
INSTANTANEOUS LOW FLOW			32	Sep 10	22	Sep 25 1980
ANNUAL RUNOFF (CFSM)	1.45	#1.42	1.31	#1.31	1.63	a1.67
ANNUAL RUNOFF (INCHES)	19.75	#19.33	17.82	#17.82	22.12	a22.64
10 PERCENT EXCEEDS	215		212		279	
50 PERCENT EXCEEDS	101		91		100	
90 PERCENT EXCEEDS	50		43		42	

* Adjusted for change in contents in Marsh Creek Reservoir.

a Period of record (1973-1991, adjusted for change in contents in Marsh Creek Reservoir since November 1973.

b From floodmark, from rating curve extended above 3,600 ft³/s, on basis of slope-area measurement of peak flow.

c Period of record (February 1972-1991).

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1972 to current year.
 pH: February 1972 to current year.
 WATER TEMPERATURE: February 1972 to current year.
 DISSOLVED OXYGEN: February 1972 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1972. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Not operated Dec. 4 to Feb. 19. Other interruptions in the daily record were due to malfunctions of the instrument. Subsequent to water year 1981, station not operated during winter months.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 652 microsiemens, Feb. 6, 1977; 67 microsiemens, July 1, 1984.
 pH: Maximum, 9.9, May 13, June 5, 1973; minimum, 5.4, Oct. 24, 26, 1973.
 WATER TEMPERATURE: Maximum, 33.0°C, July 18, 1977; minimum, 0.0°C, on many days during winter months of most years.
 DISSOLVED OXYGEN: Maximum, 19.4 mg/L, Mar. 18, 1989; minimum, 0.8 mg/L, July 23, 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	GAGE HEIGHT (FEET) (00065)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)
OCT 1990								
01...	1000	301	8.7	2.17	7.4	45	16.0	410
09...	1040	315	6.7	2.23	--	65	19.5	200
15...	1055	262	8.3	2.34	7.3	68	18.0	K960
22...	1335	287	10.5	2.31	7.5	62	15.0	440
29...	1055	280	10.8	2.26	7.5	57	10.0	200
NOV								
08...	0935	303	10.8	2.19	7.5	44	9.0	K72
14...	1118	267	11.9	2.41	7.4	82	7.0	K130
MAR 1991								
05...	0837	219	10.7	2.75	7.2	159	7.5	4300
11...	0847	251	11.9	2.48	7.4	104	4.0	K9
20...	0930	238	11.9	2.66	7.5	136	7.0	430
25...	1000	224	11.4	2.85	7.3	182	7.5	300
APR								
02...	1200	118	12.8	2.93	7.6	204	8.5	--
09...	0845	--	--	2.57	7.6	118	--	270
17...	0630	--	--	2.65	7.3	134	12.0	160
23...	0650	213	--	3.08	7.4	260	9.0	200
MAY								
15...	0625	231	--	2.46	7.3	98	20.0	360
28...	1150	260	--	2.53	7.3	110	23.0	2300
JUN								
05...	0620	312	7.5	2.25	7.5	65	18.5	K1100
13...	0750	293	7.1	2.25	7.4	65	19.0	K1100
20...	0620	249	7.8	2.52	7.4	103	19.5	5600
27...	0625	305	8.7	2.23	7.4	49	19.5	390
JUL								
18...	1405	308	9.8	--	7.9	58	26.0	540
23...	0945	257	7.4	2.30	7.4	62	24.5	K1300
AUG								
01...	0750	311	8.6	2.13	7.4	43	20.0	920
28...	0615	300	7.4	2.18	7.3	47	21.5	K800
SEP								
12...	0720	360	7.6	2.02	7.3	35	17.5	K140
19...	0645	352	7.6	1.89	7.4	36	20.5	K6600
25...	0645	200	8.8	3.50	7.3	515	16.0	K6500

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	333	300	321	344	300	318	327	253	285	---	---	---
2	337	305	327	321	291	308	350	296	322	---	---	---
3	363	312	335	321	289	308	337	198	303	---	---	---
4	343	314	332	318	290	298	---	---	---	---	---	---
5	338	305	326	326	298	316	---	---	---	---	---	---
6	352	320	331	322	296	311	---	---	---	---	---	---
7	---	---	---	327	293	315	---	---	---	---	---	---
8	---	---	---	332	290	320	---	---	---	---	---	---
9	---	---	---	343	307	327	---	---	---	---	---	---
10	---	---	---	338	140	233	---	---	---	---	---	---
11	---	---	---	202	147	181	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	283	272	275	---	---	---	---	---	---
15	294	268	277	285	260	274	---	---	---	---	---	---
16	312	279	295	286	262	275	---	---	---	---	---	---
17	309	285	298	274	243	259	---	---	---	---	---	---
18	314	225	289	277	241	260	---	---	---	---	---	---
19	254	177	216	277	252	266	---	---	---	---	---	---
20	279	247	263	287	260	274	---	---	---	---	---	---
21	292	261	276	283	254	274	---	---	---	---	---	---
22	294	257	280	292	256	274	---	---	---	---	---	---
23	294	208	269	272	247	257	---	---	---	---	---	---
24	244	182	207	271	230	250	---	---	---	---	---	---
25	267	240	253	281	243	264	---	---	---	---	---	---
26	283	255	270	283	257	272	---	---	---	---	---	---
27	312	273	289	290	263	279	---	---	---	---	---	---
28	316	280	297	288	264	278	---	---	---	---	---	---
29	315	283	301	287	268	276	---	---	---	---	---	---
30	330	301	314	282	259	274	---	---	---	---	---	---
31	338	307	322	---	---	---	---	---	---	---	---	---
MONTH	363	177	291	344	140	279	350	198	303	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	286	260	275	238	213	225	263	247	256
2	---	---	---	291	263	278	---	---	---	265	250	258
3	---	---	---	284	228	266	---	---	---	264	250	257
4	---	---	---	208	187	198	---	---	---	270	251	262
5	---	---	---	255	210	233	---	---	---	275	254	265
6	---	---	---	268	250	258	---	---	---	272	223	244
7	---	---	---	251	217	233	---	---	---	248	219	231
8	---	---	---	270	243	256	---	---	---	258	233	246
9	---	---	---	278	258	269	---	---	---	263	246	255
10	---	---	---	276	252	266	---	---	---	268	251	259
11	---	---	---	277	257	269	---	---	---	272	244	259
12	---	---	---	280	261	272	---	---	---	266	243	258
13	---	---	---	280	262	273	---	---	---	264	243	254
14	---	---	---	300	260	278	---	---	---	250	221	234
15	---	---	---	303	275	287	---	---	---	250	228	240
16	---	---	---	282	251	269	---	---	---	256	233	248
17	---	---	---	283	259	272	---	---	---	---	---	---
18	---	---	---	284	182	232	---	---	---	---	---	---
19	---	---	---	246	202	224	254	236	242	---	---	---
20	281	259	270	261	241	251	257	235	246	---	---	---
21	287	265	277	270	250	260	248	159	205	---	---	---
22	296	270	281	274	260	268	208	160	188	---	---	---
23	290	267	280	267	175	220	224	207	216	---	---	---
24	287	261	275	229	177	205	226	199	217	---	---	---
25	283	259	273	241	222	232	237	192	208	---	---	---
26	287	264	276	248	230	240	245	232	239	---	---	---
27	289	266	278	249	235	240	253	238	246	---	---	---
28	290	264	277	248	234	239	258	242	251	---	---	---
29	---	---	---	244	233	239	265	244	254	288	264	278
30	---	---	---	240	220	227	260	246	253	287	261	276
31	---	---	---	233	215	220	---	---	---	293	265	280
MONTH	296	259	276	303	175	250	265	159	230	293	219	256

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	304	276	291	315	279	297	332	302	321	359	311	337
2	312	279	295	333	300	320	341	310	330	356	319	337
3	310	284	300	---	---	---	347	304	328	338	298	326
4	315	288	304	---	---	---	332	292	307	362	325	346
5	330	302	317	---	---	---	346	310	332	359	314	340
6	330	301	317	---	---	---	351	320	341	---	---	---
7	333	303	318	---	---	---	355	278	307	---	---	---
8	332	301	318	320	277	296	340	307	325	---	---	---
9	333	306	323	342	307	323	345	296	322	---	---	---
10	333	309	324	346	322	335	273	171	214	395	358	378
11	334	307	324	360	328	346	289	244	263	398	345	369
12	329	291	306	359	333	347	312	274	293	372	335	358
13	323	290	308	---	---	---	343	307	327	379	353	367
14	336	309	324	---	---	---	353	327	339	390	310	353
15	343	305	328	---	---	---	345	303	318	360	316	342
16	333	192	311	266	233	239	332	305	321	362	320	346
17	316	180	268	286	255	271	363	309	336	365	220	339
18	326	160	236	313	283	299	368	321	352	333	223	275
19	244	158	200	319	291	308	357	318	342	362	326	343
20	273	246	260	328	294	314	348	117	210	344	311	335
21	289	263	277	348	305	328	244	155	201	382	319	351
22	300	271	285	351	316	333	284	244	262	373	325	356
23	295	269	285	322	261	289	287	259	276	400	330	363
24	304	273	290	321	295	310	306	270	290	375	330	357
25	313	284	299	343	308	326	309	263	289	343	165	218
26	307	281	297	343	213	310	313	289	304	276	221	239
27	315	288	304	294	231	264	330	295	313	321	280	299
28	320	294	311	323	241	300	315	284	304	348	296	321
29	332	295	318	320	292	308	326	296	316	372	316	340
30	328	271	307	313	274	297	330	301	320	375	342	363
31	---	---	---	317	288	308	347	301	325	---	---	---
MONTH	343	158	298	360	213	307	368	117	304	400	165	335

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.3	7.3	7.7	7.9	7.4	7.6	7.8	7.4	7.5	---	---	---
2	8.2	7.4	7.6	8.0	7.4	7.6	7.9	7.4	7.5	---	---	---
3	8.2	7.4	7.6	8.2	7.4	7.6	7.6	7.3	7.4	---	---	---
4	7.8	7.4	7.5	---	---	---	---	---	---	---	---	---
5	7.9	7.4	7.6	8.3	7.3	7.6	---	---	---	---	---	---
6	7.8	7.3	7.6	8.0	7.3	7.5	---	---	---	---	---	---
7	---	---	---	8.3	7.4	7.7	---	---	---	---	---	---
8	---	---	---	8.5	7.5	7.7	---	---	---	---	---	---
9	---	---	---	8.3	7.4	7.7	---	---	---	---	---	---
10	---	---	---	7.5	7.1	7.3	---	---	---	---	---	---
11	---	---	---	7.5	7.1	7.4	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	7.7	7.5	7.6	---	---	---	---	---	---
15	7.7	7.4	7.5	7.6	7.5	7.5	---	---	---	---	---	---
16	7.8	7.5	7.6	7.7	7.4	7.6	---	---	---	---	---	---
17	7.9	7.4	7.6	7.6	7.5	7.5	---	---	---	---	---	---
18	7.8	7.4	7.6	7.7	7.5	7.5	---	---	---	---	---	---
19	7.4	7.2	7.4	7.7	7.5	7.6	---	---	---	---	---	---
20	7.7	7.4	7.5	7.7	7.5	7.6	---	---	---	---	---	---
21	7.7	7.4	7.5	7.7	7.5	7.6	---	---	---	---	---	---
22	7.8	7.4	7.6	7.8	7.5	7.6	---	---	---	---	---	---
23	7.6	7.3	7.5	7.6	7.4	7.5	---	---	---	---	---	---
24	7.5	7.3	7.4	7.7	7.4	7.5	---	---	---	---	---	---
25	7.7	7.4	7.5	7.8	7.4	7.5	---	---	---	---	---	---
26	7.9	7.5	7.6	7.7	7.4	7.5	---	---	---	---	---	---
27	7.8	7.5	7.6	7.7	7.4	7.5	---	---	---	---	---	---
28	7.8	7.5	7.6	7.6	7.3	7.4	---	---	---	---	---	---
29	7.8	7.5	7.6	7.7	7.2	7.5	---	---	---	---	---	---
30	7.8	7.5	7.6	7.8	7.4	7.5	---	---	---	---	---	---
31	7.9	7.5	7.7	---	---	---	---	---	---	---	---	---
MONTH	8.3	7.2	7.6	8.5	7.1	7.5	7.9	7.3	7.5	---	---	---

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	8.4	7.5	7.8	8.0	7.3	7.6	7.9	7.3	7.5
2	---	---	---	8.2	7.4	7.7	7.9	7.4	7.6	8.0	7.3	7.5
3	---	---	---	8.5	7.4	7.7	8.2	7.4	7.7	8.0	7.3	7.6
4	---	---	---	7.4	7.3	7.4	8.3	7.4	7.7	8.1	7.3	7.6
5	---	---	---	8.0	7.3	7.5	---	---	---	8.1	7.3	7.6
6	---	---	---	8.0	7.4	7.6	---	---	---	7.4	7.2	7.3
7	---	---	---	7.9	7.4	7.5	---	---	---	7.8	7.2	7.4
8	---	---	---	8.0	7.4	7.6	---	---	---	8.1	7.2	7.6
9	---	---	---	8.0	7.4	7.6	8.6	7.4	7.9	7.9	7.3	7.5
10	---	---	---	8.0	7.4	7.6	8.7	7.2	7.8	8.2	7.3	7.6
11	---	---	---	8.0	7.4	7.7	8.5	7.4	7.8	8.3	7.3	7.7
12	---	---	---	8.0	7.5	7.7	8.5	7.3	7.8	8.3	7.3	7.6
13	---	---	---	7.9	7.5	7.6	7.8	7.3	7.5	8.4	7.2	7.6
14	---	---	---	7.8	7.5	7.6	8.1	7.3	7.5	8.3	7.2	7.6
15	---	---	---	8.0	7.4	7.7	7.5	7.3	7.4	8.4	7.3	7.7
16	---	---	---	8.1	7.4	7.7	8.1	7.3	7.6	7.9	7.3	7.7
17	---	---	---	8.1	7.4	7.7	8.1	7.3	7.6	---	---	---
18	---	---	---	7.5	7.4	7.4	8.0	7.3	7.6	---	---	---
19	---	---	---	7.8	7.4	7.5	8.3	7.3	7.7	---	---	---
20	8.6	7.5	7.8	8.3	7.4	7.7	7.8	7.4	7.5	---	---	---
21	8.9	7.6	8.1	8.2	7.4	7.7	7.4	7.2	7.3	---	---	---
22	9.0	7.6	8.1	8.0	7.4	7.6	7.5	7.2	7.3	---	---	---
23	8.9	7.7	8.1	7.4	7.3	7.4	7.7	7.3	7.5	---	---	---
24	8.9	7.7	8.1	7.6	7.3	7.4	7.4	7.3	7.4	---	---	---
25	9.0	7.7	8.1	7.9	7.4	7.5	7.7	7.3	7.4	---	---	---
26	8.6	7.8	8.1	8.0	7.4	7.6	7.8	7.3	7.5	---	---	---
27	8.6	7.7	8.1	8.0	7.4	7.6	7.9	7.3	7.5	---	---	---
28	8.3	7.5	7.8	8.3	7.4	7.7	7.9	7.2	7.5	---	---	---
29	---	---	---	8.1	7.4	7.6	7.7	7.3	7.4	7.7	7.3	7.5
30	---	---	---	8.0	7.4	7.6	7.8	7.3	7.5	7.8	7.3	7.5
31	---	---	---	8.0	7.3	7.6	---	---	---	7.7	7.3	7.4
MONTH	9.0	7.5	8.0	8.5	7.3	7.6	8.7	7.2	7.6	8.4	7.2	7.6
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.8	7.3	7.5	8.7	7.2	7.7	8.6	7.4	7.8	8.3	7.2	7.5
2	7.9	7.4	7.6	8.1	7.3	7.6	8.7	7.3	7.8	8.5	7.3	7.7
3	8.0	7.4	7.6	7.6	7.2	7.4	8.7	7.2	7.7	8.5	7.4	7.8
4	7.8	7.4	7.6	8.1	7.3	7.6	8.0	7.2	7.5	8.4	7.4	7.8
5	8.0	7.5	7.7	7.5	7.3	7.4	8.6	7.2	7.7	8.3	7.4	7.7
6	8.0	7.5	7.7	8.0	7.2	7.5	8.5	7.2	7.7	---	---	---
7	8.0	7.4	7.6	7.6	7.2	7.4	8.5	7.3	7.7	---	---	---
8	8.1	7.4	7.7	8.0	7.0	7.5	8.7	7.3	7.8	---	---	---
9	8.4	7.4	7.7	8.1	7.3	7.6	7.5	7.2	7.4	---	---	---
10	8.5	7.4	7.8	8.3	7.3	7.7	7.5	7.2	7.3	7.7	7.2	7.4
11	8.5	7.4	7.8	8.3	7.3	7.7	7.9	7.2	7.5	7.9	7.2	7.4
12	8.3	7.3	7.6	8.1	7.3	7.7	8.0	7.3	7.6	8.0	7.3	7.5
13	8.5	7.4	7.8	---	---	---	8.1	7.3	7.6	8.1	7.4	7.6
14	8.6	7.4	7.8	---	---	---	8.5	7.3	7.8	---	---	---
15	8.6	7.4	7.9	---	---	---	8.4	7.4	7.7	---	---	---
16	8.6	7.3	7.7	7.6	7.2	7.3	8.6	7.3	7.8	---	---	---
17	7.8	7.1	7.4	8.1	7.2	7.5	8.7	7.3	7.8	---	---	---
18	7.3	7.1	7.2	8.1	7.3	7.7	8.7	7.4	7.8	---	---	---
19	7.4	7.1	7.2	8.5	7.3	7.8	8.5	7.3	7.7	7.6	7.4	7.4
20	7.6	7.3	7.4	8.6	7.4	7.9	7.4	6.9	7.2	7.9	7.4	7.6
21	7.8	7.3	7.5	8.9	7.4	8.0	7.5	7.0	7.2	7.9	7.5	7.6
22	7.6	7.3	7.4	8.9	7.3	8.0	7.7	7.3	7.4	8.0	7.4	7.6
23	7.6	7.3	7.4	8.9	7.3	7.9	7.8	7.3	7.5	7.8	7.4	7.6
24	7.9	7.3	7.5	8.9	7.3	7.9	7.9	7.3	7.5	8.1	7.5	7.7
25	8.1	7.4	7.6	8.0	7.2	7.6	8.3	7.3	7.7	7.5	7.2	7.3
26	8.4	7.4	7.7	8.0	7.3	7.5	8.4	7.3	7.7	7.6	7.3	7.4
27	8.5	7.4	7.8	8.2	7.2	7.6	8.3	7.4	7.7	7.8	7.3	7.5
28	8.8	7.3	7.9	8.5	7.3	7.8	8.4	7.3	7.7	7.8	7.4	7.5
29	8.8	7.3	7.9	7.8	7.4	7.5	8.4	7.3	7.7	7.9	7.4	7.6
30	8.8	7.2	7.8	8.5	7.4	7.8	8.3	7.2	7.6	8.0	7.5	7.7
31	---	---	---	8.6	7.3	7.8	8.2	7.2	7.5	---	---	---
MONTH	8.8	7.1	7.6	8.9	7.0	7.7	8.7	6.9	7.6	8.5	7.2	7.6

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.5	15.5	17.0	14.5	11.5	13.0	7.0	4.5	6.0	---	---	---
2	18.0	14.5	16.0	14.5	11.5	13.0	8.0	5.5	6.5	---	---	---
3	17.0	13.0	15.0	15.0	12.0	13.5	8.5	6.0	7.0	---	---	---
4	17.0	14.5	15.5	14.0	12.0	13.5	---	---	---	---	---	---
5	17.5	13.5	15.5	14.5	11.5	13.0	---	---	---	---	---	---
6	17.5	14.5	16.0	14.5	11.5	13.0	---	---	---	---	---	---
7	---	---	---	12.0	9.5	11.0	---	---	---	---	---	---
8	---	---	---	11.0	8.5	10.0	---	---	---	---	---	---
9	---	---	---	9.5	7.0	8.5	---	---	---	---	---	---
10	---	---	---	11.0	9.5	10.5	---	---	---	---	---	---
11	---	---	---	11.5	9.0	10.5	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	8.5	7.0	7.5	---	---	---	---	---	---
15	20.5	17.5	19.0	9.0	5.5	7.5	---	---	---	---	---	---
16	18.0	15.0	16.5	10.5	7.0	9.0	---	---	---	---	---	---
17	16.5	13.5	15.0	10.0	8.0	9.5	---	---	---	---	---	---
18	17.5	15.5	16.5	8.0	6.0	7.0	---	---	---	---	---	---
19	16.0	13.0	14.0	7.5	5.0	6.0	---	---	---	---	---	---
20	14.0	11.0	12.5	8.0	5.5	6.5	---	---	---	---	---	---
21	14.0	11.0	12.5	8.0	5.5	6.5	---	---	---	---	---	---
22	15.5	13.0	14.5	8.5	6.0	7.5	---	---	---	---	---	---
23	16.5	15.5	16.0	9.5	8.5	9.0	---	---	---	---	---	---
24	16.5	15.0	15.5	9.0	7.5	8.5	---	---	---	---	---	---
25	15.0	13.0	14.0	10.0	7.0	8.5	---	---	---	---	---	---
26	14.0	11.0	13.0	10.0	7.5	9.0	---	---	---	---	---	---
27	11.5	9.0	10.5	10.5	8.5	9.5	---	---	---	---	---	---
28	12.0	9.5	10.5	12.0	9.0	10.0	---	---	---	---	---	---
29	11.5	9.5	10.5	12.5	8.5	11.0	---	---	---	---	---	---
30	11.5	8.0	10.0	8.5	6.5	7.5	---	---	---	---	---	---
31	12.5	9.5	11.0	---	---	---	---	---	---	---	---	---
MONTH	20.5	8.0	14.2	15.0	5.0	9.6	8.5	4.5	6.5	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	8.0	4.0	6.0	9.0	6.5	7.5	19.5	14.0	17.0
2	---	---	---	12.0	7.5	10.0	9.5	6.5	8.0	18.0	14.5	16.5
3	---	---	---	12.5	9.5	11.0	11.5	6.5	9.0	17.5	13.5	15.0
4	---	---	---	11.5	9.0	11.0	13.5	8.0	10.5	17.5	12.5	15.5
5	---	---	---	10.0	7.5	9.0	---	---	---	18.0	13.5	16.0
6	---	---	---	9.5	6.5	8.5	---	---	---	16.5	15.5	16.0
7	---	---	---	10.0	7.5	9.0	---	---	---	17.5	14.0	15.5
8	---	---	---	8.5	5.0	7.0	---	---	---	18.0	13.0	16.0
9	---	---	---	8.0	4.5	6.5	19.0	16.5	17.5	16.5	15.0	15.5
10	---	---	---	8.5	5.0	7.0	18.5	15.0	17.0	18.5	14.5	16.5
11	---	---	---	7.5	4.0	6.0	15.5	11.0	13.5	19.5	14.5	17.0
12	---	---	---	8.0	3.5	5.5	15.0	10.0	12.5	21.0	16.0	18.5
13	---	---	---	6.0	4.0	5.0	12.0	10.0	10.5	22.5	18.5	20.5
14	---	---	---	5.0	4.0	4.5	11.5	9.0	10.0	22.5	19.0	21.0
15	---	---	---	7.5	4.5	5.5	10.5	10.0	10.0	23.5	19.5	21.5
16	---	---	---	9.0	4.0	6.5	14.5	9.0	12.0	21.5	19.0	20.5
17	---	---	---	10.0	5.0	7.5	15.0	12.0	13.5	---	---	---
18	---	---	---	8.5	7.0	7.5	14.0	12.0	12.5	---	---	---
19	---	---	---	9.5	7.0	8.0	14.5	10.5	12.5	---	---	---
20	9.0	7.5	8.0	10.5	6.5	9.0	12.5	10.5	11.0	---	---	---
21	8.5	5.5	7.5	9.5	7.5	8.5	10.5	9.5	9.5	---	---	---
22	9.5	6.0	8.0	9.0	8.0	8.5	11.0	8.5	9.5	---	---	---
23	7.5	4.5	6.0	8.5	6.5	7.0	14.5	8.5	11.5	---	---	---
24	6.0	3.0	4.5	9.0	6.5	7.5	12.0	10.5	11.5	---	---	---
25	7.0	4.5	5.5	8.5	7.0	7.5	15.5	10.5	13.0	---	---	---
26	6.5	5.5	6.0	10.0	5.5	8.0	17.0	12.0	15.0	---	---	---
27	6.0	3.5	4.5	10.5	8.0	9.5	18.5	13.5	16.0	---	---	---
28	6.5	3.0	5.0	15.0	10.0	12.0	17.5	15.5	16.5	25.5	23.0	24.0
29	---	---	---	12.0	10.0	10.5	15.5	14.0	14.5	26.0	21.5	23.5
30	---	---	---	10.0	7.5	9.0	17.0	13.5	15.0	25.0	22.0	23.5
31	---	---	---	10.5	6.0	8.0	---	---	---	26.0	22.0	24.0
MONTH	9.5	3.0	6.1	15.0	3.5	7.9	19.0	6.5	12.3	26.0	12.5	18.7

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	25.5	22.0	23.5	26.0	22.5	23.5	25.5	20.0	22.5	22.5	19.0	20.5
2	24.5	21.0	23.0	23.0	22.0	22.5	27.0	21.5	23.5	21.0	16.5	18.5
3	24.5	21.0	22.5	22.5	21.5	22.0	26.0	22.0	24.0	20.5	15.5	18.0
4	22.5	20.0	21.5	23.0	20.5	21.5	24.5	22.5	23.5	20.5	17.0	18.5
5	21.0	18.0	19.5	22.0	21.0	21.0	26.0	21.0	23.5	23.0	19.0	20.5
6	21.5	17.0	19.0	25.5	20.5	22.5	26.0	20.5	23.0	---	---	---
7	22.5	17.0	19.5	23.5	22.0	23.0	24.0	20.5	22.0	---	---	---
8	23.0	17.5	20.0	24.5	21.5	23.0	24.5	20.0	22.0	---	---	---
9	24.5	18.5	21.0	27.0	22.0	24.0	22.5	22.0	22.0	---	---	---
10	25.0	19.5	22.0	24.5	21.0	23.0	23.0	20.5	22.0	20.5	17.5	19.0
11	24.5	20.5	22.5	26.5	21.0	23.5	23.0	19.5	21.5	21.5	19.0	20.0
12	24.0	21.5	22.5	25.0	21.5	23.5	24.0	19.5	21.5	21.0	17.5	19.0
13	24.0	19.0	21.0	---	---	---	26.0	20.0	22.5	20.5	15.5	18.0
14	24.0	18.0	20.5	---	---	---	25.0	20.5	22.5	19.0	18.0	18.5
15	25.0	18.5	21.5	---	---	---	23.5	21.5	22.5	20.0	18.0	19.0
16	26.0	21.5	23.5	23.5	21.0	22.0	25.0	20.0	22.5	23.0	19.0	20.5
17	26.0	22.5	24.0	25.5	21.0	23.0	26.0	21.0	23.0	24.5	21.5	22.5
18	24.0	19.0	21.0	27.0	22.0	24.5	26.0	22.0	23.5	23.5	21.0	22.0
19	20.0	18.5	19.0	28.0	23.5	25.5	25.5	22.5	24.0	23.0	17.5	20.5
20	24.5	19.5	21.5	28.0	24.5	26.0	23.5	20.0	21.0	18.0	15.0	16.5
21	26.0	21.5	23.5	28.5	24.5	26.0	23.0	20.0	21.0	17.0	13.0	14.5
22	23.5	21.5	22.5	28.0	25.0	26.0	23.5	19.5	21.5	16.5	12.0	14.0
23	21.5	19.0	20.0	28.5	24.5	26.5	24.0	20.0	22.0	16.0	13.0	14.5
24	22.5	17.5	20.0	28.0	24.5	26.0	24.0	21.0	22.5	17.5	14.5	15.5
25	23.0	18.5	21.0	25.0	24.0	24.5	23.5	21.0	22.0	16.5	15.5	16.0
26	24.0	18.5	21.0	24.0	22.0	23.0	23.5	19.5	21.5	17.0	15.0	16.0
27	24.5	19.5	22.0	23.0	21.0	22.0	25.5	19.5	22.0	16.0	13.0	14.5
28	26.0	20.5	23.0	24.5	20.0	22.0	24.5	21.0	22.5	15.0	11.5	13.0
29	27.0	22.0	24.5	22.0	20.0	21.0	25.5	21.5	23.0	15.5	11.0	13.5
30	26.5	23.0	24.5	21.5	19.0	20.5	26.0	21.5	23.5	15.5	12.0	14.0
31	---	---	---	24.0	20.5	21.5	25.0	22.5	23.5	---	---	---
MONTH	27.0	17.0	21.7	28.5	19.0	23.3	27.0	19.5	22.5	24.5	11.0	17.6

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	11.3	7.4	8.9	11.1	8.7	9.8	---	---	---	---	---	---
2	11.1	7.8	8.9	11.4	8.6	9.7	---	---	---	---	---	---
3	11.2	8.0	9.0	11.1	7.9	9.1	---	---	---	---	---	---
4	9.1	7.8	8.3	12.0	7.5	10.5	---	---	---	---	---	---
5	10.3	7.6	8.8	10.7	5.7	8.0	---	---	---	---	---	---
6	9.6	7.3	8.6	10.8	5.5	8.5	---	---	---	---	---	---
7	---	---	---	11.4	9.2	10.1	---	---	---	---	---	---
8	---	---	---	13.7	9.5	10.9	---	---	---	---	---	---
9	---	---	---	13.8	9.7	11.2	---	---	---	---	---	---
10	---	---	---	10.0	9.6	9.9	---	---	---	---	---	---
11	---	---	---	12.0	10.2	10.5	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	12.4	11.1	12.1	---	---	---	---	---	---
15	9.3	8.0	8.6	12.1	10.5	11.5	---	---	---	---	---	---
16	10.2	8.1	9.0	11.5	10.3	10.8	---	---	---	---	---	---
17	10.7	8.7	9.5	10.8	10.2	10.4	---	---	---	---	---	---
18	10.1	8.2	8.9	11.9	10.3	11.0	---	---	---	---	---	---
19	10.1	8.7	9.5	11.9	10.8	11.4	---	---	---	---	---	---
20	11.0	9.7	10.2	---	---	---	---	---	---	---	---	---
21	11.2	9.5	10.3	---	---	---	---	---	---	---	---	---
22	10.7	8.6	9.7	---	---	---	---	---	---	---	---	---
23	9.0	8.4	8.7	---	---	---	---	---	---	---	---	---
24	9.4	8.8	9.0	---	---	---	---	---	---	---	---	---
25	10.0	8.9	9.3	---	---	---	---	---	---	---	---	---
26	10.6	8.9	9.7	---	---	---	---	---	---	---	---	---
27	11.1	8.6	9.9	---	---	---	---	---	---	---	---	---
28	10.4	8.8	9.6	---	---	---	---	---	---	---	---	---
29	11.5	9.6	10.5	---	---	---	---	---	---	---	---	---
30	11.8	10.2	10.9	---	---	---	---	---	---	---	---	---
31	12.0	9.2	10.5	---	---	---	---	---	---	---	---	---
MONTH	12.0	7.3	9.4	13.8	5.5	10.3	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
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	---	---	---	---	---	---	---	---	---	9.0	6.4	7.5
31	---	---	---	---	---	---	---	---	---	8.9	6.4	7.4
MONTH	---	---	---	---	---	---	---	---	---	9.0	6.4	7.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	9.0	6.5	7.5	12.4	6.6	8.8	13.1	6.6	9.6	10.5	4.8	7.0
2	9.3	6.7	7.8	10.5	6.7	8.3	12.2	6.2	8.3	11.2	6.3	8.1
3	9.6	6.8	7.9	8.5	5.7	7.0	12.5	5.4	8.0	11.2	7.1	8.6
4	9.1	6.8	7.7	10.3	6.5	8.0	10.5	5.5	7.4	11.0	6.7	8.4
5	9.8	7.3	8.4	7.6	6.1	6.8	12.5	6.2	8.4	10.4	6.3	7.6
6	10.2	7.5	8.6	9.9	6.0	7.6	12.2	5.6	8.0	---	---	---
7	10.7	7.4	8.7	8.0	5.8	6.8	12.7	5.7	8.5	---	---	---
8	10.5	7.1	8.5	9.5	6.1	7.6	13.2	6.4	8.9	---	---	---
9	10.9	6.8	8.5	9.9	5.8	7.3	8.3	5.7	6.7	---	---	---
10	11.2	6.6	8.4	10.4	5.6	7.4	9.0	7.0	7.9	9.9	6.6	8.6
11	11.4	6.3	8.3	10.3	5.2	7.1	10.0	6.9	8.2	10.1	6.4	7.9
12	10.4	5.4	7.5	10.0	4.7	7.6	10.6	7.2	8.4	11.1	7.3	8.8
13	11.0	5.6	8.0	---	---	---	11.1	7.2	8.5	11.6	8.1	9.4
14	11.3	6.7	8.4	---	---	---	11.6	6.6	8.5	---	---	---
15	11.4	6.2	8.4	---	---	---	11.3	6.2	8.2	---	---	---
16	10.8	5.9	7.4	9.2	7.3	8.7	12.4	6.4	8.5	---	---	---
17	8.7	5.7	6.8	9.6	6.8	8.0	12.1	6.3	8.3	---	---	---
18	7.9	5.5	6.8	9.8	6.7	8.0	11.7	5.9	8.0	---	---	---
19	8.5	7.8	8.2	10.6	6.5	8.0	10.6	5.7	7.4	9.6	7.6	8.5
20	9.1	6.9	8.1	11.4	6.2	8.1	7.7	5.7	6.8	11.4	8.8	9.8
21	9.1	6.5	7.6	12.2	6.0	8.3	9.5	7.7	8.1	11.9	9.1	10.0
22	8.7	6.5	7.4	12.6	5.6	8.1	10.4	7.8	8.8	12.1	8.7	10.0
23	9.0	6.6	7.7	12.3	5.6	8.1	10.9	7.4	8.8	10.7	8.5	9.3
24	9.7	6.9	8.2	13.1	5.7	8.3	11.5	7.4	8.9	11.7	8.4	9.6
25	12.0	6.8	8.8	10.0	5.2	7.2	12.3	7.6	9.3	9.3	8.4	8.9
26	13.2	8.8	10.6	10.8	6.3	7.7	12.6	7.6	9.5	9.8	8.6	9.1
27	13.6	8.3	10.4	11.5	7.5	9.1	12.6	7.4	9.2	10.4	8.5	9.3
28	13.8	7.7	10.0	12.4	6.5	9.5	12.5	7.4	9.2	10.8	8.8	9.6
29	13.4	7.2	9.6	10.3	7.9	8.9	12.1	6.6	8.8	11.1	8.8	9.7
30	13.3	6.4	9.0	12.6	8.6	10.1	11.3	5.9	7.8	11.1	8.6	9.5
31	---	---	---	12.6	8.3	9.8	10.6	5.0	7.1	---	---	---
MONTH	13.8	5.4	8.3	13.1	4.7	8.1	13.2	5.0	8.3	12.1	4.8	8.9

CHRISTINA RIVER BASIN

01480887 VALLEY CREEK AT RAVINE ROAD NEAR DOWNINGTOWN, PA

LOCATION.--Lat 39°59'55", long 75°39'52", Chester County, Hydrologic Unit 02040205, on left bank, 20 ft downstream from Ravine Road bridge, 2.5 miles upstream from mouth, and 2.5 miles east of Downingtown.

DRAINAGE AREA.--14.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-statage recorder. Elevation of gage is 245 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for periods of estimated records, which are poor. Several measurements of water temperature were made during the year. Some diversion of flow by quarry upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	3.7	5.7	19	12	8.4	●28	16	8.6	5.7	3.4	2.5
2	4.5	4.5	5.6	17	12	12	●22	15	7.1	4.8	2.6	2.6
3	4.4	5.8	24	15	13	20	●20	14	6.8	5.4	5.1	3.0
4	4.6	5.7	81	14	13	39	●13	14	8.2	7.0	6.0	3.4
5	5.0	4.7	14	12	11	17	●13	14	7.2	5.1	3.0	6.0
6	4.0	6.1	10	11	13	18	●14	40	7.3	4.6	3.1	3.0
7	3.4	5.2	9.6	14	18	22	●14	22	6.9	8.9	2.9	2.1
8	4.4	5.1	9.0	12	13	15	●14	16	7.8	6.5	2.8	1.9
9	7.0	5.1	8.2	67	12	14	14	15	7.5	5.7	11	2.0
10	6.0	55	7.8	27	10	14	13	14	5.9	5.1	61	2.8
11	5.2	13	7.4	22	●9.3	13	12	15	6.0	4.9	8.0	2.9
12	5.8	8.3	7.1	168	●9.0	13	11	14	10	4.0	4.1	2.8
13	12	7.1	7.0	30	11	12	14	13	8.0	114	3.6	2.1
14	8.5	5.5	6.2	22	16	14	20	13	5.8	31	3.5	4.6
15	5.0	5.5	15	19	10	20	23	12	4.5	9.3	3.8	2.3
16	5.2	5.5	16	43	●9.4	14	17	12	8.1	7.5	3.4	2.6
17	5.1	7.2	7.1	34	●9.1	12	14	11	14	5.6	3.9	8.4
18	23	8.1	27	21	10	47	13	12	111	6.5	3.0	7.5
19	13	6.7	13	18	11	21	13	12	29	5.1	4.4	4.3
20	5.7	5.8	9.8	19	11	17	14	10	13	5.7	168	3.9
21	4.9	5.9	19	27	9.7	15	78	10	11	5.3	18	4.4
22	4.9	4.6	15	18	9.2	14	29	9.7	11	4.6	7.6	4.1
23	21	9.6	15	16	10	61	21	8.8	12	4.5	5.9	3.2
24	12	8.6	41	16	10	28	35	8.1	8.5	4.4	6.1	3.1
25	7.1	5.4	14	15	8.9	21	24	7.4	7.3	3.7	5.7	88
26	6.0	5.3	13	14	9.2	18	20	9.1	6.6	21	4.8	20
27	6.1	5.6	12	14	10	22	20	9.3	6.0	11	4.7	6.3
28	6.8	5.2	13	13	8.8	18	19	14	5.6	6.6	4.5	6.0
29	5.0	4.5	14	12	---	17	17	8.6	6.3	5.6	4.2	5.5
30	4.7	5.0	51	12	---	30	17	12	6.2	4.5	3.4	4.3
31	3.7	---	61	18	---	20	---	12	---	4.2	2.7	---
TOTAL	218.8	233.3	558.5	779	308.6	626.4	596	413.0	363.2	327.8	374.2	215.6
MEAN	7.06	7.78	18.0	25.1	11.0	20.2	19.9	13.3	12.1	10.6	12.1	7.19
MAX	23	55	81	168	18	61	78	40	111	114	168	88
MIN	3.4	3.7	5.6	11	8.8	8.4	11	7.4	4.5	3.7	2.6	1.9
CFSM	.49	.54	1.24	1.73	.76	1.39	1.37	.92	.83	.73	.83	.50
IN.	.56	.60	1.43	2.00	.79	1.61	1.53	1.06	.93	.84	.96	.55

● Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	13.3	11.3	13.1	25.1	14.1	15.7	18.7	20.1	18.4	10.5	12.9	7.35
MAX	19.5	14.8	18.0	25.1	17.2	20.2	19.9	27.0	24.8	10.6	13.7	7.51
(WY)	1990	1990	1991	1991	1990	1991	1991	1990	1990	1991	1990	1990
MIN	7.06	7.78	8.09	25.0	11.0	11.2	17.6	13.3	12.1	10.4	12.1	7.19
(WY)	1991	1991	1990	1990	1991	1991	1990	1991	1991	1990	1991	1991

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1990 - 1991
ANNUAL TOTAL	5696.0	5014.4	
ANNUAL MEAN	15.6	13.7	15.1
HIGHEST ANNUAL MEAN			16.4
LOWEST ANNUAL MEAN			13.7
HIGHEST DAILY MEAN	247	168	247
LOWEST DAILY MEAN	3.4	1.9	1.9
ANNUAL SEVEN-DAY MINIMUM	4.3	2.4	2.4
INSTANTANEOUS PEAK FLOW		764	764
INSTANTANEOUS PEAK STAGE		6.88	6.88
ANNUAL RUNOFF (CFSM)	1.08	.95	1.04
ANNUAL RUNOFF (INCHES)	14.61	12.86	14.12
10 PERCENT EXCEEDS	25	22	24
50 PERCENT EXCEEDS	11	9.6	11
90 PERCENT EXCEEDS	5.2	4.0	4.8

CHRISTINA RIVER BASIN

01480887 VALLEY CREEK AT RAVINE ROAD NEAR DOWNINGTOWN, PA--Continued

PERIOD OF RECORD.--August 1990 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT										
11...	1050	3.7	465	6.8	22.0	19.0	1.0	8.0	210	39
NOV										
07...	1115	3.7	480	7.1	9.5	9.5	1.0	12.3	220	44
DEC										
11...	0830	7.2	460	7.4	1.0	4.5	1.0	12.3	210	49
JAN										
24...	0920	16	435	7.1	7.5	3.0	--	12.9	--	--
FEB										
05...	1330	9.7	440	8.2	18.5	7.0	--	17.3	--	--
MAR										
21...	1345	15	425	7.7	12.5	9.5	--	16.1	--	--
APR										
03...	1245	13	359	7.5	10.5	10.0	--	15.8	--	--
MAY										
09...	1200	11	338	7.4	14.0	13.5	--	10.5	--	--
JUN										
10...	1250	4.2	390	7.6	28.0	20.0	0.80	10.2	160	41
JUL										
09...	0820	2.4	360	7.5	21.0	21.0	1.1	7.7	190	39

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT										
11...	28	13	0.4	11	4.5	140	66	28	4.2	269
NOV										
07...	27	12	0.4	10	4.5	146	62	27	4.0	265
DEC										
11...	22	13	0.4	12	2.7	134	48	28	5.8	264
JAN										
24...	--	--	--	--	--	123	--	--	--	--
FEB										
05...	--	--	--	--	--	123	46	32	--	--
MAR										
21...	--	--	--	--	--	138	42	35	--	--
APR										
03...	--	--	--	--	--	112	26	33	--	--
MAY										
09...	--	--	--	--	--	113	20	28	--	--
JUN										
10...	15	11	0.4	13	1.5	130	26	30	6.8	206
JUL										
09...	23	12	0.4	12	3.3	102	68	30	5.9	--

CHRISTINA RIVER BASIN

01480887 VALLEY CREEK AT RAVINE ROAD NEAR DOWNINGTOWN, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)
OCT 11...	277	2.28	0.020	2.30	0.010	0.40	0.60	<0.010	<0.010
NOV 07...	283	3.16	0.040	3.20	0.100	0.70	0.70	0.050	0.060
DEC 11...	262	2.99	0.010	3.00	0.030	0.50	0.30	0.020	0.010
JAN 24...	--	--	--	--	--	--	--	--	--
FEB 05...	--	2.88	0.020	2.90	0.020	--	--	--	--
MAR 21...	--	2.38	0.020	2.40	<0.010	--	--	--	--
APR 03...	--	--	--	--	--	--	--	--	--
MAY 09...	--	2.07	0.030	2.10	0.040	--	--	--	--
JUN 10...	219	2.09	0.010	2.10	0.020	--	--	--	--
JUL 09...	252	2.18	0.020	2.20	0.020	--	--	--	--
DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	BROMIDE DIS- SOLVED (MG/L) AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L) AS LI) (01130)
OCT 11...	0.010	<0.10	20	0.040	<1	26	25	87	33
NOV 07...	0.050	<0.10	20	--	<1	33	21	99	21
DEC 11...	<0.010	<0.10	20	--	<1	11	17	--	20
JAN 24...	--	--	--	--	--	--	--	--	--
FEB 05...	<0.010	<0.10	--	--	--	--	--	--	20
MAR 21...	<0.010	<0.10	--	--	--	--	--	--	40
APR 03...	--	0.10	--	--	--	--	--	--	40
MAY 09...	0.020	<0.10	--	--	--	--	--	--	40
JUN 10...	<0.010	0.20	--	--	--	22	24	--	37
JUL 09...	0.020	--	--	0.060	--	15	24	100	70

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA

LOCATION.--Lat 39°52'11", long 75°35'37", Delaware County, Hydrologic Unit 02040205, on left bank 27 ft upstream from Penn Central Railroad bridge at Chadds Ford, 150 ft upstream from Harvey Run and 1,200 ft downstream from highway bridge on U.S. Highway 1.

DRAINAGE AREA.--287 mi², includes that of Harvey Run.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to December 1953, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1917-18 (M), 1919-20, 1922-31 (M), 1932-33. 1934 (M), 1936, 1938 (P), 1939 (M), 1942, 1944-46 (M).

GAGE.--Water-stage recorder. Datum of gage is 150.45 ft above National Geodetic Vertical Datum of 1929. Prior to May 21, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 17 mi upstream. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	168	176	643	409	280	578	409	233	200	152	105
2	148	169	162	475	365	312	587	378	219	162	141	99
3	144	169	193	410	367	353	519	362	213	161	130	98
4	141	164	1630	371	361	1010	438	349	218	162	148	100
5	149	164	636	333	362	654	416	340	213	163	126	114
6	147	174	287	324	378	432	432	563	205	164	117	121
7	137	173	237	374	562	625	417	624	207	210	118	111
8	135	161	225	349	550	435	402	410	202	216	123	108
9	165	161	209	617	418	379	400	368	196	173	193	108
10	224	835	196	568	382	363	387	361	193	145	537	102
11	161	1110	187	487	362	347	357	338	187	132	243	97
12	154	320	178	2030	345	332	345	328	207	132	171	97
13	187	251	179	1010	379	326	341	326	219	1210	148	92
14	314	220	176	760	489	355	565	335	194	967	133	112
15	198	204	218	873	503	451	521	313	180	363	139	131
16	171	201	469	1140	370	463	624	291	218	293	164	112
17	162	219	279	1210	317	370	452	277	470	221	137	104
18	223	217	427	718	317	728	405	281	847	193	125	162
19	693	207	515	616	339	727	385	271	972	173	131	121
20	254	197	302	586	407	468	370	268	319	167	918	131
21	197	190	335	668	371	407	862	256	241	160	664	118
22	185	189	548	●530	332	395	1140	256	208	154	214	104
23	229	222	375	●430	311	875	668	246	210	169	175	100
24	812	257	1050	●425	297	1030	633	243	213	162	160	103
25	295	211	545	●420	300	652	782	241	191	148	148	826
26	226	195	358	●420	299	550	507	251	176	171	139	455
27	193	186	312	●415	292	574	457	239	168	294	135	210
28	182	188	311	390	286	603	442	258	162	179	131	150
29	178	188	375	382	---	507	422	240	156	160	130	131
30	171	177	592	377	---	665	411	232	156	170	125	125
31	169	---	1780	532	---	637	---	258	---	163	121	---
TOTAL	6900	7487	13462	18883	10470	16305	15265	9912	7793	7537	6236	4547
MEAN	223	250	434	609	374	526	509	320	260	243	201	152
MAX	812	1110	1780	2030	562	1030	1140	624	972	1210	918	826
MIN	135	161	162	324	286	280	341	232	156	132	117	92
MEAN*	225	246	438	585	380	548	505	320	259	243	201	149
CFSM*	.78	.86	1.53	2.04	1.32	1.91	1.76	1.11	.90	.85	.70	.52
IN.*	.90	.96	1.76	2.35	1.38	2.20	1.96	1.28	1.01	.98	.81	.58

* Adjusted for change in contents of Marsh Creek Reservoir.

● Estimated.

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1991, BY WATER YEAR (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	273	331	449	560	576	575	601	558	415	389	251	274
MAX	832	693	1125	1664	1308	1227	1509	1097	833	1153	456	905
(WY)	1980	1980	1984	1979	1979	1978	1983	1989	1975	1975	1978	1979
MIN	115	136	130	106	309	195	200	262	154	149	126	93.2
(WY)	1987	1982	1981	1981	1980	1981	1985	1985	1985	1977	1980	1980

SUMMARY STATISTICS

	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1974 - 1991
ANNUAL TOTAL	142230	124797	
ANNUAL MEAN	390	342	437
HIGHEST ANNUAL MEAN		\$393	714
LOWEST ANNUAL MEAN			199
HIGHEST DAILY MEAN	3560	May 30	10600
LOWEST DAILY MEAN	135	Oct 8	84
ANNUAL SEVEN-DAY MINIMUM	143	Oct 2	88
INSTANTANEOUS PEAK FLOW		2950	16400
INSTANTANEOUS LOW FLOW		6.40	14.35
ANNUAL RUNOFF (CFSM)	1.36	\$ 1.37	8.4
ANNUAL RUNOFF (INCHES)	18.44	\$18.60	1.52
10 PERCENT EXCEEDS	672	636	803
50 PERCENT EXCEEDS	319	257	316
90 PERCENT EXCEEDS	169	132	134

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1953, 1962 - 1973, BY WATER YEAR (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	1962 - 1973
ANNUAL TOTAL		
ANNUAL MEAN	385	1928
HIGHEST ANNUAL MEAN	625	1932
LOWEST ANNUAL MEAN	218	Aug 24 1933
HIGHEST DAILY MEAN	9590	Sep 12 1966
LOWEST DAILY MEAN	42	Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	45	Jun 22 1972
INSTANTANEOUS PEAK FLOW	a23800	Jun 22 1972
INSTANTANEOUS PEAK STAGE	16.56	Oct 2 1942
INSTANTANEOUS LOW FLOW	4.9	
ANNUAL RUNOFF (CFSM)	1.34	
ANNUAL RUNOFF (INSHES)	18.23	
10 PERCENT EXCEEDS	700	
50 PERCENT EXCEEDS	274	
90 PERCENT EXCEEDS	118	

‡ Adjusted for change in contents of Marsh Creek Reservoir.

a From rating curve extended above 9,000 ft³/s, on basis at area-velocity study.

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PERIOD OF RECORD.--July 1963 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to current year.

pH: October 1965 to September 1966, December 1971 to current year.

WATER TEMPERATURE: October 1964 to current year.

DISSOLVED OXYGEN: October 1971 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1963 to current year.

INSTRUMENTATION.--Water-quality monitor since August 1971. Subsequent to 1986, interfaced with data collection platform.

REMARKS.--Not operated Dec. 4 to Feb. 25. Other interruptions in the daily record were due to malfunctions of the instrument. Subsequent to water year 1981, station not operated during winter months.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 556 microsiemens, June 16, 1991; minimum, 42 microsiemens, Nov. 26, 1979.

pH: Maximum, 9.8, Apr. 9, 1975; minimum, 6.1, Feb. 22, 1976.

WATER TEMPERATURE: Maximum, 31.0°C, July 18, 19, 1977, Aug. 15, 1988; minimum, 0.0°C on many days during winter months.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 5, 1976; minimum, 3.0 mg/L, June 21, 1984.

WATER-QUALITY DATA

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	GAGE HEIGHT (FEET) (00065)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)
OCT 1990								
02...	1500	296	10.4	1.44	7.5	142	18.0	K120
08...	1400	302	10.0	1.38	7.4	132	19.0	K81
16...	1330	275	9.5	1.49	7.4	166	18.5	200
24...	1500	190	8.6	2.67	7.2	752	17.0	K43000
30...	1300	276	9.5	1.51	7.5	169	11.5	240
NOV								
06...	1500	280	10.2	1.54	7.5	180	13.5	K120
13...	1500	240	11.2	1.70	7.3	234	7.5	--
20...	1500	267	12.8	1.60	7.4	198	6.5	--
27...	1430	264	9.8	1.56	7.4	184	10.0	--
MAR 1991								
05...	1040	204	10.2	2.47	7.2	629	8.0	3500
11...	1030	250	12.6	2.91	7.6	352	4.5	K99
19...	1430	202	10.9	2.47	7.4	623	9.0	E1100
26...	1500	230	13.4	2.33	8.0	541	9.5	E36
APR								
02...	1500	228	13.1	2.40	8.0	582	9.0	E54
09...	1530	236	12.6	2.05	8.7	396	18.0	27
16...	1500	212	12.1	2.37	7.8	518	13.5	E1100
23...	1500	214	11.1	2.54	7.4	639	13.0	1100
30...	1500	246	9.7	2.06	7.4	401	16.0	160
MAY								
07...	1500	222	8.7	2.38	7.2	577	17.5	840
13...	1500	252	10.5	1.87	7.6	318	22.0	180
20...	1430	266	10.2	1.76	7.4	268	18.0	230
28...	1100	278	7.4	1.75	7.2	264	25.0	370
JUN								
05...	1445	284	9.0	1.62	7.5	213	21.5	--
13...	1500	287	9.4	1.65	7.6	224	23.5	220
19...	1500	185	7.9	2.48	7.0	634	19.5	8800
27...	1545	287	9.5	1.59	7.9	166	24.5	220
JUL								
05...	1510	298	8.7	1.57	7.1	163	22.0	560
10...	--	291	10.3	1.51	7.6	149	25.0	330
15...	1525	224	7.3	1.95	7.1	361	24.5	2000
24...	1555	288	9.0	1.45	8.5	156	3.0	130
AUG								
01...	1100	287	8.9	1.44	7.3	149	24.0	320
05...	1355	297	9.8	1.35	7.7	124	26.5	180
12...	1135	271	7.8	1.48	7.0	166	23.0	--
21...	1505	182	7.4	1.96	7.0	381	23.5	26000
26...	1502	289	9.2	1.40	8.0	135	24.5	1100
SEP								
03...	1405	318	10.6	1.29	8.1	100	22.0	90
09...	1500	298	9.2	1.32	7.8	111	24.5	120
17...	1130	307	9.2	1.30	7.4	104	24.0	300
26...	1510	218	9.2	1.96	7.1	371	19.0	29000

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	305	292	297	282	275	279	268	264	266	---	---	---
2	298	292	295	287	276	282	273	262	265	---	---	---
3	306	293	296	284	275	280	285	263	277	---	---	---
4	306	298	301	---	---	---	---	---	---	---	---	---
5	312	301	305	287	276	281	---	---	---	---	---	---
6	309	297	303	290	278	284	---	---	---	---	---	---
7	311	302	304	301	278	286	---	---	---	---	---	---
8	309	294	300	289	280	285	---	---	---	---	---	---
9	314	300	305	285	277	280	---	---	---	---	---	---
10	324	291	305	300	260	272	---	---	---	---	---	---
11	296	281	288	---	---	---	---	---	---	---	---	---
12	306	292	297	---	---	---	---	---	---	---	---	---
13	320	288	301	---	---	---	---	---	---	---	---	---
14	---	---	---	254	242	249	---	---	---	---	---	---
15	---	---	---	263	250	255	---	---	---	---	---	---
16	---	---	---	266	254	260	---	---	---	---	---	---
17	---	---	---	266	254	260	---	---	---	---	---	---
18	---	---	---	260	250	255	---	---	---	---	---	---
19	---	---	---	265	254	260	---	---	---	---	---	---
20	---	---	---	267	257	261	---	---	---	---	---	---
21	---	---	---	266	260	263	---	---	---	---	---	---
22	---	---	---	266	261	264	---	---	---	---	---	---
23	267	260	263	269	258	263	---	---	---	---	---	---
24	---	---	218	257	244	252	---	---	---	---	---	---
25	232	202	217	247	240	244	---	---	---	---	---	---
26	254	233	245	257	243	250	---	---	---	---	---	---
27	262	253	258	267	253	258	---	---	---	---	---	---
28	---	---	---	269	260	265	---	---	---	---	---	---
29	---	---	---	270	263	267	---	---	---	---	---	---
30	---	---	---	269	265	267	---	---	---	---	---	---
31	284	276	279	---	---	---	---	---	---	---	---	---
MONTH	324	202	283	301	240	266	285	262	269	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	260	249	254	224	218	221	252	245	248
2	---	---	---	268	248	253	229	224	227	252	246	249
3	---	---	---	267	235	252	229	225	227	258	249	253
4	---	---	---	---	---	---	238	229	233	255	245	251
5	---	---	---	220	202	207	242	238	240	---	---	---
6	---	---	---	240	222	233	243	231	239	260	220	242
7	---	---	---	242	224	234	241	232	236	224	218	221
8	---	---	---	237	224	231	240	231	235	239	223	232
9	---	---	---	247	240	244	240	232	237	---	---	---
10	---	---	---	256	243	248	245	240	242	251	246	249
11	---	---	---	251	244	249	245	240	243	257	248	250
12	---	---	---	253	245	249	247	237	243	262	252	257
13	---	---	---	258	249	253	251	241	246	261	249	255
14	---	---	---	256	242	249	236	218	229	253	245	250
15	---	---	---	347	244	286	224	217	220	258	246	251
16	---	---	---	277	247	265	224	210	215	261	249	254
17	---	---	---	251	245	247	233	216	226	267	251	256
18	---	---	---	261	231	241	236	232	234	272	256	262
19	---	---	---	---	---	---	238	233	235	271	251	261
20	---	---	---	234	219	228	243	237	241	274	260	266
21	---	---	---	241	236	238	245	179	223	281	262	269
22	---	---	---	247	241	245	198	168	180	---	---	---
23	---	---	---	251	186	226	224	197	211	291	263	278
24	---	---	---	205	178	187	232	214	226	---	---	---
25	---	---	---	223	206	215	223	208	214	---	---	---
26	256	249	251	231	224	227	239	217	227	---	---	---
27	258	248	253	233	230	232	239	235	237	---	---	---
28	258	251	254	231	226	228	242	236	239	---	---	---
29	---	---	---	232	229	231	245	239	242	---	---	---
30	---	---	---	231	218	226	248	240	243	300	277	284
31	---	---	---	219	215	217	---	---	---	299	269	285
MONTH	258	248	253	347	178	238	251	168	230	300	218	256

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	302	273	283	344	284	297	291	286	288	313	308	310
2	293	277	286	301	286	292	296	290	292	322	309	315
3	283	272	278	324	284	292	328	296	301	320	309	316
4	295	273	282	323	291	297	303	296	300	316	312	314
5	306	272	283	302	291	296	301	291	296	332	311	316
6	300	280	289	307	297	299	330	300	305	326	314	320
7	310	286	297	309	263	292	319	305	309	316	310	311
8	336	293	313	281	269	276	322	306	314	322	310	313
9	334	303	321	285	268	273	322	253	298	311	298	303
10	356	316	331	309	283	288	291	201	248	308	299	304
11	337	319	329	295	285	290	267	240	249	324	302	312
12	355	292	316	311	295	300	298	268	276	331	321	327
13	317	287	295	402	139	222	293	287	291	327	319	322
14	312	287	294	193	144	166	306	291	299	337	315	324
15	320	289	301	225	196	218	336	304	310	319	310	314
16	556	259	322	249	226	238	313	297	305	315	301	311
17	254	224	240	268	244	254	317	300	311	318	300	307
18	333	144	225	278	268	271	332	307	312	335	281	312
19	197	154	175	304	280	288	326	309	314	321	279	290
20	248	201	224	293	288	290	317	130	264	312	302	306
21	268	247	258	299	291	297	202	137	171	314	305	308
22	306	267	275	338	297	303	248	204	229	321	313	318
23	285	274	279	304	298	301	272	249	261	334	312	318
24	276	269	273	299	287	291	285	272	279	341	322	327
25	277	269	272	324	296	305	295	284	290	336	178	251
26	289	270	277	314	275	297	297	286	291	230	186	207
27	289	280	285	298	249	270	307	297	303	259	231	244
28	291	280	285	273	255	262	308	301	304	284	260	273
29	296	287	291	287	270	279	309	301	304	301	284	290
30	310	290	293	288	285	287	313	301	306	312	304	309
31	---	---	---	297	281	286	313	307	311	---	---	---
MONTH	556	144	282	402	139	278	336	130	288	341	178	303

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	8.8	7.7	8.4	8.3	7.4	7.8	7.5	7.2	7.3
2	---	---	---	8.8	7.6	8.4	8.4	7.4	7.8	7.5	7.2	7.3
3	---	---	---	8.6	7.5	8.1	8.7	7.4	8.0	7.5	7.2	7.3
4	---	---	---	---	---	---	8.9	7.4	8.2	7.6	7.2	7.4
5	---	---	---	7.6	7.2	7.3	8.7	7.5	8.2	---	---	---
6	---	---	---	7.9	7.3	7.6	9.0	7.3	8.2	7.4	7.2	7.2
7	---	---	---	7.8	7.3	7.5	9.0	7.5	8.4	7.3	7.1	7.2
8	---	---	---	8.1	7.3	7.6	9.1	7.5	8.4	7.5	7.2	7.3
9	---	---	---	8.4	7.5	7.9	9.1	7.6	8.4	---	---	---
10	---	---	---	8.5	7.5	8.0	8.9	7.5	8.3	7.5	7.2	7.4
11	---	---	---	8.5	7.6	8.0	9.0	7.6	8.4	7.7	7.2	7.4
12	---	---	---	8.6	7.6	8.1	9.1	7.7	8.5	7.7	7.2	7.5
13	---	---	---	8.5	7.6	8.1	8.9	7.7	8.1	7.7	7.3	7.5
14	---	---	---	8.3	7.5	7.8	8.5	7.5	7.9	7.8	7.2	7.5
15	---	---	---	8.7	7.5	8.0	8.4	7.5	7.8	7.9	7.2	7.5
16	---	---	---	8.8	7.5	8.2	8.4	7.5	7.8	7.8	7.2	7.5
17	---	---	---	8.9	7.5	8.2	8.4	7.3	7.8	7.5	7.2	7.3
18	---	---	---	8.7	7.4	7.7	8.1	7.3	7.7	7.5	7.2	7.3
19	---	---	---	---	---	---	8.7	7.3	7.9	7.6	7.3	7.4
20	---	---	---	8.6	7.3	7.9	8.5	7.4	7.7	7.5	7.3	7.4
21	---	---	---	8.6	7.4	8.0	7.6	7.3	7.4	7.5	7.2	7.3
22	---	---	---	8.4	7.4	7.9	7.3	7.2	7.3	---	---	---
23	---	---	---	8.0	7.3	7.5	7.6	7.2	7.3	7.4	7.0	7.2
24	---	---	---	7.4	7.3	7.3	7.3	7.2	7.2	7.4	7.0	7.2
25	---	---	---	7.7	7.3	7.4	7.3	7.2	7.2	---	---	---
26	8.8	7.8	8.5	8.2	7.3	7.7	7.5	7.1	7.3	---	---	---
27	8.8	7.6	8.3	8.1	7.3	7.6	7.5	7.2	7.3	---	---	---
28	8.8	7.8	8.4	8.6	7.3	7.9	7.4	7.1	7.2	---	---	---
29	---	---	---	8.2	7.3	7.7	7.4	7.2	7.2	---	---	---
30	---	---	---	8.4	7.3	7.8	7.4	7.1	7.3	7.7	7.2	7.4
31	---	---	---	8.5	7.4	7.9	---	---	---	7.7	7.2	7.4
MONTH	8.8	7.6	8.4	8.9	7.2	7.8	9.1	7.1	7.8	7.9	7.0	7.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.7	7.2	7.4	8.1	7.4	7.7	7.8	7.3	7.5	8.5	7.6	8.0
2	7.8	7.3	7.5	7.7	7.4	7.6	7.9	7.3	7.6	8.4	7.6	7.9
3	7.8	7.3	7.5	7.4	7.2	7.3	7.8	7.3	7.5	8.4	7.6	7.9
4	7.6	7.3	7.5	7.7	7.2	7.4	7.6	7.2	7.4	8.5	7.6	7.9
5	7.6	7.3	7.4	7.5	7.3	7.4	7.7	7.2	7.4	8.2	7.4	7.7
6	7.7	7.3	7.5	7.6	7.2	7.4	7.9	7.3	7.5	7.9	7.3	7.5
7	7.8	7.3	7.5	7.4	7.1	7.3	7.7	7.2	7.5	8.0	7.3	7.5
8	7.7	7.3	7.5	7.5	7.1	7.3	7.8	7.2	7.4	7.9	7.3	7.5
9	7.9	7.3	7.5	7.6	7.2	7.4	7.4	7.1	7.2	7.9	7.3	7.5
10	7.9	7.2	7.5	7.8	7.2	7.5	7.2	7.1	7.1	7.8	7.4	7.5
11	7.9	7.3	7.6	8.1	7.3	7.7	7.2	7.0	7.1	7.7	7.3	7.5
12	7.8	7.2	7.4	8.3	7.3	7.8	7.3	7.0	7.2	7.8	7.3	7.5
13	7.9	7.3	7.5	7.9	6.8	7.2	7.4	7.1	7.2	7.9	7.4	7.5
14	7.9	7.3	7.6	7.1	6.9	7.0	7.5	7.2	7.3	7.5	7.4	7.4
15	7.9	7.3	7.6	7.4	7.1	7.2	7.4	7.2	7.3	7.6	7.3	7.4
16	7.8	7.0	7.5	7.4	7.2	7.3	7.6	7.3	7.4	7.7	7.3	7.5
17	7.3	7.0	7.1	7.6	7.2	7.4	7.6	7.2	7.4	7.7	7.3	7.4
18	7.1	6.9	7.0	8.0	7.3	7.6	7.7	7.3	7.4	7.5	7.2	7.3
19	7.1	7.0	7.1	8.3	7.4	7.8	7.8	7.3	7.4	7.3	7.2	7.2
20	7.4	7.1	7.2	8.5	7.4	8.0	7.4	6.9	7.2	7.5	7.2	7.4
21	7.4	7.2	7.3	8.5	7.6	8.1	7.1	6.9	7.0	7.7	7.4	7.5
22	7.3	7.2	7.3	8.4	7.6	8.1	7.3	7.1	7.2	7.8	7.5	7.6
23	7.3	7.2	7.2	8.5	7.5	8.0	7.4	7.2	7.3	7.7	7.5	7.6
24	7.5	7.2	7.4	8.5	7.5	8.1	7.5	7.2	7.4	7.8	7.5	7.6
25	7.6	7.2	7.4	8.4	7.5	7.8	7.7	7.3	7.5	7.5	7.2	7.3
26	7.7	7.3	7.5	7.6	7.3	7.4	8.0	7.0	7.6	7.3	7.0	7.2
27	8.0	7.3	7.6	7.5	7.3	7.4	8.2	7.5	7.8	7.3	7.2	7.2
28	8.3	7.4	7.8	7.7	7.2	7.4	8.4	7.6	8.0	7.4	7.3	7.3
29	8.4	7.5	8.0	7.5	7.3	7.3	8.6	7.6	8.1	7.5	7.3	7.4
30	8.4	7.5	8.0	7.7	7.3	7.4	8.6	7.6	8.2	7.6	7.4	7.4
31	---	---	---	7.7	7.3	7.5	8.5	7.6	8.1	---	---	---
MONTH	8.4	6.9	7.5	8.5	6.8	7.5	8.6	6.9	7.5	8.5	7.0	7.5

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	18.5	17.5	18.0	12.5	10.0	11.0	6.5	5.5	6.0	---	---	---
2	18.0	16.5	17.0	13.0	11.5	12.5	6.0	4.5	5.5	---	---	---
3	17.0	15.0	16.0	13.5	12.0	13.0	7.5	5.5	6.0	---	---	---
4	16.5	15.5	16.5	---	---	---	---	---	---	---	---	---
5	17.5	15.5	16.5	13.5	12.0	12.5	---	---	---	---	---	---
6	18.5	16.0	17.0	13.5	12.5	13.0	---	---	---	---	---	---
7	19.0	16.5	18.0	12.0	10.5	11.0	---	---	---	---	---	---
8	19.5	17.5	18.5	10.5	9.0	10.0	---	---	---	---	---	---
9	22.0	19.5	20.5	8.5	7.5	8.0	---	---	---	---	---	---
10	21.5	20.5	21.5	11.0	8.0	9.5	---	---	---	---	---	---
11	22.0	21.0	21.5	---	---	---	---	---	---	---	---	---
12	22.0	21.0	21.5	---	---	---	---	---	---	---	---	---
13	22.5	22.0	22.0	---	---	---	---	---	---	---	---	---
14	---	---	---	7.0	6.0	6.5	---	---	---	---	---	---
15	---	---	---	8.0	6.0	7.0	---	---	---	---	---	---
16	---	---	---	9.5	7.0	8.0	---	---	---	---	---	---
17	---	---	---	10.0	9.0	9.5	---	---	---	---	---	---
18	---	---	---	8.0	6.5	7.5	---	---	---	---	---	---
19	---	---	---	6.5	5.5	6.0	---	---	---	---	---	---
20	---	---	---	6.5	5.5	6.0	---	---	---	---	---	---
21	---	---	---	6.5	5.0	6.0	---	---	---	---	---	---
22	---	---	---	7.5	5.5	6.5	---	---	---	---	---	---
23	16.5	15.5	16.0	9.5	7.5	8.5	---	---	---	---	---	---
24	---	---	---	9.5	8.5	9.0	---	---	---	---	---	---
25	16.5	15.0	15.5	9.5	8.0	8.5	---	---	---	---	---	---
26	15.0	12.5	14.0	9.5	8.5	9.0	---	---	---	---	---	---
27	12.0	10.5	11.5	10.0	8.5	9.5	---	---	---	---	---	---
28	---	---	---	11.5	9.5	10.0	---	---	---	---	---	---
29	---	---	---	12.0	10.0	11.5	---	---	---	---	---	---
30	---	---	---	10.0	7.0	8.5	---	---	---	---	---	---
31	10.5	8.5	9.5	---	---	---	---	---	---	---	---	---
MONTH	22.5	8.5	17.3	13.5	5.0	9.2	7.5	4.5	5.8	---	---	---
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	7.0	4.0	5.5	9.5	8.0	8.5	19.5	16.0	18.0
2	---	---	---	11.5	7.0	9.0	9.5	7.0	8.0	19.5	17.5	18.5
3	---	---	---	12.5	10.5	11.5	10.5	7.0	8.5	18.5	16.0	17.5
4	---	---	---	---	---	---	12.5	8.5	10.0	18.0	15.0	17.0
5	---	---	---	9.5	8.0	8.5	11.5	10.0	11.0	---	---	---
6	---	---	---	8.5	7.0	8.0	14.0	10.5	12.0	18.5	17.0	17.5
7	---	---	---	9.0	8.0	8.5	17.0	12.5	14.5	18.0	16.0	17.0
8	---	---	---	8.0	5.5	6.5	18.0	15.0	16.5	19.0	15.5	17.0
9	---	---	---	6.5	4.5	6.0	19.5	16.5	18.0	---	---	---
10	---	---	---	7.0	5.0	6.0	19.0	17.5	18.0	19.0	16.0	17.5
11	---	---	---	6.0	4.0	5.0	17.0	13.0	14.5	20.0	16.5	18.0
12	---	---	---	6.0	3.5	4.5	14.5	11.5	13.5	21.5	17.5	19.5
13	---	---	---	5.5	4.0	4.5	13.5	11.0	12.0	23.0	21.0	21.5
14	---	---	---	4.0	3.5	3.5	12.0	10.0	11.0	23.5	21.0	22.0
15	---	---	---	5.5	3.5	4.5	11.5	11.0	11.5	24.0	21.5	23.0
16	---	---	---	7.0	4.0	5.5	16.0	11.5	13.0	23.5	21.5	22.5
17	---	---	---	8.0	5.0	7.0	16.5	14.5	15.5	23.0	21.0	21.5
18	---	---	---	8.0	7.0	7.5	16.5	15.0	15.5	22.0	19.0	20.5
19	---	---	---	---	---	---	16.0	13.0	14.5	19.5	17.0	18.5
20	---	---	---	10.5	8.0	9.5	15.0	13.0	14.0	19.0	16.5	18.0
21	---	---	---	10.5	9.0	9.5	12.5	11.5	12.0	20.5	17.0	18.5
22	---	---	---	10.0	9.0	9.0	12.0	10.5	11.0	---	---	---
23	---	---	---	9.0	7.5	8.5	15.0	11.0	12.5	24.0	20.5	22.0
24	---	---	---	9.0	7.5	8.0	15.0	13.5	14.0	---	---	---
25	---	---	---	9.0	8.0	8.5	16.0	12.0	14.0	---	---	---
26	6.5	6.0	6.0	10.0	7.0	8.5	18.0	14.5	16.0	---	---	---
27	6.0	4.0	5.0	11.5	9.5	10.0	19.5	16.0	18.0	---	---	---
28	5.0	3.5	4.5	15.5	11.0	13.0	19.5	18.0	18.5	---	---	---
29	---	---	---	14.5	12.0	13.0	18.0	16.0	16.5	---	---	---
30	---	---	---	12.5	9.5	10.5	17.5	15.5	16.0	26.0	24.0	25.0
31	---	---	---	10.0	7.5	9.0	---	---	---	26.0	24.0	25.0
MONTH	6.5	3.5	5.2	15.5	3.5	7.9	19.5	7.0	13.6	26.0	15.0	19.8

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	26.0	24.5	25.5	26.5	24.5	25.5	27.0	23.5	25.0	26.0	23.0	24.5
2	25.0	23.5	24.5	25.5	24.0	24.5	28.0	25.0	26.5	23.5	21.0	22.0
3	24.5	23.0	24.0	24.0	22.5	23.0	28.0	26.0	27.0	22.5	19.5	21.0
4	24.0	21.5	23.0	23.0	22.0	22.5	27.0	26.0	26.5	22.5	20.5	21.5
5	21.5	20.0	20.5	22.5	21.5	22.0	27.0	24.5	26.0	24.5	21.5	23.0
6	20.5	18.5	19.5	24.5	21.5	22.5	26.5	24.0	25.0	23.5	22.0	22.5
7	21.0	18.5	20.0	25.0	23.5	24.0	26.0	23.0	24.5	24.5	21.5	22.5
8	21.5	18.5	20.5	24.5	22.5	23.5	26.0	23.5	24.5	25.0	21.5	23.0
9	23.5	20.0	21.5	26.0	23.5	25.0	25.5	24.0	24.5	25.0	22.0	23.5
10	24.5	21.5	23.0	25.5	23.5	24.5	25.0	23.0	24.0	23.5	22.0	23.0
11	25.0	22.5	23.5	26.0	23.0	24.5	24.0	22.5	23.5	24.5	22.5	23.0
12	24.5	23.0	23.5	26.5	23.5	25.0	25.0	22.5	23.5	23.5	21.5	22.5
13	23.5	21.5	23.0	25.5	23.0	24.0	26.0	23.0	24.5	23.0	19.5	21.0
14	23.0	20.0	22.0	25.0	23.0	24.0	26.0	24.0	25.0	21.5	21.0	21.0
15	24.0	20.5	22.5	26.0	23.0	24.5	26.0	25.0	25.5	22.0	20.5	21.0
16	26.0	23.0	24.5	24.5	22.5	24.0	26.0	23.5	25.0	24.5	21.5	22.5
17	25.5	23.0	24.0	26.0	23.0	24.5	27.0	24.5	25.5	26.5	23.5	25.0
18	25.0	19.5	22.5	27.0	24.5	26.0	28.0	25.0	26.5	25.5	25.0	25.0
19	19.5	19.0	19.5	28.0	25.5	27.0	28.0	25.5	26.5	25.0	22.0	24.0
20	23.5	19.5	21.0	29.0	26.5	27.5	26.5	22.5	25.0	22.0	19.5	21.0
21	25.5	22.5	24.0	29.0	26.5	28.0	24.5	22.0	23.0	19.5	17.5	18.5
22	25.0	23.0	24.0	29.0	27.0	28.0	25.0	22.5	24.0	18.5	15.5	17.0
23	23.0	20.5	21.5	29.0	26.5	28.0	25.5	23.0	24.0	17.0	16.0	16.5
24	22.0	19.0	20.5	29.0	26.5	28.0	25.5	24.0	25.0	19.0	16.5	17.5
25	23.0	20.5	22.0	27.5	26.0	26.5	26.0	24.0	25.0	19.0	18.5	18.5
26	24.0	21.0	22.5	26.0	24.5	25.0	25.0	23.0	24.0	19.5	17.5	18.5
27	24.5	21.5	23.5	24.5	23.0	23.5	25.5	23.0	24.0	18.5	17.0	17.5
28	26.0	23.0	24.5	25.0	22.0	23.5	26.5	24.0	25.0	17.0	15.0	16.0
29	27.0	24.5	26.0	24.5	22.5	23.5	28.0	25.0	26.5	17.0	14.0	15.5
30	27.5	25.5	26.5	23.0	21.0	22.0	28.0	25.5	27.0	17.0	15.0	16.0
31	---	---	---	24.5	22.5	23.5	27.5	26.0	27.0	---	---	---
MONTH	27.5	18.5	22.8	29.0	21.0	24.8	28.0	22.0	25.1	26.5	14.0	20.8

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	10.1	8.2	9.0	11.2	10.5	10.9	12.9	12.1	12.5	---	---	---
2	10.4	8.4	9.2	10.9	10.3	10.5	13.3	12.7	12.9	---	---	---
3	10.9	8.8	9.7	11.0	9.8	10.3	12.9	12.0	12.5	---	---	---
4	9.9	8.8	9.3	---	---	---	---	---	---	---	---	---
5	10.5	8.5	9.3	10.8	9.8	10.1	---	---	---	---	---	---
6	10.4	8.6	9.3	10.3	9.4	9.8	---	---	---	---	---	---
7	10.3	8.2	9.0	10.8	9.6	10.1	---	---	---	---	---	---
8	10.0	7.9	8.7	11.6	10.2	10.8	---	---	---	---	---	---
9	9.3	7.5	8.2	12.2	11.1	11.6	---	---	---	---	---	---
10	8.2	6.7	7.4	11.5	9.7	10.5	---	---	---	---	---	---
11	7.5	6.6	6.9	---	---	---	---	---	---	---	---	---
12	7.4	6.3	6.7	---	---	---	---	---	---	---	---	---
13	6.8	6.1	6.4	---	---	---	---	---	---	---	---	---
14	---	---	---	11.4	11.0	11.2	---	---	---	---	---	---
15	---	---	---	11.6	11.3	11.4	---	---	---	---	---	---
16	---	---	---	11.4	11.1	11.3	---	---	---	---	---	---
17	---	---	---	11.1	10.7	10.9	---	---	---	---	---	---
18	---	---	---	11.9	11.2	11.5	---	---	---	---	---	---
19	---	---	---	12.4	11.9	12.2	---	---	---	---	---	---
20	---	---	---	12.8	11.5	12.5	---	---	---	---	---	---
21	---	---	---	12.7	12.4	12.5	---	---	---	---	---	---
22	---	---	---	12.6	12.3	12.5	---	---	---	---	---	---
23	8.6	8.4	8.5	12.2	11.3	11.7	---	---	---	---	---	---
24	8.6	8.2	8.4	11.6	11.0	11.3	---	---	---	---	---	---
25	8.8	8.4	8.6	12.0	11.4	11.7	---	---	---	---	---	---
26	9.6	8.8	9.2	12.1	11.5	11.8	---	---	---	---	---	---
27	10.3	8.1	9.9	12.3	11.6	11.9	---	---	---	---	---	---
28	9.0	8.1	8.5	11.7	11.1	11.5	---	---	---	---	---	---
29	9.4	8.3	8.8	11.3	10.6	11.0	---	---	---	---	---	---
30	11.8	9.1	10.3	12.2	11.1	11.6	---	---	---	---	---	---
31	11.7	11.1	11.4	---	---	---	---	---	---	---	---	---
MONTH	11.8	6.1	8.8	12.8	9.4	11.3	13.3	12.0	12.6	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	14.2	11.6	13.0	12.4	10.3	11.3	9.4	8.2	8.6
2	---	---	---	12.8	10.4	11.8	13.1	10.4	11.7	---	---	---
3	---	---	---	11.9	9.1	10.4	13.8	10.9	12.2	9.6	8.1	8.8
4	---	---	---	---	---	---	14.0	10.5	12.1	10.0	8.1	8.9
5	---	---	---	10.2	9.9	10.1	13.0	9.9	11.5	---	---	---
6	---	---	---	11.3	9.6	10.4	14.2	8.3	11.6	8.6	7.8	8.0
7	---	---	---	10.8	9.4	10.1	13.4	9.2	11.0	9.5	7.9	8.5
8	---	---	---	12.2	10.1	11.1	12.9	8.4	10.5	9.4	8.3	8.8
9	---	---	---	12.8	10.8	11.9	11.6	8.3	10.0	---	---	---
10	---	---	---	12.8	10.8	11.9	11.2	9.3	9.9	10.2	9.0	9.5
11	---	---	---	13.5	11.1	12.4	13.1	9.1	10.9	10.4	8.7	9.3
12	---	---	---	14.1	11.8	13.0	13.8	9.2	12.0	10.4	8.3	9.4
13	---	---	---	13.9	11.7	13.0	12.5	10.5	11.7	10.5	8.5	9.4
14	---	---	---	13.8	12.1	13.0	13.5	11.3	12.2	9.9	6.8	8.1
15	---	---	---	14.6	12.3	13.5	12.4	11.1	11.7	9.6	6.7	7.7
16	---	---	---	14.8	12.1	13.4	12.4	10.7	11.5	9.9	6.8	8.2
17	---	---	---	14.9	11.8	13.4	11.9	9.0	10.3	8.3	6.1	7.4
18	---	---	---	13.1	11.2	11.9	11.2	8.5	9.9	9.4	6.7	8.0
19	---	---	---	---	---	---	12.5	9.1	11.0	10.0	8.3	9.1
20	---	---	---	13.3	10.5	11.7	11.0	9.1	10.2	10.2	6.2	8.8
21	---	---	---	13.3	10.5	11.9	10.5	9.7	10.2	9.4	8.3	8.8
22	---	---	---	13.0	10.5	11.8	10.9	10.0	10.5	---	---	---
23	---	---	---	11.8	10.9	11.3	11.0	8.1	10.5	8.6	6.7	7.6
24	---	---	---	11.5	11.2	11.4	9.7	8.6	9.1	---	---	---
25	---	---	---	12.4	11.1	11.7	10.7	9.1	10.1	---	---	---
26	13.9	11.6	12.8	13.4	11.5	12.3	10.0	8.5	9.2	---	---	---
27	14.1	11.6	12.9	12.1	9.4	11.0	9.7	8.0	8.7	---	---	---
28	14.5	11.8	13.2	11.8	9.4	10.6	8.9	7.2	8.1	---	---	---
29	---	---	---	11.2	8.7	9.9	10.0	8.2	9.2	---	---	---
30	---	---	---	12.3	8.3	10.8	9.9	9.3	9.6	8.7	6.3	7.2
31	---	---	---	12.9	10.5	11.6	---	---	---	8.6	6.1	7.3
MONTH	14.5	11.6	13.0	14.9	8.3	11.7	14.2	7.2	10.6	10.5	6.1	8.4
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	8.6	6.1	7.3	9.0	8.0	8.5	9.2	7.5	8.5	10.2	6.6	8.0
2	8.9	7.0	7.8	8.8	8.3	8.5	9.3	7.5	8.1	10.7	7.2	8.5
3	9.0	7.0	7.9	8.8	8.5	8.6	9.5	7.4	8.0	10.7	7.8	8.8
4	8.9	7.1	8.0	9.1	8.7	8.9	7.8	6.8	7.4	10.7	7.5	8.7
5	9.4	7.6	8.3	10.2	8.7	9.2	10.3	7.2	8.2	10.1	7.0	8.1
6	9.4	7.2	8.1	10.4	9.5	10.1	9.3	7.4	8.1	9.2	6.6	7.7
7	9.5	7.6	8.5	10.2	9.4	9.8	9.9	7.8	8.6	9.6	7.1	7.9
8	9.6	7.5	8.4	11.1	10.3	10.7	9.8	8.0	8.7	9.4	7.0	7.8
9	9.8	7.4	8.4	10.9	9.6	10.3	9.0	7.8	8.2	10.1	7.1	8.4
10	9.7	7.0	8.2	10.6	9.7	10.2	8.8	7.8	8.4	10.4	9.7	10.0
11	9.4	6.8	8.0	10.3	8.9	9.8	9.5	7.9	8.6	10.4	9.6	10.0
12	9.0	6.5	7.6	9.3	8.0	8.8	8.8	7.7	8.4	10.7	9.6	10.2
13	9.9	7.4	8.2	9.7	7.8	8.7	8.7	7.2	7.9	11.5	10.0	10.8
14	9.3	7.3	8.3	10.0	8.3	9.4	9.0	7.1	7.8	11.0	10.7	10.9
15	9.1	7.3	8.1	8.6	7.3	8.1	8.1	7.1	7.6	11.1	10.4	10.8
16	8.4	6.3	7.1	8.3	7.6	8.0	8.7	6.8	7.7	10.7	9.4	10.1
17	6.4	5.5	6.0	8.6	7.9	8.2	8.9	7.1	7.8	9.9	8.6	9.3
18	7.7	4.9	6.2	8.7	7.8	8.3	8.9	6.9	7.5	9.1	8.6	8.8
19	8.0	7.2	7.8	8.7	7.7	8.2	8.3	6.6	7.2	9.6	8.7	9.0
20	7.7	6.8	7.3	8.7	7.8	8.3	7.5	6.5	6.9	10.5	9.6	10.1
21	7.5	6.3	6.8	8.9	8.0	8.4	7.6	7.1	7.4	11.7	10.2	10.9
22	7.2	6.1	6.7	9.1	8.2	8.6	7.9	7.3	7.6	12.2	10.1	11.2
23	8.3	6.8	7.5	9.5	8.6	9.0	8.3	7.6	7.9	11.5	10.4	10.9
24	8.9	8.1	8.4	10.0	6.7	8.8	8.5	8.0	8.2	10.6	8.8	9.9
25	8.7	7.8	8.2	8.0	6.1	6.9	8.8	8.3	8.6	9.4	8.6	9.0
26	8.9	7.5	8.2	8.7	7.3	7.8	9.5	6.9	8.8	9.8	9.0	9.4
27	9.6	7.4	8.3	9.1	7.9	8.5	9.0	6.9	7.8	9.8	8.8	9.3
28	9.2	8.8	9.0	9.6	8.6	9.1	9.5	6.8	8.0	10.4	9.4	9.8
29	9.5	8.4	9.0	9.0	8.3	8.7	9.9	6.6	8.1	10.9	9.8	10.2
30	8.8	8.0	8.5	10.0	8.9	9.4	10.1	6.4	8.1	10.9	9.6	10.1
31	---	---	---	9.6	8.7	9.1	9.7	6.3	7.9	---	---	---
MONTH	9.9	4.9	7.9	11.1	6.1	8.9	10.3	6.3	8.0	12.2	6.6	9.5

CHRISTINA RIVER BASIN

RESERVOIR IN CHRISTINA RIVER BASIN

01480684 MARSH CREEK RESERVOIR.--Lat 40°03'24", long 75°43'06", Chester County, Hydrologic Unit 02040205, on right bank at dam on Marsh Creek, 0.3 mi upstream from mouth and 3.2 mi north of Downingtown. DRAINAGE AREA, 20.1 mi². PERIOD OF RECORD, November 1973 to current year. GAGE, water-stage recorder. Datum of gage is above National Geodetic Vertical Datum, of 1929 (levels by Pennsylvania Department of Environmental Resources). Reservoir formed by earthfill dam with concrete spillway at elevation of, 359.5 ft. Storage began November 1973. Total capacity 22,190 acre-ft at elevation of, 373 ft. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent contents above lowest gate sill at elevation of, 289.5 ft. Records furnished by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 16,380 acre-ft Jan. 25, 1979, at elevation of, 363.49 ft; minimum contents (after first filling), 10,410 acre-ft Mar. 3, 1976, at elevation of, 351.75 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 14,840 acre-ft, Aug. 12, 14, at elevation of, 360.70 ft; minimum contents, 12,960 acre-ft, Jan. 27, at elevation of, 357.10 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
01480684 Marsh Creek Reservoir			
Sept. 30	359.93	14,420	--
Oct. 31	360.13	14,530	+ 1.8
Nov. 30	359.65	14,270	- 4.4
Dec. 31	360.15	14,540	+ 4.4
CAL YR 1990	--	--	+ 2.6
Jan. 31	357.35	13,080	- 23.7
Feb. 28	358.00	13,410	+ 5.9
Mar. 31	360.52	14,740	+ 21.6
Apr. 30	360.10	14,510	- 3.9
May 31	360.07	14,500	- 0.2
June 30	359.93	14,420	- 1.3
July 31	359.93	14,420	0
Aug. 31	359.95	14,430	+ 0.2
Sept. 30	359.60	14,240	- 3.2
WTR YR 1991	--	--	- 0.2

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Hydrologic Unit 02040205, on platform about 0.4 mi downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi² approximately.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

pH: February 1970 to current year.

WATER TEMPERATURE: February 1970 to current year.

DISSOLVED OXYGEN: February 1970 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1970. Subsequent to 1986, interfaced with data collection platform.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 35,600 microsiemens, Nov. 15, 1978, minimum, 100 microsiemens, on several days in 1969, 1970, 1974, and 1979.

pH: Maximum, 8.9, Mar. 4, 1980; minimum, 5.4, Dec. 31, 1972.

WATER TEMPERATURE: Maximum 32.5°C, July 23, 1987; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 16, 19, 1976; minimum, 0.3 mg/L, Sept. 16, 17, 1971.

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18300	8220	11900	16100	6950	10800	16000	5590	9320	---	---	---
2	15500	8490	11800	16100	3290	9760	13900	5150	8060	---	---	---
3	15200	7950	10900	15200	6490	9770	16600	5490	9700	---	---	---
4	16400	8690	11700	14700	6680	9840	14900	6030	10800	---	---	---
5	15500	6980	10100	16000	6980	10400	9000	2090	5670	---	---	---
6	15300	6950	9900	14900	6730	10700	8470	1780	3810	---	---	---
7	14900	6760	9750	13800	6070	8640	6710	1340	2720	---	---	---
8	15100	6930	9620	14400	4630	8040	6640	1170	2680	---	---	---
9	15100	6860	9780	14700	5660	9760	7050	1040	2640	---	---	---
10	14300	6730	9340	14200	6710	11200	7250	900	2750	8970	1160	5300
11	14100	7050	9850	11800	5680	8030	7120	800	2930	8450	2560	5730
12	15000	7270	9480	7120	1700	3970	9220	1700	4780	13100	3560	7790
13	13800	7250	9370	5410	870	2150	9590	2070	4340	11300	2720	5750
14	13700	6950	9260	8910	680	3090	8000	1610	3810	11300	2160	6420
15	12200	6730	8790	11900	1660	6210	10900	1870	5000	11300	2600	5150
16	11900	5900	7950	11300	2090	4870	8860	1660	4200	---	---	---
17	12900	5560	8100	11400	2510	5340	8220	1290	3110	---	---	---
18	11500	5290	7600	14000	3750	7240	9420	1870	4400	---	---	---
19	8000	1440	4440	17600	6120	11500	5730	1140	2770	---	---	---
20	8250	2610	4180	15600	5630	10600	8030	1190	2580	---	---	---
21	9690	950	4460	14300	4930	9350	7050	1220	3050	---	---	---
22	10800	3100	5380	15000	6390	10100	5850	1140	2480	---	---	---
23	10700	2070	5370	15400	6460	10600	4000	920	1670	---	---	---
24	9540	2970	5260	15300	6220	10300	---	---	---	---	---	---
25	15300	1850	11100	13100	4760	8830	---	---	---	---	---	---
26	14400	13000	13800	12500	4340	7850	---	---	---	---	---	---
27	14800	12600	13600	13500	4560	8700	---	---	---	---	---	---
28	14800	12700	13800	14100	5270	8890	---	---	---	---	---	---
29	13700	12800	13300	11400	4710	7540	---	---	---	9600	1600	3440
30	14300	12100	13200	---	4410	8200	---	---	---	9620	1600	3920
31	16700	7080	12700	---	---	---	---	---	---	5990	1560	3210
MONTH	18300	950	9540	17600	680	8410	16600	800	4490	13100	1160	5190

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2480	870	1490	---	---	---	8420	1960	3690	7350	1740	3060
2	4750	860	1880	---	---	---	6680	1660	2920	6580	1660	3220
3	3090	830	1440	---	---	---	7080	1550	2400	6790	1700	2800
4	2680	800	1270	---	---	---	6670	1440	2390	8330	1770	3580
5	6210	830	2560	3380	1490	2290	4740	1430	2190	10100	2110	5300
6	6780	1070	2600	3890	1240	1750	5290	1320	2460	---	---	---
7	8920	1180	3890	3560	550	1450	6770	1580	3500	---	---	---
8	9630	1720	4560	2680	360	747	7650	1430	4070	---	---	---
9	9500	2720	5680	7910	290	3090	9670	2130	5350	---	---	---
10	11900	2990	7470	10900	2280	6920	11100	2290	6330	---	---	---
11	13900	3210	8350	14900	5460	10300	10300	2250	5520	---	---	---
12	13800	3340	7840	18000	9110	14200	11600	2730	5610	---	---	---
13	15700	4740	9330	18400	11100	15000	11700	3750	7100	---	---	---
14	16700	5840	13100	20900	12400	15500	---	---	---	8550	3130	4430
15	---	---	---	20000	11700	16300	---	---	---	11500	3330	5690
16	---	---	---	19200	11100	15100	---	---	---	12000	3310	5890
17	---	---	---	18900	9800	13400	---	---	---	10500	3530	5720
18	---	---	---	17100	9960	13000	---	---	---	8470	3420	5280
19	---	---	---	16600	8680	11800	9930	4830	6800	10700	3530	6430
20	---	---	---	15100	7750	10100	11900	5050	7720	7930	3650	5260
21	---	---	---	14400	6760	9200	12000	5240	8270	7160	3500	4970
22	5360	2180	3320	13400	6250	8390	11900	4670	7360	7190	3210	4600
23	7850	1640	3050	14600	6510	9510	10600	4060	5990	10100	3040	5040
24	9290	1670	4290	13300	5430	8630	7960	3520	4910	9460	3550	5360
25	10200	2220	4650	11200	5000	7010	8030	2400	4130	8890	2760	4460
26	10900	2520	5130	12300	4170	7010	7450	2150	3610	9910	2500	4540
27	10300	2360	5240	11500	3670	6420	5500	1760	2980	10000	3110	5450
28	9470	2520	4470	8750	3050	5500	7170	1720	2840	10000	3130	4940
29	---	---	---	8330	2750	4450	8210	1880	3460	10000	3130	5140
30	---	---	---	8140	2510	4340	7010	1770	3030	10800	3490	6070
31	---	---	---	9660	1890	3970	---	---	---	11700	4020	6410
MONTH	16700	800	4840	20900	290	8350	12000	1320	4590	12000	1660	4940
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	12000	4500	7210	17700	8850	12500	---	---	---	18900	9560	12600
2	11900	4240	7800	17000	9490	12200	15400	9140	11000	18700	10600	14000
3	13400	4780	8420	15900	9580	12100	16700	9280	11900	17800	10400	13200
4	13400	5730	8900	17100	10100	13300	16700	9730	12000	17300	9460	12400
5	16400	7540	11800	---	---	---	17800	9530	12300	17900	9020	11500
6	15800	7790	12000	---	---	---	18100	9490	12300	18500	9850	12800
7	16900	7690	11700	---	---	---	18500	9780	12600	18300	4910	13200
8	17800	8200	11600	---	---	---	19000	9800	12700	18900	10400	13500
9	18800	7990	11400	---	---	---	18800	10600	13700	18300	10600	13600
10	19200	8620	12400	---	---	---	18000	9160	12100	18300	11100	14300
11	17500	8780	12000	16900	9690	11900	17400	8730	11800	16800	11100	13500
12	17700	8460	11600	17800	9530	12500	17100	8730	11800	18200	10300	13200
13	17900	8540	11700	17700	9420	12500	16000	8700	11600	18100	10800	14100
14	16800	8640	11700	16400	8380	11300	---	---	---	16800	11400	13600
15	17600	8840	12100	15500	7970	10600	---	---	---	17900	11100	13400
16	16600	9030	12100	14400	7710	10200	---	---	---	16700	10700	13000
17	16100	9300	12000	13200	8150	10100	---	---	---	16000	9890	12300
18	15800	2880	11800	12900	7660	9420	---	---	---	18500	9650	13000
19	15200	8320	11700	13300	7470	9570	---	---	---	15700	10300	12900
20	15900	8400	11400	13600	7210	9520	---	---	---	19700	9820	13400
21	16500	8050	11100	14700	7410	9860	---	---	---	18700	11100	14600
22	17400	9100	11600	15800	7440	9990	17500	8070	11700	17600	10800	14100
23	18800	9550	12100	16200	8040	11200	17300	8270	11400	18800	11600	14400
24	17200	9360	12700	17400	2700	10100	17300	8180	11100	17600	11300	13800
25	17100	9430	11900	17100	8720	11800	16700	9580	12500	18600	11000	14700
26	16700	9370	11400	16600	8590	11300	18100	9320	12700	18100	10800	13600
27	16500	8980	11600	15300	8440	10800	16100	9500	12100	17500	10400	13100
28	15800	8690	11100	16200	8430	11500	---	---	---	17200	10100	12700
29	16200	8300	10900	16700	9580	12100	16200	8930	11700	---	---	---
30	15800	9080	11700	16800	9060	12700	17600	9210	12400	---	---	---
31	---	---	---	16400	9590	13200	17000	9820	12500	---	---	---
MONTH	19200	2880	11200	17800	2700	11300	19000	8070	12100	19700	4910	13400

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	21.0	20.5	20.5	---	---	---	9.0	8.5	9.0	---	---	---
2	20.5	20.0	20.5	---	---	---	9.0	8.5	8.5	---	---	---
3	20.5	19.5	20.0	---	---	---	9.0	8.0	8.5	---	---	---
4	20.0	19.5	20.0	---	---	---	9.5	8.5	9.0	---	---	---
5	20.0	19.5	19.5	---	---	---	8.5	7.0	8.0	---	---	---
6	20.0	19.5	20.0	---	---	---	7.5	7.0	7.5	---	---	---
7	20.5	19.5	20.0	---	---	---	7.5	7.0	7.0	---	---	---
8	20.5	20.0	20.5	---	---	---	7.5	7.0	7.0	---	---	---
9	21.0	20.5	20.5	---	---	---	7.0	7.0	7.0	---	---	---
10	21.5	20.5	21.0	---	---	---	7.5	6.5	7.0	5.0	4.0	4.5
11	21.5	21.0	21.0	---	---	---	7.0	6.5	6.5	4.5	4.0	4.0
12	22.5	22.0	22.0	---	---	---	7.0	6.0	6.5	5.0	4.0	4.5
13	24.0	22.0	22.0	---	---	---	7.0	6.5	7.0	4.5	3.5	4.0
14	25.5	24.0	24.5	---	---	---	6.5	6.0	6.5	4.5	3.5	4.0
15	24.5	22.0	23.0	---	---	---	6.5	6.0	6.5	4.5	3.5	4.0
16	22.5	21.5	22.0	---	---	---	6.5	6.0	6.5	---	---	---
17	22.0	21.0	21.5	---	---	---	6.5	5.5	6.0	---	---	---
18	21.5	21.0	21.5	---	---	---	7.0	6.0	6.5	---	---	---
19	21.5	14.0	20.0	---	---	---	7.0	6.0	6.5	---	---	---
20	20.0	18.0	19.0	---	---	---	7.0	6.0	6.5	---	---	---
21	19.5	18.5	19.0	---	---	---	7.0	6.0	6.5	---	---	---
22	19.0	18.5	19.0	9.0	8.5	9.0	7.0	6.5	7.0	---	---	---
23	19.0	18.5	19.0	9.0	9.0	9.0	7.5	6.5	7.0	---	---	---
24	20.0	18.5	19.0	9.0	8.5	9.0	7.5	6.0	7.0	---	---	---
25	---	---	---	9.0	8.5	9.0	6.5	5.5	6.5	---	---	---
26	---	---	---	9.0	8.5	9.0	6.5	5.5	6.0	---	---	---
27	---	---	---	9.5	8.5	9.0	---	---	---	---	---	---
28	---	---	---	10.0	9.0	9.5	---	---	---	---	---	---
29	---	---	---	10.0	9.5	9.5	---	---	---	4.5	4.0	4.5
30	---	---	---	9.5	8.5	9.0	---	---	---	5.0	4.0	4.5
31	---	---	---	---	---	---	---	---	---	5.0	4.0	4.5
MONTH	25.5	14.0	20.6	10.0	8.5	9.1	9.5	5.5	7.1	5.0	3.5	4.3

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	4.0	3.0	3.5	---	---	---	10.0	9.0	9.5	16.5	15.5	16.0
2	4.5	3.5	4.0	---	---	---	10.0	9.0	9.5	17.0	16.0	16.5
3	4.5	4.0	4.0	---	---	---	10.0	9.0	9.5	17.0	16.0	16.5
4	5.0	4.0	4.5	---	---	---	10.5	9.0	9.5	17.5	16.0	16.5
5	5.0	4.5	5.0	8.0	7.0	7.5	10.5	9.5	10.0	19.0	16.5	17.0
6	5.5	5.0	5.0	8.0	7.0	7.5	12.0	10.0	11.0	20.0	17.0	18.5
7	5.5	5.0	5.5	8.5	7.5	8.0	13.0	10.5	11.5	---	---	---
8	6.0	5.5	5.5	8.0	7.0	7.5	13.5	11.0	12.0	---	---	---
9	6.5	5.5	5.5	8.5	7.0	7.5	14.5	12.0	13.0	---	---	---
10	6.5	5.5	6.0	8.5	7.5	8.0	14.5	13.0	13.5	---	---	---
11	6.0	5.0	5.5	8.0	7.0	7.5	14.5	12.5	13.5	---	---	---
12	5.5	4.5	5.0	8.0	6.5	7.5	14.5	12.5	13.5	---	---	---
13	5.5	4.5	5.0	7.5	7.0	7.5	13.0	12.5	12.5	---	---	---
14	5.5	5.0	5.5	7.0	7.0	7.0	---	---	---	21.0	20.0	20.5
15	---	---	---	7.5	7.0	7.0	---	---	---	21.5	20.0	20.5
16	---	---	---	8.0	7.0	7.5	---	---	---	21.5	20.5	21.0
17	---	---	---	8.5	7.5	7.5	---	---	---	22.0	21.0	21.5
18	---	---	---	8.0	7.5	8.0	---	---	---	21.5	20.5	21.0
19	---	---	---	8.5	7.5	8.0	13.5	13.0	13.0	21.0	20.0	20.5
20	---	---	---	8.5	8.0	8.5	13.0	12.5	13.0	21.5	20.0	20.5
21	---	---	---	9.0	8.0	8.5	12.5	12.0	12.5	21.5	20.0	20.5
22	5.5	4.5	5.0	8.5	8.5	8.5	13.0	12.0	12.5	22.5	20.5	21.5
23	5.0	4.0	4.5	8.5	8.0	8.0	14.0	12.0	12.5	23.5	21.0	22.0
24	5.0	4.0	4.5	9.0	8.0	8.5	13.5	12.5	13.0	23.0	21.5	22.5
25	5.5	4.5	5.0	8.5	7.5	8.0	14.5	13.0	13.5	24.5	22.5	23.0
26	5.0	5.0	5.0	9.0	8.0	8.0	14.5	13.5	14.0	24.5	23.0	23.5
27	5.0	4.5	5.0	9.0	8.0	8.5	16.0	14.0	14.5	25.0	23.0	24.0
28	5.5	4.5	5.0	10.0	8.5	9.5	15.5	14.5	15.0	25.5	24.0	25.0
29	---	---	---	9.5	9.0	9.5	15.5	15.0	15.0	26.5	24.5	25.5
30	---	---	---	9.5	8.5	9.0	16.5	15.0	15.5	26.5	25.0	25.5
31	---	---	---	9.5	8.5	9.0	---	---	---	26.5	25.5	26.0
MONTH	6.5	3.0	4.9	10.0	6.5	8.0	16.5	9.0	12.5	26.5	15.5	21.1
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	27.0	25.5	26.5	27.5	26.0	26.5	---	---	---	28.0	26.5	27.0
2	27.0	26.0	26.5	27.0	26.0	26.5	29.0	28.0	28.0	27.0	26.0	26.5
3	27.0	26.0	26.5	26.5	26.5	26.5	29.0	28.0	28.0	27.0	25.5	26.5
4	26.5	25.0	26.0	26.5	26.0	26.5	28.5	28.0	28.5	26.5	25.5	26.0
5	26.0	24.5	25.0	---	---	---	28.5	28.0	28.0	27.0	26.0	26.0
6	25.5	24.5	25.0	---	---	---	28.5	27.5	28.0	26.5	26.0	26.0
7	26.5	24.0	25.0	---	---	---	28.5	27.5	28.0	27.0	26.0	26.0
8	26.0	24.5	25.0	---	---	---	28.5	27.5	28.0	27.0	26.0	26.5
9	27.0	25.0	25.5	---	---	---	28.0	27.0	27.5	27.0	26.0	26.5
10	27.5	25.5	26.0	---	---	---	28.0	27.0	27.5	26.5	26.0	26.5
11	27.5	26.0	26.5	28.5	27.0	27.0	27.5	27.0	27.0	26.5	26.0	26.0
12	27.0	26.0	26.5	28.0	27.0	27.0	27.5	25.5	27.0	25.5	25.0	25.5
13	27.0	25.5	26.0	27.5	27.0	27.0	28.0	25.0	27.0	26.0	25.0	25.5
14	27.0	25.5	26.0	27.5	27.0	27.0	---	---	---	25.5	25.5	25.5
15	26.5	25.5	26.0	27.5	26.5	27.0	---	---	---	26.0	25.0	25.5
16	27.5	26.0	26.5	28.0	26.5	27.0	---	---	---	27.0	25.5	26.0
17	27.0	26.0	26.5	27.5	26.5	27.0	---	---	---	27.5	26.0	26.5
18	26.5	25.0	25.5	28.5	27.0	27.5	---	---	---	27.5	26.5	27.0
19	25.0	24.5	25.0	28.5	27.0	28.0	---	---	---	27.0	26.0	26.5
20	26.0	24.5	25.0	29.0	27.5	28.5	---	---	---	25.5	24.0	25.5
21	27.5	25.0	25.5	29.5	28.5	29.0	---	---	---	24.5	24.0	24.5
22	26.0	25.0	25.5	30.0	28.5	29.0	28.5	27.5	27.5	24.0	23.5	24.0
23	25.0	24.5	25.0	29.5	28.5	29.0	28.5	27.0	27.5	23.5	23.0	23.5
24	26.0	24.0	25.0	30.0	28.0	28.5	28.5	27.0	27.5	23.5	23.0	23.0
25	26.0	24.5	25.0	28.5	28.5	28.5	28.0	27.0	27.5	23.0	22.5	23.0
26	26.0	24.5	25.0	29.0	28.0	28.5	27.5	26.5	27.0	22.5	22.0	22.5
27	26.0	24.5	25.5	28.5	27.5	28.0	28.0	27.0	27.0	22.0	19.5	21.5
28	26.5	25.0	25.5	28.5	27.0	27.5	---	---	---	22.0	21.0	21.5
29	27.0	25.5	26.0	27.5	27.0	27.5	---	---	---	---	---	---
30	27.0	26.0	26.5	27.5	26.5	27.0	29.0	27.5	28.0	---	---	---
31	---	---	---	27.5	27.0	27.0	28.5	28.0	28.5	---	---	---
MONTH	27.5	24.0	25.7	30.0	26.0	27.5	29.0	25.0	27.6	28.0	19.5	25.2

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	12.3	11.7	11.9
11	---	---	---	---	---	---	---	---	---	12.5	11.7	12.1
12	---	---	---	---	---	---	---	---	---	12.8	12.3	12.6
13	---	---	---	---	---	---	---	---	---	12.9	12.4	12.6
14	---	---	---	---	---	---	---	---	---	12.6	12.0	12.3
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	12.8	12.5	12.6
30	---	---	---	---	---	---	---	---	---	12.8	12.5	12.6
31	---	---	---	---	---	---	---	---	---	13.0	12.5	12.7
MONTH	---	---	---	---	---	---	---	---	---	13.0	11.7	12.4
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	12.8	12.4	12.7	---	---	---	10.2	9.7	9.9	8.7	8.1	8.4
2	12.6	12.2	12.4	---	---	---	10.2	7.0	9.7	8.5	7.9	8.3
3	12.4	12.2	12.3	---	---	---	10.1	9.8	9.9	8.4	8.0	8.1
4	12.7	12.2	12.4	---	---	---	10.6	9.8	10.1	8.4	7.9	8.2
5	12.6	12.4	12.5	11.5	11.1	11.2	10.1	9.6	9.9	8.4	7.8	8.1
6	12.8	12.3	12.5	11.7	11.1	11.4	10.3	9.8	10.1	---	---	---
7	12.8	12.0	12.3	11.9	11.1	11.4	10.3	9.9	10.2	---	---	---
8	12.4	11.9	12.2	11.9	11.2	11.6	10.2	9.9	10.1	---	---	---
9	12.2	11.9	12.0	11.7	11.5	11.6	10.3	9.6	9.9	---	---	---
10	12.3	11.9	12.0	11.6	11.0	11.4	10.2	9.7	9.9	---	---	---
11	12.1	11.5	11.8	11.5	10.8	11.2	10.1	9.5	9.9	---	---	---
12	12.3	11.8	12.0	11.6	11.1	11.4	10.0	9.4	9.8	---	---	---
13	12.8	11.9	12.1	11.5	11.0	11.2	9.6	8.9	9.4	---	---	---
14	12.3	12.0	12.1	11.3	10.9	11.1	9.3	8.2	8.6	8.0	7.6	7.8
15	---	---	---	11.4	10.5	10.9	---	---	---	8.0	7.6	7.8
16	---	---	---	10.8	10.4	10.5	---	---	---	7.8	7.4	7.6
17	---	---	---	11.0	10.5	10.8	---	---	---	7.5	7.0	7.3
18	---	---	---	11.3	10.9	11.2	---	---	---	7.8	7.2	7.4
19	---	---	---	11.2	10.6	11.0	9.4	8.5	8.8	8.1	7.3	7.8
20	---	---	---	11.1	10.7	10.9	9.2	8.8	9.0	8.2	7.5	7.9
21	---	---	---	11.2	10.6	11.0	9.3	8.9	9.2	7.9	7.4	7.6
22	15.3	11.8	13.6	11.0	10.5	10.7	9.7	9.0	9.4	7.7	7.3	7.5
23	15.0	14.0	14.5	10.8	10.4	10.6	9.6	9.3	9.5	7.6	7.2	7.4
24	14.2	13.3	13.9	10.7	10.4	10.6	9.5	9.2	9.4	7.5	7.2	7.3
25	13.6	12.6	13.2	10.7	10.2	10.5	9.4	9.1	9.3	7.3	6.8	7.1
26	12.6	12.0	12.3	10.7	10.4	10.5	9.4	8.9	9.1	7.1	6.7	6.9
27	12.1	11.4	11.8	10.7	10.3	10.5	9.0	8.5	8.8	6.8	6.4	6.6
28	12.0	11.4	11.7	10.6	10.2	10.4	8.8	8.3	8.6	6.7	6.3	6.5
29	---	---	---	10.5	9.9	10.2	8.7	8.4	8.6	6.6	6.2	6.4
30	---	---	---	10.3	9.9	10.1	8.6	8.2	8.4	6.4	6.1	6.3
31	---	---	---	10.2	9.7	10.0	---	---	---	6.4	6.0	6.2
MONTH	15.3	11.4	12.5	11.9	9.7	10.9	10.6	7.0	9.4	8.7	6.0	7.4

DELAWARE RIVER BASIN

01482900 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.5	5.9	6.2	7.8	7.2	7.4	---	---	---	---	---	---
2	6.1	5.5	5.8	7.1	6.7	6.9	6.2	5.6	5.8	---	---	---
3	5.8	5.2	5.5	6.8	6.1	6.5	6.6	5.9	6.1	---	---	---
4	5.5	5.1	5.3	6.1	5.4	5.9	6.4	5.8	6.1	---	---	---
5	5.5	4.9	5.2	---	---	---	6.9	6.1	6.4	---	---	---
6	7.8	4.9	6.7	---	---	---	7.1	6.4	6.6	---	---	---
7	7.5	7.0	7.3	---	---	---	7.3	6.5	6.9	---	---	---
8	7.3	6.9	7.1	---	---	---	6.9	6.1	6.6	---	---	---
9	7.0	6.3	6.7	---	---	---	6.7	6.1	6.4	---	---	---
10	6.8	6.2	6.4	---	---	---	6.6	5.4	6.2	---	---	---
11	6.6	6.1	6.3	6.3	5.8	5.9	6.4	5.7	6.0	---	---	---
12	6.6	6.2	6.4	6.3	5.6	5.9	6.5	4.1	5.7	7.2	6.3	6.6
13	6.9	6.3	6.6	5.5	4.6	5.0	5.8	4.8	5.3	7.0	6.0	6.5
14	6.8	6.3	6.5	5.5	4.5	5.0	---	---	---	7.1	5.8	6.8
15	6.5	6.0	6.3	5.5	5.1	5.3	---	---	---	7.4	4.8	6.9
16	6.3	6.0	6.2	5.8	5.2	5.5	---	---	---	7.7	6.4	6.9
17	6.6	6.0	6.2	5.8	5.2	5.5	---	---	---	7.1	6.3	6.7
18	7.0	6.1	6.7	6.0	5.3	5.6	---	---	---	7.0	6.1	6.6
19	6.9	6.5	6.7	6.6	5.5	5.9	---	---	---	9.1	6.1	7.9
20	6.7	6.1	6.4	6.3	5.4	5.7	---	---	---	10.4	8.6	9.2
21	6.7	6.0	6.3	6.0	5.2	5.6	---	---	---	10.1	9.3	9.7
22	6.5	5.9	6.2	6.5	5.3	5.7	7.7	6.2	6.8	10.3	9.6	10.0
23	6.8	6.3	6.5	7.8	5.3	6.7	7.4	6.4	6.9	10.3	9.8	10.0
24	6.9	6.3	6.6	8.4	6.8	7.4	7.3	6.2	6.7	10.5	9.7	10.1
25	7.1	6.5	6.7	7.2	5.9	6.6	7.2	6.4	6.7	9.8	8.9	9.4
26	9.5	6.5	7.4	6.0	5.3	5.6	6.7	6.1	6.4	9.0	8.0	8.5
27	7.6	6.9	7.2	5.4	5.0	5.2	6.6	6.0	6.3	12.7	7.4	9.4
28	7.7	6.9	7.3	5.4	4.9	5.1	---	---	---	8.8	7.5	7.9
29	8.0	7.5	7.7	5.2	4.8	5.0	---	---	---	---	---	---
30	8.0	7.5	7.7	5.4	4.9	5.2	---	---	---	---	---	---
31	---	---	---	5.7	4.8	5.1	---	---	---	---	---	---
MONTH	9.5	4.9	6.5	8.4	4.5	5.8	7.7	4.1	6.3	12.7	4.8	8.2

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1991

		Water Year 1991 maximum*				Period of record maximum		
Station Name and number	Location and drainage area	Period of Record	Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
<u>DELAWARE RIVER BASIN</u>								
LACKAWAXEN RIVER BASIN								
Dyberry Creek above Reservoir near Honesdale Pa. (01429300)	Lat 41°39'26", long 75°17'12", Wayne County, on right bank 955 ft downstream from bridge on West Branch Dyberry Creek at Tanners Falls, 0.2 mi downstream from confluence of the east and west branches of Dyberry Creek, and 6 mi north of Dtberry. Datum of gage is 1,023.43 ft National Geodetic Vetical Datum of 1929. Drainage area is 45.8 mi ² .	1975-91	11-10-90	10.25	2,890	9-27-85	11.75	5,140
VANDERMARK CREEK BASIN								
Vandermark Creek at Milford, Pa. (01438300)	Lat 41°19'35", long 74°47'50", Pike County, at stone bridge on Broad Street in Milford, and 0.4 mi above mouth. Datum of gage is 490.50 ft National Geodetic Vertical Datum of 1929 Drainage area is 5.36 mi ² .	1962-91	9-27-85 3-15-86 9- 9-87 2- 3-88 5-17-89 10-20-89 12- 4-90	2.33 2.63 2.55 2.50 2.62 3.04 2.56	b111 b193 b169 b155 b190 b365 172	9-25-75	3.65	372
BRODHEAD CREEK BASIN								
Mill Creek at Mountainhome, (01440300)	Lat 41°09'50", long 75°16'00", Monroe County, at stone-arch bridge on macadam road 0.5 mi east of Mountainhome, and 1.5 mi above mouth. Drainage area is 5.84 mi ² .	1961-91	12- 4-90	8.48	610	7-28-69	12.65	1,650

* Includes revised record from earlier water years.

b Revised.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1991

Station Name and number	Location and drainage area	Period of Record	Water Year 1991 maximum*		Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
<u>DELAWARE RIVER BASIN</u>								
LEHIGH RIVER BASIN								
Lehigh River at Allentown, Pa. (01451192)	Lat 40°36'23", long 75°27'17", Lehigh County, on upstream side of Hamilton Street Bridge, at Allentown, 200 ft downstream from lock and dam, and 0.7 mi upstream from Little Lehigh Creek. Drainage area is 1,033 mi ² .	1977-81d 1982-91	12- 4-90	42.92	24,300	9- 9-87	46.89	43,200
Saucon Creek near Hellertown, Pa. (01454651)	Lat 40°36'18", long 75°20'38", Northampton County, on downstream side of Fire Lane Bridge, near Hellertown, at Saucon Park. Drainage area is 46.5 mi ² .	1989-91	12- 4-90	228.14	766	9-20-89	229.94	2,990
SCHUYLKILL RIVER BASIN								
Schuylkill River at Pottsville, Pa. (01467500)	Lat 40°40'53", long 76°11'25" Schuylkill County, at bridge on State Highway 61 at Pottsville, and 1.7 mi downstream from Mill Creek. Drainage area is 53.4 mi ² .	1975-91	12- 4-90	6.75	1,540	4-16-83	9.52	3,650
West Branch Schuylkill River near Cressona Pa. (01467948)	Lat 40°38'30", long 76°11'43", Schuylkill County, at bridge on Gordon-Nagle Trail, 0.75 mi upstream from Panther Creek, and 1.0 mi north of Cressona. Drainage area is 52.5 mi ² .	1975-91	12- 4-90	5.09	1,190	9-26-75	6.74	2,940
Little Schuylkill River at Port Clinton, Pa. (01470190)	Lat 40°35'24", long 76°01'43", Schuylkill County, 0.65 mi upstream from Rattling Run and 0.7 mi north of Port Clinton. Drainage area is 132 mi ² .	1975-91	12- 4-90	7.45	3,610	1-24-79	9.86	7,710
Schuylkill River at Temple, Pa. (01470766)	Lat 40°24'52", long 75°56'23", Berks County, at concrete bridge on State Highway Route 383, 0.7 mi downstream from mouth of Maiden Creek, 0.6 mi west of Temple. Drainage area is 641 mi ² .	1978-91	12- 4-90	13.49	15,000	4-16-83	20.36	29,700
Northkill Creek at Bernville, Pa. (01470810)	Lat 40°26'22", long 76°07'12", Berks County, at bridge on State Highway 183, 0.3 mi upstream from Little Northkill Creek and 0.7 mi northwest of Bernville. Drainage area is 18.8 mi ² .	1975-91	11-10-90	4.55	384	1-26-76	10.39	2,480
Little Northkill Creek near Bernville, Pa. (01470818)	Lat 40°26'33", long 76°07'23", Berks County, at bridge on L.R. 06013, 1.5 mi west of Bernville and 1.6 mi upstream from mouth. Drainage area is 21.2 mi ² .	1975-81 1983-91	5-28-91	5.04	599	1-26-76	9.88	2,130
Schuylkill River at Birdsboro, Pa. (01471660)	Lat 40°16'04", long 75°48'40", Berks county, on Railroad Bridge, on right bank 1,000 feet upstream from Route 82 Bridge, crossing Schuylkill River in Birdsboro. Drainage area is 976 mi ² .	1981-91	12- 4-90	151.19	13,300	4-16-83	158.72	30,700

^d Operated as low-flow partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1991

Station Name and number	Location and drainage area	Period of Record	Water Year 1991 maximum ^a			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
DELAWARE RIVER BASIN								
SCHUYLKILL RIVER BASIN-Continued								
Schuylkill River at Phoenixville, Pa. (01472162)	Lat 40°08'11", long 75°30'41", Chester County, on the downstream end of the left bank wingwall of Reading Railroad bridge across the mouth of French Creek at Phoenixville. Drainage area is 1,280 mi ² .	1971-91	12-25-90	82.50	16,000	6-23-72	100.58	79,100
Schuylkill River at Port Kennedy, Pa. (01473193)	Lat 40°06'29", long 75°25'16", Montgomery County, on left bank 200 ft upstream from Betzwood Bridge, and 4.0 mi downstream from Perkiomen Creek at Port Kennedy. Drainage area is 1,691 mi ² .	1977-91	No peak recorded			1-25-79	75.64	65,500
Stony Creek at Norristown, Pa. (01473470)	Lat 40°07'38", long 75°20'43", Montgomery County, on right bank at culvert on Steiger Street in Norristown, 0.1 mi downstream from dam, 0.7 mi downstream from unnamed tributary, and 1.1 mi upstream from mouth. Drainage area is 20.4 mi ² .	1975-91	7-13-91	6.14	3,530	6-18-90	10.14	15,800
Schuylkill River at Norristown, Pa. (01473500)	Lat 40°06'40", long 75°20'50", Montgomery County, on right bank at Conrail Bridge pier, 600 ft upstream from Dekalb Street Bridge in Norristown. Drainage area is 1,760 mi ² .	1981-91	12- 5-90	55.81	15,500	4-16-83	63.34	44,800
CHRISTINA CREEK BASIN								
Middle Branch White Clay Creek near Landenberg, Pa. (01478200)	Lat 39°46'54", long 75°48'03", Chester County, at bridge on L.R. 15017, 1.4 mi above mouth, and 1.7 mi west of Landenberg. Drainage area is 12.7 mi ² .	1960-91	1-12-91	5.73	307	6-22-72	12.29	3,860
Sucker Run near Coatesville, Pa. (01480610)	Lat 39°58'20", long 75°51'03", Chester County, at concrete bridge on South Park Avenue at State Highway 372, 1.6 mi above mouth, and 2 mi west of Coatesville. Drainage area is 2.57 mi ² .	1964-91	8-20-91	4.75	107	7-21-79	8.49	1,500

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1991

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements Date	Discharge (ft ³ /s)
EQUINUNK CREEK BASIN						
01427200	Equinunk Creek near Equinunk, Pa.	Lat 41°50'15", long 75°13'55", Wayne County, at highway bridge 700 ft downstream from South Branch Equinunk Creek, and 1.4 mi above mouth and Equinunk.	56.3	1946-57 1978-91	6- 5-91 7-11-91 8- 6-91 9-12-91	21.3 4.11 3.26 1.38
CALKINS CREEK BASIN						
01427700	Calkins Creek at Milanville, Pa.	Lat 41°40'12", long 75°04'07", Wayne County, at Milanville, 300 ft downstream from confluence of North and South Branches, and 0.6 mi upstream from mouth.	44.0	1958-64 1966-69 1981-91	6- 5-91 7-11-91 8- 6-91 9-12-91	7.50 3.18 0.77 0.38
LACKAWAXEN RIVER BASIN						
01428800	West Branch Lackawaxen River at Aldenville, Pa.	Lat 41°38'38", long 75°21'36", Wayne County, at bridge on State Highway 170, 0.3 mi southeast of Aldenville, and 4.5 mi north of Prompton.	48.9	1970-78 1981-91	6- 5-91 7-11-91 8- 6-91 8- 6-91 9-12-91	22.8 10.9 8.29 8.35 5.86
01429300	Dyberry Creek above Reservoir near Honesdale, Pa.	Lat 41°39'29", long 75°17'12", Wayne County, on right bank 955 ft downstream from bridge, on West Branch Dyberry Creek at Tanners Falls, 0.2 mi downstream from confluence of the east and west branches of Dyberry Creek, and 6 mi north of Dyberry. Datum of gage is 1,023.43 ft National Geodetic Vertical Datum of 1929.	45.8	1975-91	6- 5-91 7-11-91 8- 6-91 8- 6-91 9-12-91	18.5 3.92 2.79 2.77 1.86
SHOHOLA CREEK BASIN						
01432500	Shohola Creek at Shohola, Pa.	Lat 41°27'20", long 74°55'25", Pike County, 1.7 mi upstream from mouth, and 1.4 mi south of Shohola. Prior to 1959 at highway bridge 0.4 mi upstream.	83.6	1920-28† 1957-80b 1981-91	6- 5-91 7-11-91 8- 6-91 9-12-91	35.7 12.4 5.43 4.74
BUSH KILL BASIN						
01439700	Little Bush Kill at Bushkill Pa.	Lat 41°05'30", long 75°00'15", Pike County, at highway bridge 175 ft upstream from mouth, at Bush Kill.	33.0	1958-69 1981-91	6- 4-91 7-11-91 8- 7-91 9- 9-91	15.0 3.05 1.87 1.04
BRODHEAD CREEK BASIN						
01440500	Paradise Creek at Henryville, Pa.	Lat 41°06'00", long 75°15'05", Monroe County, 400 ft upstream from concrete bridge on State Highway 191, about 600 ft upstream from confluence with Cranberry Creek, and 0.5 mi northwest of Henryville.	30.2	1908-14† 1981-91	6- 4-91 7- 9-91 8- 8-91 9-10-91	27.7 14.8 11.1 9.37
01441000	McMichael Creek at Stroudsburg, Pa.	Lat 40°58'45", long 75°12'05", Monroe County, at bridge on Interstate Highway 80, 0.25 mi upstream from Little Pocono Creek, and 0.7 mi southwest of Stroudsburg.	65.3	1911-38† 1970-74 1981-91	6- 3-91 7-10-91 8- 7-91 9- 9-91	46.8 26.6 9.03 15.8

† Operated as a continuous-record station.

b Operated as a miscellaneous station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements Date	Discharge (ft ³ /s)
BRODHEAD CREEK BASIN--Continued						
01441500	Pocono Creek near Stroudsburg, Pa.	Lat 40°59'10", long 75°13'35", Monroe County, at bridge on county road, 0.3 mi upstream from Flagler Run, 1.3 mi west of Stroudsburg, and 1.9 mi upstream from mouth.	41.0	1911-19† 1970-76 1982-91	6- 3-91 7-11-91 8- 8-91 9-10-91	24.8 12.0 6.52 6.60
01442600	Marshall Creek at Minisink Hills, Pa.	Lat 40°59'53", long 75°08'25", Monroe County, at bridge on rural road, 600 ft upstream from mouth, at Minisink Hills.	27.1	1958-72 1981-91	6- 4-91 7-10-91 8- 7-91 9-10-91	12.9 4.91 3.01 3.09
JACOBY CREEK BASIN						
01443100	Jacoby Creek at Portland, Pa.	Lat 40°55'00", long 75°06'19", Northampton County, at county highway bridge, 0.6 mi southwest of Portland and 0.7 mi upstream from mouth.	6.17	1970-91	6- 3-91 7-10-91 8- 8-91 9- 9-91	5.44 3.80 2.98 2.99
MARTINS CREEK BASIN						
01446650	Martins Creek below Little Martins Creek at Martins Creek, Pa.	Lat 40°47'02", long 75°11'08", Northampton County, at bridge on State Highway 611 in village of Martins Creek and 0.9 mi upstream from mouth.	43.4	1932 1970-91	6- 3-91 7-10-91 8- 8-91 9- 9-91	26.4 12.2 7.67 7.48
BUSHKILL CREEK BASIN						
01446900	Bushkill Creek near Easton, Pa.	Lat 40°42'38", long 75°14'46", Northampton County, at bridge just west of Bushkill Drive at Coilton, 0.8 mi downstream from Schoeneck Creek and 2.5 mi north of Easton.	72.0	1970-78b 1982-91	6- 3-91 7-10-91 8- 8-91 9- 9-91	45.9 40.9 34.6 22.3
LEHIGH RIVER BASIN						
01447750	Bear Creek near White Haven, Pa.	Lat 41°10'42", long 75°45'21", Luzerne County, at bridge on State Highway 115, at Bear Creek, 200 ft downstream from Bear Creek Dam, 8 mi southeast of Wilkes-Barre, and 8.3 mi north of White Haven.	35.0	1959-69 1981-91	6- 6-91 7-10-91 8- 7-91 9-12-91	15.2 6.97 2.93 4.15
01448100	Sandy Run near White Haven, Pa.	Lat 41°00'31", long 75°46'08", Luzerne County, at bridge on L.R. 40118, 800 ft upstream from Pond Creek, and 3.8 mi south of White Haven.	10.9	1970-78 1981-91	6- 6-91 7-10-91 8- 7-91 9-10-91	8.79 4.63 2.81 3.47
01449300	Mahoning Creek at Lehigh, Pa.	Lat 40°49'30", Long 75°42'04", Carbon County, at mouth at Lehigh.	38.3	1946 1955 1981-91	6- 4-91 7-11-91 8- 5-91 9-13-91	18.3 7.18 5.02 4.82
01449355	Middle Creek at Kresgeville, Pa.	Lat 40°54'03", long 75°29'50", Monroe County, at bridge on U.S. Highway 209 at Kresgeville, 0.5 mi downstream from Dotters Creek, and 0.5 mi upstream from mouth.	18.6	1970-78 1981-91	6- 4-91 7-11-91 8- 5-91 9-13-91	18.3 7.18 5.02 4.80
01451110	Hokendauqua Creek near Northampton Pa.	Lat 40°42'50", long 75°29'45", Northampton County, at bridge on county road, 1.7 mi north of Northampton, and 3.3 mi upstream from mouth.	38.1	1970-78 1981-91	6- 6-91 8- 9-91 9-10-91	15.2 6.29 3.51
01451165	Catasauqua Creek at Catasauqua, Pa.	Lat 40°38'52", long 75°28'06", Lehigh County, at bridge on North Daulphin Street, Catasauqua, 0.1 mi upstream from mouth.	15.7	1970-78 1981-91	6- 6-91 8-13-91 9-10-91	0.11 0.08 0
01451192	Lehigh River at Allentown, Pa.	Lat 40°36'23", long 75°27'17", Lehigh County, on upstream side of Hamilton Street Bridge, at Allentown, 200 ft downstream from lock and dam, and 0.7 mi upstream from Little Lehigh Creek.	1,033	1977-81d 1982-86 1988-91	6- 6-91 8 -8-91 9-10-91	1110 740 678

† Operated as a continuous-record station.

b Operated as a miscellaneous station.

d Publish as Wyomissing Creek near Reading.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements Date	Discharge (ft ³ /s)
LEHIGH RIVER BASIN--Continued						
01451900	Jordan Creek near Stetlersville, Pa.	Lat 40°37'46", long 75°33'13", Lehigh County, at covered bridge on rural road, 0.5 mi north of Stetlersville.	70.4	1967-69 ^b 1981-91	6- 6-91 8- 9-91 9-10-91	16.6 0 0
01452300	East Branch Monocacy Creek near Bath, Pa.	Lat 40°43'10", long 75°22'10" Northampton County, on left bank 25 ft downstream from bridge on L.R. 40863, 1.5 mi southeast of Bath, and 2.5 mi upstream from mouth. Datum of gage is 372.06 ft, National Geodetic Vertical Datum of 1929.	5.35	1962-68 [‡] 1969-81 ^c 1982-91	6- 6-91 8- 7-91 9-10-91	0.11 0 0
TOHICKON CREEK BASIN						
01459100	Beaver Run tributary at Quakertown, Pa.	Lat 40°26'37", long 75°19'42", Bucks County, at concrete weir upstream from twin concrete-arch culvert on Erie Avenue at intersection with Elm Street in Quakertown, 0.2 mi upstream from mouth.	2.42	1961-68 1981-91	6- 4-91 7-10-91 8- 6-91 9- 9-91	0.36 0.12 0.30 0.13
01459150	Tohickon Creek near Quakertown, Pa.	Lat 40°26'26", long 75°18'42", Bucks County, 1,000 ft downstream from county highway bridge and 1 mi east of Quakertown.	27.5	1970-78 1981-91	6- 4-91 7-10-91 8- 6-91 9- 9-91	1.15 1.20 0.51 0.04
JERICHO CREEK BASIN						
01462300	Jericho Creek at Washington Crossing, Pa.	Lat 40°18'40", long 74°54'23", Bucks County, at bridge on State Highway 32, 0.3 mi upstream from mouth, and 2.5 mi northwest of Washington Crossing.	9.52	1971-91	6- 7-91 7- 9-91 8-12-91 9- 9-91	0.67 0.31 3.70 0.04
NESHAMINY CREEK BASIN						
01464900	Park Creek near Warrington, Pa.	Lat 40°13'24", long 75°08'42", Bucks County, at mouth, 0.3 mi upstream from bridge on State Highway 611 cross Little Neshaminy Creek, and 2.0 mi southwest of Warrington.	11.8	1946-57 1981-91	6- 7-91 7-10-91 8- 8-91 9-10-91	1.63 1.59 1.53 1.54
01465000	Neshaminy Creek at Rushland, Pa.	Lat 40°15'20", long 75°02'00", Bucks County, at railroad bridge 0.1 mi downstream from Little Neshaminy Creek, 0.2 mi southwest of Rushland, and 0.4 mi upstream from Mill Creek.	134	1885-1913 [‡] 1932-34 [‡] 1981-91	6- 6-91 7- 9-91 8-12-91 9-10-91	45.3 37.1 53.9 25.8
01465100	Mill Creek at Rushland, Pa.	Lat 40°15'35", long 75°01'34", Bucks County, at bridge on L.R. 09047 at Rushland.	21.6	1950 1981-91	6- 6-91 7- 9-91 8- 9-91 9-10-91	8.36 3.37 5.97 2.59
POQUESSING CREEK BASIN						
01465790	Byberry Creek at Chalfont Road, Philadelphia, Pa.	Lat 40°05'01", long 74°58'57", Philadelphia County, on right bank 200 ft downstream from Chalfont Road Bridge, 0.2 mi downstream from Walton Run, at Philadelphia.	5.34	1964-78 [‡] 1981-91	6- 5-91 7- 9-91 8- 9-91 9-10-91	1.23 1.07 1.87 1.83
FRANKFORD CREEK BASIN						
01467084	Rock Creek above Curtis Arboretum near Philadelphia Pa.	Lat 40°04'54", long 75°09'03", Montgomery County, on right bank 60 ft upstream from stone-arch bridge, 1,600 ft upstream from Washington Lane, Cheltenham Township, and about 1.2 mi upstream from mouth.	1.15	1971-78 [‡] 1981-91	6- 5-91 8-13-91 9- 9-91	1.07 0.86 0.89

‡ Operated as a continuous-record station.

^b Operated as a miscellaneous station.^c Operated as a crest-stage partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements Date	Discharge (ft ³ /s)
SCHUYLKILL RIVER BASIN						
01467470	Schuylkill River at Port Carbon, Pa.	Lat 40°41'40", long 76°09'55", Schuylkill County, at bridge 550 ft upstream from Mill Creek, at Port Carbon.	27.1	1949-50 1963-64 ^b 1981-91	6- 3-91 7- 9-91 8- 5-91 9-17-91	27.3 13.0 9.55 8.49
01469100	Bear Creek near Auburn, Pa.	Lat 40°35'27", long 76°07'00", Schuylkill County, at bridge on rural road, 1 mi west Auburn, and 2.2 mi upstream from mouth.	Not Determined	1965 ^b 1981-91	6- 4-91 7- 9-91 8- 5-91 9-16-91	8.81 3.47 1.80 1.29
01469290	Pine Creek at Barnesville, Pa.	Lat 40°49'09", long 76°01'06", Schuylkill County, 0.1 mi south of State Highway 45, and 0.8 mi east of Barneville.	7.33	1964 ^b 1981-91	6- 4-91 7- 9-91 8- 5-91 9-13-91	4.88 2.65 1.92 0.99
01470700	Maiden Creek near Lenhartsville, Pa.	Lat 40°35'10", long 75°53'40", Berks County, at Zettlemoyers bridge, 1 mi north of Lenhartsville.	75.7	1943-57 1981-91	6- 3-91 7- 9-91 8-12-91 9- 9-91	36.8 19.9 11.7 6.52
01470720	Maiden Creek tributary at Lenhartsville, Pa.	Lat 40°34'23", long 75°52'34", Berks County, at bridge on U.S. Highway 22, 0.5 mi east of Lenhartsville, and 0.5 mi upstream from mouth.	7.46	1961-65* 1965-81 1981-91	6- 3-91 7- 9-91 8-12-91 9- 9-91	1.64 1.05 0.99 0.45
01470758	Moselem Creek near Shoemakersville, Pa.	Lat 40°30'10", long 75°52'47", Berks County, at bridge on county road, 0.35 mi upstream from mouth, 2.8 mi west of Moselem Springs, and 5 mi east of Shoemakersville.	13.5	1970-78 1981-91	6- 3-91 7- 9-91 8-12-91 9- 9-91	16.7 17.6 11.7 9.43
01470764	Maiden Creek near Temple, Pa.	Lat 40°25'24", long 75°56'54", Berks County, 1,000 ft upstream from mouth, near Temple.	216	1947-52 1981-82 1986-91	6- 3-91 7- 9-91 8-14-91 9-12-91	30.6 24.5 18.2 43.0
01470800	Tulpehocken Creek at Bernville, Pa.	Lat 40°25'35", long 76°06'45", Berks County, at a single-span concrete highway bridge on L.R. 06047, 600 ft upstream from confluence with Northkill Creek, and 0.5 mi south of Bernville.	18.8	1944 1951 1955 1957 1972-77 ^b 1981-91	6- 3-91 7- 8-91 8-12-91 9-12-91	80.5 53.2 52.4 34.7
01470810	Northkill Creek at Bernville, Pa.	Lat 40°26'22", long 76°07'12", Berks County, at bridge on State Highway 183, 0.3 mi upstream from Little Northkill Creek and 0.7 mi northwest of Bernville.	18.8	1975-77 1979-84* 1978-91	6- 3-91 7- 8-91 8-12-91 9-11-91	7.54 7.38 4.47 2.40
01470818	Little Northkill Creek near Bernville, Pa.	Lat 40°26'33", long 76°07'23", Berks County, at bridge on L.R. 06013, 1.5 mi west of Bernville and 1.6 mi upstream from mouth.	21.2	1975-77 1979-84 1987-91	6- 3-91 7- 8-91 8-12-91 9-11-91	6.27 10.9 5.39 2.90
01471520	Wyomissing Creek at West Reading, Pa.	Lat 40°19'46", long 75°56'23", Berks County, at West Reading, and 180 ft upstream from mouth.	15.6	1948-53 ^d 1981-91	6- 4-91 8-14-91 9-11-91	33.5 17.4 14.2
01471620	Allegheny Creek at Gibraltar, Pa.	Lat 40°17'06", long 75°52'25", Berks County, 600 ft upstream from Schuylkill Canal, at Gibraltar.	17.9	1967 ^b 1981-91	6- 4-91 8-14-91 9-11-91	17.8 6.50 5.04
01471800	Pine Creek near Manatawny, Pa.	Lat 40°24'43", long 75°44'02", Berks County, at steel bridge on macadam road, at Lobachsville, 0.5 mi upstream from mouth, 0.5 mi below West Branch Pine Creek and 2 mi north of Manatawny.	15.6	1970-81* 1982-91	6- 4-91 7-10-91 8- 7-91 9-10-91	6.11 4.66 2.01 2.10
01471900	Manatawny Creek at Earlville, Pa.	Lat 40°19'05", long 75°44'01", Berks County, at bridge on State Highway 562 at Earlville, and 2.7 mi south of Spangsville.	60.9	1947-57 1981-91	6- 4-91 7-10-91 8- 7-91 9-12-91	41.8 29.4 16.4 15.2
01472100	Pigeon Creek at Parker Ford, Pa.	Lat 40°11'48", long 75°35'13", Chester County, 50 ft downstream from bridge on State Highway 724, at Parker Ford.	13.9	1944-57 1981-91	7-10-91 8- 7-91 9- 9-91	6.65 4.25 3.52

^b Operated as a miscellaneous station.^d Publish as Wyomissing Creek near Reading.

* Also a crest-stage partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements Date	Discharge (ft ³ /s)
SCHUYLKILL RIVER BASIN--Continued						
01472130	French Creek near St. Peters, Pa.	Lat 40°11'03", long 75°45'10", Chester County, at highway bridge, 1.2 mi northwest of St. Peters.	11.8	1932-33 1981-91	6- 3-91 7- 9-91 8-13-91 9- 9-91	5.83 12.4 6.86 15.9
01472150	French Creek at Coventryville, Pa.	Lat 40°10'16", long 75°41'26", Chester County, at highway bridge, 0.1 mi south of State Highway 23, at Coventryville, 0.3 mi downstream from South Branch, 0.6 mi southwest of Pottstown.	36.9	1951-69 1981-91	6- 3-91 7- 9-91 8-13-91 9- 9-91	23.6 11.7 6.21 15.1
01472175	Unnamed tributary to Pickering Creek near Ludwigs Corner, Pa.	Lat 40°06'06", long 75°39'32", Chester County, at bridge on rural road, 2.1 mi southeast of Ludwigs Corner.	1.87	1967-68b 1981-91	6- 6-91 7- 9-91 8-14-91 9-13-91	0.22 0.09 0.18 0.28
01472280	Macoby Creek at Green Lane, Pa.	Lat 40°20'22", long 75°28'20", Montgomery County, at bridge on State Highway 29, at Green Lane, and 0.1 mi upstream from mouth.	17.4	1949 1981-91	6- 5-91 7-10-91 8-13-91 9- 9-91	1.78 2.03 2.58 1.23
01472450	Unami Creek at Sumneytown, Pa.	Lat 40°19'34", long 75°27'00", Montgomery County, at bridge on State Highway 63, at Sumneytown.	47	1946a,b 1951a,b 1981-91	6- 5-91 7-10-91 9- 9-91	6.62 6.40 3.18
01473100	Zarharias Creek near Skippack Pa.	Lat 40°12'26", long 75°21'57", Montgomery County, at concrete weir, 1.2 mi southeast of Skippack.	7.27	1960-80* 1981-91	6- 5-91 7- 9-91 8-14-91 9- 9-91	0.77 0.49 0.35 0.45
01473200	Trout Creek near Valley Forge, Pa.	Lat 40°05'25", long 75°25'24", Chester County, at bridge on Richard Road, 750 ft upstream from bridge on State Highway 23, and 2.2 mi east of Valley Forge.	6.55	1946-57 1981-91	6- 6-91 7- 9-91 8-14-91 9- 9-91	1.00 1.01 0.73 0.92
CHRISTINA RIVER BASIN						
01478150	East Branch White Clay Creek at Landenberg, Pa.	Lat 39°46'40", long 75°46'18", Chester County, at county highway bridge at Landenberg, 1.4 mi downstream from Egypt Run and 4 mi southeast of West Grove.	25.6	1970-78 1981-91	6- 4-91 7- 9-91 8- 7-91 9- 9-91	16.6 17.6 5.29 7.40
01479700	West Branch Red Clay Creek near Kennett Square, Pa.	Lat 39°48'39", long 75°42'19", Chester County, at county highway bridge on Kaolin Road, 1 mi upstream from East Branch Red Clay Creek, 1.4 mi east of Kaolin and 2.5 mi south of Kennett Square.	17.0	1970-78 1980-91	6- 4-91 7- 9-91 8- 7-91 9- 9-91	12.8 11.2 10.9 7.26
01480630	Buck Run near Doe Run, Pa.	Lat 39°55'40", long 75°48'22", Chester County, 1,300 ft downstream from bridge on county road, 0.65 mi upstream from Doe Run, and 2.0 mi southwest of Mortonville.	24.4	1949 1955 1981-91	6- 4-91 7- 9-91 8- 4-91 9- 9-91	43.5 25.0 13.9 15.3
01480665	East Branch Brandywine Creek at Dorlan, Pa.	Lat 40°03'08", long 75°43'28", Chester County, 300 ft upstream from bridge on private road, 0.3 mi upstream from Marsh Creek, and 0.5 mi northwest of Dorlan.	33.4	1967-68† 1981-91	6- 4-91 7- 9-91 8-13-91 9- 9-91	21.0 15.3 14.9 7.54
01494980	Big Elk Creek at Lewisville, Pa.	Lat 39°44'08", long 75°52'53", Chester County, at Fergusons Bridge on State Highway 841, 0.9 mi north of Lewisville.	31.2	1976-79b 1981-91	6- 4-91 7- 9-91 9- 9-91	18.6 17.0 11.0

† Published as "at Camp Belmont".

a Operated as a continuous-record station.

b Operated as a miscellaneous station.

* Also a crest-stage partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1991

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Discharge Date (ft ³ /s)
LACKAWAXEN RIVER BASIN					
Wallenpaupack Creek	Lackawaxen River	Lat 41°20'90", long 75°20'26" Wayne County, at bridge on dirt road, 2.6 mi south of intersection of Route 84 and 191, near East Sterling, Pa.	33.4	1978-81 1989-90	12- 4-90 19.0 12- 4-90 18.5 6-12-91 30.5 7-30-91 13.9
Lackawaxen River	Delaware River	Lat 41°28'33", long 75°02'12", Pike County, at mouth downstream from bridge at SR0590, at Rowland, Pa.	596	1989-90	12- 5-90 52.3 8- 6-91 55.1
SCHUYLKILL RIVER BASIN					
Maiden Creek	Schuylkill River	Lat 40°26'21", long 75°55'37" Berks County, at Willeys Bridge 1 mile upstream from SR61	215	1979-80 1989-90	2- 8-91 400.7 4- 9-91 250.0 8-15-91 19.8
CHRISTINA RIVER BASIN					
White Clay Creek	Christina River	Lat 39°45'02", long 75°46'19" Chester County, at bridge on Sharpless Rd., 1.2 mi south of Landenberg	60.0	1989-90	10- 3-90 12.7 11-28-90 14.8 1-22-91 25.0 5-14-91 26.0 7- 2-91 11.2
Big Elk Creek near Lewisville	Elk River	Lat 39°43'50", long 75°50'55", Chester County, at bridge on Lewisville Rd., 9.2 mi north of Elkton, Md.	41.0	1990	10- 3-90 21.8 11-28-90 26.8 1-22-91 57.0 5-14-91 50.6 7- 2-91 18.8 8- 7-91 15.0

SCHUYLKILL RIVER BASIN

MANATAWNY CREEK SEEPAGE INVESTIGATION

One series of discharge measurements was made during the 1983 water year and one during the 1991 water year, on the Manatawny Creek and tributaries to study channel gains and losses. The 1983 measurements were made on January 14, 1983. Measurements were also made on June 26, 1991. The reach for the seepage investigation is 4.8 mi in length and extends from Rhodes Road to Earlville. Measurements were made during periods of constant base flow of the stream. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

January 14, 1983

Manatawny Creek mile	Stream	Location	Discharge, in cubic feet per second		
			Main stream	Gain or loss in Manatawny Creek and/or measurement error	Total gain or loss in Manatawny Creek and/or measurement error
4.8	Manatawny Creek	at Rhodes Road	29.8	--	--
3.4	Manatawny Creek	at Spangsville	40.6	+10.8	+10.8
1.6	Manatawny Creek	at Manatawny Road	38.3	-2.3	+8.5
0.0	Manatawny Creek	at Earlville 01471900	45.1	+6.8	+15.3

SCHUYLKILL RIVER BASIN

MANATAWNY CREEK SEEPAGE INVESTIGATION--Continued

June 26, 1991

					Discharge, in cubic feet per second		
Manatawny Creek mile	Stream	Location	Tributary	Main stream	Gain or loss in Manatawny Creek and/or measurement error	Total gain or loss in Manatawny Creek and/or measurement error	
4.8	Manatawny Creek	at Rhodes Road	--	28.1	--	--	
3.4	Manatawny Creek	at Spangsville	--	24.6	-3.5	-3.5	
a	Furnace Run	above landfill	1.45	--	--	--	
b	Furnace Run	below landfill	1.51	--	--	--	
c	Furnace Run	at Mouth	1.53	--	--	--	
2.6	Manatawny Creek	at Fisher Mill Road	--	26.4	+1.8	-1.7	
1.9	Manatawny Creek	at powerline line	--	24.6	-1.8	-3.5	
1.6	Manatawny Creek	at Manatawny	--	33.5	+8.9	+5.4	
0.9	Manatawny Creek	at Rabbit Hill	--	26.4	-7.1	-1.7	
0.5	Trout Run	at Mouth	1.13	--	--	--	
0.0	Manatawny Creek	at Earlville 01471900	--	35.7	+9.3	+7.6	

- a** 1.3 miles above confluence with Manatawny Creek at stream mile 3.3.
b 0.6 miles above confluence with Manatawny Creek at stream mile 3.3.
c 0.2 miles above confluence with Manatawny Creek at stream mile 3.3.

CHRISTINA RIVER BASIN

RED CLAY CREEK SEEPAGE INVESTIGATIONS--UNIONVILLE, PA TO STANTON, DE

One series of discharge measurements was made during the 1991 water year, on October 31 to November 2, on the Red Clay Creek and tributaries in Pennsylvania and Delaware, to study channel gains and losses. The reach for the seepage investigation is 21 mi in length and extends from the headwaters of the West Branch Red Clay Creek to the confluence with White Clay at Stanton, Delaware. These measurements were made during periods of constant base flow of the stream. Tributary flow, industrial and sewage treatment plant discharges were considered a contribution and not a gain. Diversions were not considered a loss. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Red Clay Creek seepage investigation, October 31-November 2, 1990
[--, no data; ft³/s, cubic feet per second]

West Branch Red Clay Creek from headwaters to confluence with East Branch, October 31, 1990

Stream mile	Stream	Location	Tributary	Tributary	Discharge (ft ³ /s)			
					Main stream	Gain or loss in tributary ¹	Gain or loss in Red Clay Creek ¹	Total gain or loss in Red Clay Creek ¹
21.1	West Branch Red Clay Creek	Lat 39°53'09", long 75°44'30", at Mill Road	--	--	0.72	--	--	--
21.0	Tributary to West Branch Red Clay Creek	Lat 39°53'07", long 75°44'30", at Mill Road	--	.56	--	--	--	--
20.1	West Branch Red Clay Creek ²	Lat 39°52'31", long 75°44'00", near Wollaston Road	--	--	2.19	--	+ .91	+ .91
19.6	West Branch Red Clay Creek	Lat 39°52'08", long 75°44'16", south of Street Road	--	--	3.30	--	+ 1.11	+ 2.02
19.5	Tributary to West Branch Red Clay Creek	Lat 39°52'08", long 75°44'17", downstream of Mill Road	--	.32	--	--	--	--
19.5	West Branch Red Clay Creek	Lat 39°52'06", long 75°44'16", south of Street Road	--	--	2.84	--	- .78	+ 1.24
19.3	Tributary to West Branch Red Clay Creek	Lat 39°51'59", long 75°44'04", downstream of Wollaston Road	--	.06	--	--	--	--
19.2	West Branch Red Clay Creek	Lat 39°51'56", long 75°44'08", south of Street Road	--	--	3.33	--	+ .43	+ 1.67
19.2	Tributary to West Branch Red Clay Creek	Lat 39°51'55", long 75°44'10", downstream of Mill Road	--	.04	--	--	--	--
--	South Brook (1.8 miles above mouth)	Lat 39°51'43", long 75°45'51", at Landhope Farm	--	.31	--	--	--	--
--	Discharge, New Bolton Center ³ (1.2 miles above mouth)	Lat 39°51'38", long 75°45'16"	.04	--	--	--	--	--
--	South Brook (1.0 miles above mouth)	Lat 39°51'41", long 75°45'15", at New Bolton Center	--	.37	--	+ .02	--	--
18.9	South Brook	Lat 39°51'40", long 75°44'15", at Mill Road at mouth	--	.63	--	+ .26	--	--
18.8	West Branch Red Clay Creek	Lat 39°51'35", long 75°44'03", below confluence with South Brook	--	--	4.38	--	+ .38	+ 2.05
18.1	Tributary to West Branch Red Clay Creek	Lat 39°51'01", long 75°44'04", near Pemberton Road	--	.09	--	--	--	--

¹And/or measurement error.

²Increase in flow may be due to small unmeasured tributary flowing into stream above this station.

³Reported.

CHRISTINA RIVER BASIN

RED CLAY CREEK SEEPAGE INVESTIGATIONS--UNIONVILLE, PA TO STANTON, DE--Continued

Red Clay Creek seepage investigation, October 31-November 2, 1990
 [--, no data; ft³/s, cubic feet per second]

West Branch Red Clay Creek from headwaters to confluence with East Branch, October 31, 1990

Stream mile	Stream	Location	Tributary	Tributary	Discharge ft ³ /s			
					Main stream	Gain or loss in tributary ¹	Gain or loss in Red Clay Creek ¹	Total gain or loss in Red Clay Creek ¹
17.9	West Branch Red Clay Creek	Lat 39°50'58", long 75°43'30", at Pemberton Road	--	--	5.24	--	+ .77	+ 2.82
17.5	West Branch Red Clay Creek	Lat 39°50'44", long 75°43'18", at Baltimore Pike	--	--	5.66	--	+ .42	+ 3.24
17.3	Discharge, Seneca-Kennett Foods ³	Lat 39°50'36", long 75°43'17"	--	.04	--	--	--	--
16.8	Tributary to West Branch Red Clay Creek	Lat 39°50'15", long 75°43'30" near Quarry Road	--	.38	--	--	--	--
16.7	West Branch Red Clay Creek	Lat 39°50'13", long 75°43'33", at Kennett Square (01479680)	--	--	6.05	--	- .03	+ 3.21
16.5	Discharge, Kennett Square Sewage Treatment Plant ³	Lat 39°50'03", long 75°43'29"	--	1.18	--	--	--	--
--	Toughkenamon Tributary (1.4 miles above mouth)	Lat 39°50'12", long 75°44'54", at Baltimore Pike	--	.52	--	--	--	--
--	Toughkenamon Tributary (1.2 miles above mouth)	Lat 39°50'10", long 75°44'43", at Chambers Road	--	.56	--	+ .04	--	--
--	Tributary to Toughkenamon Tributary (1.1 miles above mouth)	Lat 39°50'04", long 75°44'41", at Chambers Road	.46	--	--	--	--	--
16.4	Toughkenamon Tributary	Lat 39°50'00", long 75°43'34", at Scarlett Road near mouth	--	1.14	--	+ .12	--	--
16.2	West Branch Red Clay Creek	Lat 39°49'53", long 75°43'24", at Hillendale Road	--	--	9.94	--	+ 1.57	+ 4.78
--	Bucktoe Creek (0.9 miles from mouth)	Lat 39°49'03", long 75°43'53", north of Bucktoe Road	--	.72	--	--	--	--
--	Tributary to Bucktoe Creek (0.4 miles from mouth)	Lat 39°48'53", long 75°43'24", east of Sharp Road	.22	--	--	--	--	--
14.7	Bucktoe Creek	Lat 39°48'49", long 75°43'10", near Bucktoe Road near mouth	--	.99	--	+ .05	--	--
14.5	West Branch Red Clay Creek	Lat 39°48'40", long 75°42'48", at Chandler Mill and Bucktoe Rds.	--	--	10.52	--	- .41	+ 4.37
14.3	Tributary to West Branch Red Clay Creek	Lat 39°48'34", long 75°42'39", at Chandler Mill and Kaolin Rds.	--	.24	--	--	--	--
13.1	West Branch Red Clay Creek	Lat 39°49'04", long 75°41'35", at Marshalls Bridge Road	--	--	10.80	--	+ .04	--

¹And/or measurement error.

²Increase in flow may be due to small unmeasured tributary flowing into stream above this station.

³Reported.

CHRISTINA RIVER BASIN

RED CLAY CREEK SEEPAGE INVESTIGATIONS--UNIONVILLE, PA TO STANTON, DE--Continued

Red Clay Creek seepage investigation, October 31-November 2, 1990
[--, no data; ft³/s, cubic feet per second]

East Branch Red Clay Creek from headwaters to confluence with West Branch, November 1, 1990
Stream mile measured from confluence of East and West Branches Red Clay Creek

Stream mile	Stream	Location	Tributary	Tributary	Discharge (ft ³ /s)			
					Main stream	Gain or loss in tributary ¹	Gain or loss in Red Clay Creek ¹	Total gain or loss in Red Clay Creek ¹
5.7	East Branch Red Clay Creek	Lat 39°52'30", long 75°42'46", at Street Road	--	--	.33	--	--	--
--	Tributary to East Branch Red Clay Creek (0.6 miles above mouth)	Lat 39°52'32", long 75°42'05", at Street Road	--	.15	--	--	--	--
5.1	Tributary to East Branch Red Clay Creek ²	Lat 39°52'07", long 75°42'17", at Walnut Street near mouth	--	.37	--	+ .22	--	--
5.0	East Branch Red Clay Creek	Lat 39°52'03", long 75°42'20", at East Locust Street	--	--	.71	--	+ .01	+ .01
3.5	Tributary to East Branch Red Clay Creek	Lat 39°51'04", long 75°42'29", at Walnut Street, Kennett Square	--	.23	--	--	--	--
3.4	East Branch Red Clay Creek	Lat 39°50'53", long 75°42'24", at Baltimore Pike	--	--	1.99	--	+ 1.05	+ 1.06
3.1	East Branch Red Clay Creek	Lat 39°50'39", long 75°42'21", at Kennett Square Fire Station	--	--	1.93	--	- .06	+ 1.00
2.4	Discharge, Mushroom Co-op ³	Lat 39°50'35", long 75°42'00"	--	.11	--	--	--	--
2.4	East Branch Red Clay Creek	Lat 39°50'28", long 75°41'58", north of Route 82	--	--	2.03	--	- .01	+ .99
1.2	East Branch Red Clay Creek	Lat 39°49'46", long 75°41'21", north of Old Kennett Road	--	--	2.86	--	+ .83	+ 1.82
--	Longwood Tributary (2.4 miles above mouth)	Lat 39°51'31", long 75°40'41", at Orchard Valley Development	--	.72	--	--	--	--
--	Longwood Tributary (1.9 miles above mouth)	Lat 39°51'07", long 75°40'35", at Bayard Road	--	.93	--	+ .21	--	--
--	Longwood Tributary (1.6 miles above mouth)	Lat 39°50'50", long 75°40'37", at Rosedale and Bayard Roads	--	1.27	--	+ .34	--	--
--	Tributary to Longwood Trib. (0.8 miles above mouth)	Lat 39°50'38", long 75°41'18", at Rosedale Road	.33	--	--	--	--	--
--	Longwood Tributary (0.7 miles above mouth)	Lat 39°50'22", long 75°41'16", at Hillendale Road	--	1.55	--	- .05	--	--
--	Longwood Tributary (0.4 miles above mouth)	Lat 39°50'05", long 75°41'19", east of McFarland Road above unmeasured tributary	--	1.73	--	+ .18	--	--

¹And/or measurement error.

²Increase in flow may be due to small unmeasured tributary flowing into stream above this station.

³Reported.

CHRISTINA RIVER BASIN

RED CLAY CREEK SEEPAGE INVESTIGATIONS--UNIONVILLE, PA TO STANTON, DE--Continued

Red Clay Creek seepage investigation, October 31-November 2, 1990
 [--, no data; ft³/s, cubic feet per second]

East Branch Red Clay Creek from headwaters to confluence with West Branch, November 1, 1990
 Stream mile measured from confluence of East and West Branches Red Clay Creek

Stream mile	Stream	Location	Tributary	Tributary	Discharge (ft ³ /s)			
					Main stream	Gain or loss in tributary ¹	Gain or loss in Red Clay Creek ¹	Total gain or loss in Red Clay Creek ¹
--	Longwood Tributary ² (0.3 miles above mouth)	Lat 39°50'03", long 75°41'19" east of McFarland Road below unmeasured tributary	--	2.03	--	+ .30	--	--
1.1	Longwood Tributary	Lat 39°49'48", long 75°41'20" off Old Kennett Road above Pond tributary at mouth	--	1.92	--	- .11	--	--
1.1	Tributary to Longwood Tributary	Lat 39°49'46", long 75°41'19" off Old Kennett Road	.26	--	--	--	--	--
0.1	East Branch Red Clay Creek	Lat 39°49'11", long 75°41'29", near Five Point near Kennett Square (01479800)	--	--	5.48	--	+ .44	+ 2.26
Red Clay Creek below confluence of West and East Branches, November 2, 1990								
12.9	Red Clay Creek	Lat 39°49'00", long 75°41'31", near Kennett Square, (01479820)	--	--	16.8	--	--	--
12.9	Tributary to Red Clay Creek	Lat 39°48'57", long 75°41'31", at Marshalls Bridge Road	--	.39	--	--	--	--
12.3	Diversion, NVF ³	Lat 39°48'46", long 75°40'55"	--	2.78	--	--	--	--
11.3	Red Clay Creek	Lat 39°48'27", long 75°40'30", at NVF	--	--	16.3	--	+ 1.89	+ 1.89
11.2	Tributary to Red Clay Creek	Lat 39°48'17", long 75°40'35", at NVF	--	.23	--	--	--	--
11.2	Discharge, NVF ³	Lat 39°48'25", long 75°40'27"	--	1.50	--	--	--	--
11.1	Tributary to Red Clay Creek	Lat 39°48'36", long 75°40'23", at Yorklyn	--	.88	--	--	--	--
11.0	Red Clay Creek	Lat 39°48'32", long 75°40'17", at Yorklyn below NVF	--	--	18.6	--	- .31	+ 1.58
10.3	Tributary to Red Clay Creek	Lat 39°48'10", long 75°39'42", at Route 82 and Sharp Road	--	.02	--	--	--	--
10.2	Red Clay Creek	Lat 39°48'07", long 75°39'43", at Route 82 and Sharp Road	--	--	17.9	--	- .72	+ .86
10.1	Tributary to Red Clay Creek	Lat 39°47'59", long 75°39'47", at Delaware Nature Society	--	.18	--	--	--	--

¹And/or measurement error.²Increase in flow may be due to small unmeasured tributary flowing into stream above this station.³Reported.

CHRISTINA RIVER BASIN

RED CLAY CREEK SEEPAGE INVESTIGATIONS--UNIONVILLE, PA TO STANTON, DE--Continued

Red Clay Creek seepage investigation, October 31-November 2, 1990
[--, no data; ft³/s, cubic feet per second]

Red Clay Creek below confluence of West and East Branches, November 2, 1990

Discharge (ft³/s)

Stream mile	Stream	Location	Tributary	Tributary	Main stream	Gain or loss in tributary ¹	Gain or loss in Red Clay Creek ¹	Total gain or loss in Red Clay Creek ¹
0.0	Tributary to Red Clay Creek	Lat 39°47'55", long 75°39'44", at Delaware Nature Society	--	.07	--	--	--	--
9.8	Tributary to Red Clay Creek	Lat 39°47'49", long 75°39'34", at Delaware Nature Society	--	.14	--	--	--	--
9.7	Tributary to Red Clay Creek	Lat 39°47'50", long 75°39'25", south of Barley Mill Road	--	.05	--	--	--	--
9.0	Red Clay Creek	Lat 39°47'54", long 75°38'57", above Burroughs Run	--	--	18.8	--	+ .46	+ 1.32
Burroughs Run from headwaters to confluence with Red Clay Creek, November 1, 1990 Stream mile measured from mouth of Burroughs Run								
3.6	Burroughs Run	Lat 39°50'24", long 75°39'09", north of Spring Mill Road	--	1.22	--	--	--	--
3.5	Tributary to Burroughs Run	Lat 39°50'21", long 75°39'05", northeast of Spring Mill Road	.39	--	--	--	--	--
3.0	Tributary to Burroughs Run	Lat 39°49'50", long 75°39'16", at Norway Road	.40	--	--	--	--	--
2.9	Burroughs Run	Lat 39°49'51", long 75°39'03", at Burnt Mill Road	--	2.31	--	+ .30	--	--
2.7	Burroughs Run ²	Lat 39°49'45", long 75°38'48", at Center Mill Road	--	2.35	--	+ .04	--	--
2.6	Tributary to Burroughs Run	Lat 39°49'44", long 75°38'40", at Burnt Mill Road	.22	--	--	--	--	--
2.4	Tributary to Burroughs Run	Lat 39°49'35", long 75°38'29", at L'Hermitage Development	.17	--	--	--	--	--
1.9	Tributary to Burroughs Run	Lat 39°49'12", long 75°38'39", south of Snuff Mill Road	.32	--	--	--	--	--
1.8	Burroughs Run	Lat 39°49'06", long 75°38'35", at Old Kennett Road	--	3.58	--	+ .52	--	--
1.5	Tributary to Burroughs Run	Lat 39°49'02", long 75°38'20", at Old Kennett Road	.14	--	--	--	--	--
0.1	Burroughs Run	Lat 39°47'56", 75°39'01", at Route 82 near mouth	--	4.19	--	+ .47	--	--

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³Reported.

CHRISTINA RIVER BASIN

RED CLAY CREEK SEEPAGE INVESTIGATIONS--UNIONVILLE, PA TO STANTON, DE--Continued

Red Clay Creek seepage investigation, October 31-November 2, 1990
 [--, no data; ft³/s, cubic feet per second]

Red Clay Creek below confluence with Burroughs Run, November 2, 1990

Discharge (ft³/s)

Stream mile	Stream	Location	Tributary	Tributary	Main stream	Gain or loss in tributary ¹	Gain or loss in Red Clay Creek ¹	Total gain or loss in Red Clay Creek ¹
8.9	Burroughs Run	Lat 39°47'56", long 75°39'01", at Route 82	--	4.26	--	--	--	--
8.7	Tributary to Red Clay Creek	Lat 39°47'42", long 75°38'44", at Route 82 and Walnut Green Road	--	.92	--	--	--	--
7.7	Red Clay Creek	Lat 39°47'12", long 75°38'25" at Mt. Cuba and Hillside Mill Rds.	--	--	27.1	--	+ 3.12	+ 4.44
7.4	Tributary to Red Clay Creek	Lat 39°47'09", long 75°38'15", at Hillside Mill Road	--	.19	--	--	--	--
7.2	Tributary to Red Clay Creek	Lat 39°46'53", long 75°38'29", at Mt. Cuba Road	--	.23	--	--	--	--
6.7	Tributary to Red Clay Creek	Lat 39°46'30", long 75°38'31", at Spring Valley Road	--	.31	--	--	--	--
6.2	Tributary to Red Clay Creek	Lat 39°46'15", long 75°38'09", below Hoopes Reservoir	--	.08	--	--	--	--
6.1	Tributary to Red Clay Creek	Lat 39°46'09", long 75°38'02" at Rolling Mill and Barley Mill Roads	--	.38	--	--	--	--
4.8	Red Clay Creek	Lat 39°45'52", long 75°38'08", at Wooddale, Del., (01480000)	--	--	25.5	--	- 2.79	+ 1.65
3.3	Red Clay Creek	Lat 39°44'39", long 75°38'05", above mouth of Hyde Run	--	--	24.9	--	- .60	+ 1.05
--	Hyde Run (2.0 miles above mouth)	Lat 39°45'29", long 75°39'20", near Heritage and Amblerside Rds.	--	.48	--	--	--	--
3.2	Hyde Run	Lat 39°44'37", long 75°38'06", at B & O Railroad, Brandywine Springs Park at mouth	--	.96	--	+ .48	--	--
1.6	Red Clay Creek	Lat 39°43'28", long 75°38'03", at Kiaminski Road	--	--	27.8	--	+ 1.94	+ 2.99
0.8	Red Clay Creek	Lat 39°42'55", long 75°38'28", near Stanton, Del., (01480015)	--	--	29.8	--	+ 2.0	+ 4.99
0.5	Tributary to Red Clay Creek	Lat 39°42'51", long 75°38'40", at Route 4	--	.26	--	--	--	--
0.1	Red Clay Creek	Lat 39°42'27", long 75°38'40" near mouth at Wilmington Suburban Water Company	--	--	32.7	--	+ 2.64	+ 7.63

¹And/or measurement error.

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³Reported.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)										
OCT 1990 04...	0815	3.9	170	6.1	18.5	14.0	1.5	9.9	55	15
01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)										
OCT 1990 04...	1145	0.67	242	6.8	21.5	15.0	3.0	9.9	78	12
01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)										
NOV 1990 16...	0900	16	132	6.8	15.0	6.5	1.3	12.4	49	3
01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)										
NOV 1990 16...	1150	9.6	196	6.9	23.5	7.5	1.5	12.8	70	17
01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)										
NOV 1990 15...	0830	35	165	7.0	6.0	4.0	1.1	12.9	55	3
014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)										
NOV 1990 15...	1400	51	197	7.4	19.5	7.5	4.5	13.1	69	13
01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)										
OCT 1990 03...	0800	1.2	238	6.2	9.5	10.5	1.5	10.4	86	19
01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)										
OCT 1990 03...	1030	2.9	213	6.6	14.5	11.5	1.0	10.7	76	11
014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)										
OCT 1990 03...	1230	9.7	218	6.0	18.0	12.5	1.0	11.0	78	5
014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)										
OCT 1990 02...	0930	13	189	7.5	15.0	13.5	0.40	10.4	82	30
01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)										
OCT 1990 12...	0815	14	272	6.8	20.0	18.5	2.9	9.3	86	12
01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)										
NOV 1990 14...	0900	5.5	510	6.9	3.5	6.5	0.30	12.7	220	51
01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)										
NOV 1990 14...	1130	12	595	6.9	6.0	6.5	2.5	13.2	250	65

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
	01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)										
OCT 1990 04...	14	4.9	8.0	0.5	23	1.5	40	18	9.8	18	
	01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)										
OCT 1990 04...	20	6.9	12	0.6	24	2.3	66	21	18	17	
	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)										
NOV 1990 16...	12	4.6	5.9	0.4	20	1.3	46	13	7.3	18	
	01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)										
NOV 1990 16...	18	6.0	7.6	0.4	19	2.1	53	21	17	20	
	01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)										
NOV 1990 15...	14	4.9	6.7	0.4	20	1.9	52	15	9.6	17	
	014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)										
NOV 1990 15...	18	5.8	8.8	0.5	21	2.1	56	20	13	16	
	01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)										
OCT 1990 03...	23	7.0	8.3	0.4	17	1.8	67	15	24	20	
	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)										
OCT 1990 03...	21	5.7	7.4	0.4	17	1.9	65	14	17	18	
	014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)										
OCT 1990 03...	21	6.2	8.1	0.4	18	1.8	73	14	19	18	
	014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)										
OCT 1990 02...	22	6.5	9.0	0.4	19	2.0	52	21	20	18	
	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)										
OCT 1990 12...	23	7.0	9.3	0.4	18	3.1	74	18	20	19	
	01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)										
NOV 1990 14...	58	18	23	0.7	18	2.3	168	29	45	7.7	
	01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)										
NOV 1990 14...	50	31	26	0.7	18	3.5	188	28	45	8.0	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS-SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS-SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS-SOLVED (MG/L) AS P) (00671)
	01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1990 04...	109	--	<0.010	2.40	0.020	0.30	0.30	0.050	<0.040	0.030
	01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1990 04...	156	4.29	0.010	4.30	0.020	0.50	0.40	0.050	<0.060	0.050
	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
NOV 1990 16...	95	--	<0.010	1.10	0.050	0.30	<0.20	<0.010	<0.010	<0.010
	01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
NOV 1990 16...	141	--	<0.010	3.80	0.050	0.40	0.70	0.030	<0.010	0.010
	01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
NOV 1990 15...	108	--	<0.010	1.80	0.050	0.30	<0.20	0.030	0.020	<0.010
	014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
NOV 1990 15...	126	--	<0.010	1.80	0.060	0.50	0.30	0.030	<0.010	0.010
	01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1990 03...	149	--	<0.010	2.20	0.010	0.30	0.20	<0.010	<0.010	<0.010
	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1990 03...	133	--	<0.010	2.00	0.020	0.20	0.40	0.010	<0.010	<0.010
	014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1990 03...	139	--	<0.010	1.50	0.010	0.40	0.30	<0.010	<0.010	<0.010
	014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1990 02...	136	--	<0.010	1.50	0.040	0.30	0.30	0.010	0.010	<0.010
	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1990 12...	148	--	<0.010	0.900	0.020	0.20	0.40	0.040	0.010	<0.050
	01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1990 14...	295	--	<0.010	2.40	0.050	<0.20	<0.20	<0.010	<0.010	<0.010
	01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1990 14...	317	2.78	0.020	2.80	0.110	0.60	0.60	0.040	0.020	<0.010

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
	01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1990 04...	30	--	--	--	--	--	--	--	36	--
	01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1990 04...	<10	--	--	--	--	--	--	--	17	--
	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
NOV 1990 16...	20	--	--	--	--	--	--	--	120	--
	01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
NOV 1990 16...	<10	--	--	--	--	--	--	--	100	--
	01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
NOV 1990 15...	10	--	--	--	--	--	--	--	140	--
	014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
NOV 1990 15...	10	<1	36	<0.5	<1.0	<5	<3	<10	120	<10
	01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1990 03...	<10	--	--	--	--	--	--	--	100	--
	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1990 03...	10	--	--	--	--	--	--	--	78	--
	014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1990 03...	<10	--	--	--	--	--	--	--	67	--
	014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1990 02...	10	--	--	--	--	--	--	--	70	--
	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1990 12...	20	--	--	--	--	--	--	--	47	--
	01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1990 14...	20	<1	24	<0.5	<1.0	<5	<3	<10	9	<10
	01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1990 14...	<10	<1	27	<0.5	<1.0	<5	<3	<10	8	<10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS 2N) (01090)
01472080 PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03N LONG 075 37 10W)									
OCT 1990 04...	16	--	--	--	--	--	--	--	--
01472109 STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11N LONG 075 34 45W)									
OCT 1990 04...	47	--	--	--	--	--	--	--	--
01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14N LONG 075 41 50W)									
NOV 1990 16...	17	--	--	--	--	--	--	--	--
01472140 SOUTH BRANCH FRENCH CREEK AT COVENTRYVILLE, PA. (LAT 40 09 18N LONG 075 42 52W)									
NOV 1990 16...	20	--	--	--	--	--	--	--	--
01472154 FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 17N LONG 075 38 25W)									
NOV 1990 15...	19	--	--	--	--	--	--	--	--
014721612 FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA (LAT 40 08 10N LONG 075 30 41W)									
NOV 1990 15...	33	<10	86	<6	4	<0.1	<10	<1.0	<3
01472170 PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43N LONG 075 39 14W)									
OCT 1990 03...	43	--	--	--	--	--	--	--	--
01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22N LONG 075 37 50W)									
OCT 1990 03...	21	--	--	--	--	--	--	--	--
014721854 PICKERING CREEK AT MERLIN, PA (LAT 40 06 25N LONG 075 35 34W)									
OCT 1990 03...	14	--	--	--	--	--	--	--	--
014721884 PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA (LAT 40 05 57N LONG 075 33 20W)									
OCT 1990 02...	21	--	--	--	--	--	--	--	--
01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33N LONG 075 31 42W)									
OCT 1990 12...	7	--	--	--	--	--	--	--	--
01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA. (LAT 40 04 00N LONG 075 28 22W)									
NOV 1990 14...	5	<10	120	<6	9	<0.1	<10	<1.0	4
01473168 VALLEY CREEK NEAR VALLEY FORGE, PA. (LAT 40 04 11N LONG 075 28 25W)									
NOV 1990 14...	14	<10	63	<6	57	<0.1	<10	<1.0	<3

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)										
NOV 1990 02...	0930	4.6	190	6.7	20.5	11.5	0.40	11.7	70	17
01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)										
OCT 1990 30...	0900	2.4	249	6.4	8.0	7.0	0.50	12.0	89	37
01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)										
OCT 1990 30...	1145	6.2	251	6.6	12.5	8.5	1.1	12.3	83	17
01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)										
OCT 1990 05...	1100	0.74	328	6.8	18.5	14.0	7.6	9.6	100	45
09...	0840	--	310	6.8	19.0	12.5	--	9.2	--	--
01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)										
OCT 1990 05...	0830	2.1	324	6.8	16.5	13.5	1.0	9.0	120	29
01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)										
OCT 1990 25...	1330	7.6	298	6.8	14.5	14.0	4.0	10.0	110	38
01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)										
OCT 1990 25...	1045	12	850	7.0	12.5	15.5	2.2	9.4	170	--
01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)										
OCT 1990 25...	0900	20	590	6.5	9.5	11.5	2.0	8.8	130	56
01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)										
NOV 1990 01...	0845	7.0	336	6.5	14.0	9.5	0.70	12.4	150	50
01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)										
NOV 1990 09...	0900	5.5	231	6.8	4.5	5.5	1.4	13.4	87	29
01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)										
NOV 1990 09...	1115	4.1	177	7.4	7.5	5.5	0.40	14.1	54	6
01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)										
OCT 1990 31...	0900	6.1	300	6.7	13.5	9.0	0.60	12.1	130	43
01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)										
NOV 1990 01...	1230	5.5	308	6.9	18.5	11.5	2.6	13.8	120	62

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT WH TOT FET FIELD (MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
	01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)									
NOV 1990 02...	15	8.0	7.6	0.4	19	1.8	53	11	14	17
	01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)									
OCT 1990 30...	19	10	14	0.6	25	2.2	52	17	25	9.8
	01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)									
OCT 1990 30...	18	9.3	15	0.7	27	2.3	66	15	22	14
	01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)									
OCT 1990 05... 09...	22 --	12 --	17 --	0.7 --	26 --	1.8 --	59 --	17 --	47 --	7.6 --
	01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)									
OCT 1990 05...	27	13	13	0.5	19	2.6	92	21	35	13
	01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)									
OCT 1990 25...	24	11	13	0.6	20	3.7	67	17	26	15
	01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)									
OCT 1990 25...	43	15	80	3	44	41	73	120	86	20
	01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)									
OCT 1990 25...	32	12	48	2	39	25	74	85	52	17
	01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)									
NOV 1990 01...	36	15	7.7	0.3	10	3.0	102	23	14	16
	01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)									
NOV 1990 09...	20	8.9	9.9	0.5	19	3.7	58	17	16	14
	01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)									
NOV 1990 09...	13	5.3	7.6	0.4	22	3.1	48	14	15	13
	01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)									
OCT 1990 31...	31	13	8.9	0.3	13	3.5	88	25	18	16
	01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)									
NOV 1990 01...	30	11	9.9	0.4	15	3.6	58	33	19	16

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)
	01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)									
NOV 1990 02...	113	--	<0.010	1.50	0.020	0.40	0.60	0.030	0.020	0.030
	01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)									
OCT 1990 30...	140	2.47	0.030	2.50	0.020	0.50	0.80	0.080	0.070	0.090
	01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)									
OCT 1990 30...	155	4.08	0.020	4.10	0.030	0.60	0.90	0.280	0.260	0.270
	01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)									
OCT 1990 05... 09...	179 --	-- --	<0.010 --	4.30 --	0.040 --	0.40 --	0.30 --	0.020 --	0.020 --	0.020 --
	01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)									
OCT 1990 05...	189	1.98	0.020	2.00	0.020	0.40	0.40	<0.020	<0.010	<0.010
	01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)									
OCT 1990 25...	163	2.57	0.030	2.60	0.090	0.70	0.80	0.270	0.210	0.210
	01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)									
OCT 1990 25...	539	17.9	0.080	18.0	0.250	1.8	2.1	3.50	3.20	3.20
	01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)									
OCT 1990 25...	357	8.37	0.030	8.40	0.090	1.2	1.6	1.30	1.20	1.10
	01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)									
NOV 1990 01...	199	5.28	0.020	5.30	0.020	0.60	0.80	0.020	<0.010	0.030
	01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)									
NOV 1990 09...	151	5.79	0.010	5.80	0.170	0.90	1.0	0.180	0.170	0.170
	01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)									
NOV 1990 09...	117	--	<0.010	3.90	0.050	0.40	0.50	<0.010	<0.010	<0.010
	01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)									
OCT 1990 31...	194	5.58	0.020	5.60	0.280	1.1	1.2	0.180	0.120	0.120
	01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)									
NOV 1990 01...	176	4.08	0.020	4.10	<0.010	0.60	0.70	0.050	0.030	0.030

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
	01475840 CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)									
NOV 1990 02...	<10	--	--	--	--	--	--	--	61	--
	01476430 RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)									
OCT 1990 30...	<10	--	--	--	--	--	--	--	58	--
	01476435 RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)									
OCT 1990 30...	<10	--	--	--	--	--	--	--	55	--
	01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)									
OCT 1990 05... 09...	<10 --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	5 --	-- --
	01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)									
OCT 1990 05...	10	--	--	--	--	--	--	--	34	--
	01476835 EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)									
OCT 1990 25...	10	<1	47	<0.5	<1.0	<5	<3	<10	63	<10
	01476840 TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)									
OCT 1990 25...	10	<1	46	<0.5	<1.0	<5	<3	20	59	<10
	01476848 EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)									
OCT 1990 25...	<10	<1	59	<0.5	<1.0	<5	<3	10	63	10
	01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)									
NOV 1990 01...	<10	--	--	--	--	--	--	--	18	--
	01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)									
NOV 1990 09...	<10	--	--	--	--	--	--	--	52	--
	01478220 WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)									
NOV 1990 09...	10	--	--	--	--	--	--	--	53	--
	01479680 WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)									
OCT 1990 31...	<10	<1	42	<0.5	<1.0	<5	<3	<10	50	<10
	01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)									
NOV 1990 01...	<10	<1	49	<0.5	<1.0	<5	<3	<10	33	<10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
01475840	CRUM CREEK AT WHITEHORSE, PA. (LAT 39 59 54N LONG 075 27 38W)								
NOV 1990 02...	6	--	--	--	--	--	--	--	--
01476430	RIDLEY CREEK AT GOSHENVILLE, PA. (LAT 39 59 28N LONG 075 32 40W)								
OCT 1990 30...	23	--	--	--	--	--	--	--	--
01476435	RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA. (LAT 39 58 52N LONG 075 31 02W)								
OCT 1990 30...	27	--	--	--	--	--	--	--	--
01476790	EAST BRANCH CHESTER CREEK AT GREEN HILL, PA. (LAT 39 59 49N LONG 075 35 40W)								
OCT 1990 05... 09...	67 --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
01476830	EAST BRANCH CHESTER CREEK AT MILLTOWN, PA. (LAT 39 58 21N LONG 075 32 57W)								
OCT 1990 05...	22	--	--	--	--	--	--	--	--
01476835	EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 26N LONG 075 32 30W)								
OCT 1990 25...	39	<10	130	<6	6	<0.1	<10	<1.0	5
01476840	TRIBUTARY GOOSE CREEK TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 56 04N LONG 075 33 31W)								
OCT 1990 25...	51	20	170	<6	38	<0.1	<10	<1.0	38
01476848	EAST BRANCH CHESTER CREEK BELOW GOOSE CREEK NEAR WEST CHESTER, PA (LAT 39 55 45N LONG 075 32 00W)								
OCT 1990 25...	39	10	150	<6	13	<0.1	<10	<1.0	15
01478120	EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA. (LAT 39 49 42N LONG 075 46 52W)								
NOV 1990 01...	12	--	--	--	--	--	--	--	--
01478190	EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA. (LAT 39 47 44N LONG 075 49 27W)								
NOV 1990 09...	20	--	--	--	--	--	--	--	--
01478220	WEST BRANCH WHITE CLAY CREEK NEAR CHESTERTOWN, PA. (LAT 39 45 56N LONG 075 47 47W)								
NOV 1990 09...	17	--	--	--	--	--	--	--	--
01479680	WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA (LAT 39 50 13N LONG 075 43 33W)								
OCT 1990 31...	35	<10	100	<6	<4	<0.1	<10	<1.0	4
01479800	EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11N LONG 075 41 29W)								
NOV 1990 01...	15	<10	130	<6	6	<0.1	<10	<1.0	<3

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD AS CACO3 (00902)
01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)										
OCT 1990 16...	1130	22	232	7.1	16.5	14.0	1.0	10.3	82	20
01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)										
OCT 1990 17...	1130	12	237	6.9	17.5	12.5	1.8	10.9	80	20
01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)										
OCT 1990 17...	0900	5.9	146	7.1	10.0	11.5	1.0	10.8	51	0
01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)										
OCT 1990 15...	1100	79	258	6.8	18.5	19.0	2.5	8.4	88	0
01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)										
OCT 1990 26...	0900	2.6	212	6.2	6.0	9.5	1.9	10.5	84	26
01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)										
OCT 1990 26...	1200	11	197	6.4	8.5	10.5	1.7	11.4	73	17
01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)										
NOV 1990 13...	1030	3.7	160	7.6	4.5	5.5	1.0	12.6	57	17
01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)										
OCT 1990 11...	1245	6.1	390	6.9	23.0	19.0	0.50	10.2	160	48
NOV 07...	0845	9.0	398	6.6	4.5	7.5	0.70	12.4	170	--
DEC 11...	1000	10	390	7.8	0.5	4.0	1.0	14.2	170	--
JAN 1991 24...	1030	28	354	7.2	2.5	2.5	--	14.1	--	--
FEB 11...	1145	19	320	6.8	2.5	4.5	0.40	16.1	140	--
MAR 21...	1135	24	353	7.1	11.5	8.5	1.4	14.2	150	--
APR 03...	1055	23	323	7.4	10.5	8.5	2.0	14.2	130	--
MAY 09...	1100	21	295	7.4	14.0	14.0	1.1	11.3	140	--
JUN 07...	1215	9.2	325	8.0	19.5	18.5	0.70	13.7	130	--
JUL 12...	0915	7.7	377	7.6	22.0	19.0	1.1	9.9	160	--
01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)										
OCT 1990 15...	1300	86	295	6.6	22.0	19.5	1.5	8.8	100	26
01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)										
OCT 1990 15...	0930	201	242	6.8	18.5	19.0	3.7	7.6	80	4

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
	01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA (LAT 39 59 36N LONG 075 49 41W)										
OCT 1990 16...	20	7.7	8.1	0.4	17	4.8	62	17	16	--	16
	01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)										
OCT 1990 17...	20	7.4	9.0	0.4	19	2.7	60	16	17	--	9.7
	01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)										
OCT 1990 17...	12	5.1	5.1	0.3	17	2.0	51	7.6	9.6	--	11
	01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)										
OCT 1990 15...	22	7.9	12	0.6	22	4.3	88	18	19	--	13
	01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)										
OCT 1990 26...	22	7.0	8.0	0.4	17	3.0	58	21	17	--	23
	01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)										
OCT 1990 26...	19	6.1	7.9	0.4	18	3.1	56	15	12	--	21
	01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)										
NOV 1990 13...	16	4.1	7.4	0.4	21	1.6	40	13	11	--	24
	01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)										
OCT 1990 11...	32	20	12	0.4	14	3.1	114	43	24	<0.10	5.8
NOV 07...	37	19	12	0.4	13	3.0	115	39	26	<0.10	4.4
DEC 11...	39	17	13	0.4	14	2.4	114	38	26	0.10	6.1
JAN 1991 24...	--	--	--	--	--	--	116	--	--	--	--
FEB 11...	35	12	14	0.5	18	1.5	95	21	27	<0.10	4.9
MAR 21...	35	14	15	0.5	18	1.9	98	33	31	<0.10	4.2
APR 03...	32	13	12	0.5	16	1.7	93	28	26	<0.10	5.4
MAY 09...	31	14	12	0.4	16	1.8	88	30	24	<0.10	5.5
JUN 07...	29	15	11	0.4	15	1.7	90	39	26	<0.10	6.0
JUL 12...	33	19	12	0.4	14	2.6	104	50	26	--	5.3
	01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)										
OCT 1990 15...	--	25	9.7	15	0.6	23	4.0	77	21	22	12
	01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)										
OCT 1990 15...	--	19	7.8	11	0.5	22	4.5	76	19	18	12

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE SOLVED (MG/L) (00618)	NITRO- GEN, NITRITE SOLVED (MG/L) (00613)	NITRO- GEN, NO2+NO3 SOLVED (MG/L) (00631)	NITRO- GEN, AMMONIA SOLVED (MG/L) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	PHOS- PHORUS TOTAL (MG/L) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) (00671)
01480434 WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA. (LAT 39 59 36N LONG 075 49 41W)											
OCT 1990 16...	--	138	2.39	0.010	2.40	0.030	0.50	0.60	0.060	0.050	0.040
01480629 BUCK RUN AT DOE RUN, PA. (LAT 39 55 46N LONG 075 49 24W)											
OCT 1990 17...	--	138	4.59	0.010	4.60	0.020	0.40	0.90	0.070	0.070	0.050
01480632 DOE RUN AT SPRINGDELL, PA. (LAT 39 54 25N LONG 075 49 42W)											
OCT 1990 17...	--	101	--	<0.010	4.10	<0.010	0.50	0.80	0.020	0.020	<0.010
01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34N LONG 075 39 47W)											
OCT 1990 15...	--	162	2.78	0.020	2.80	0.030	0.60	0.60	0.140	0.100	0.110
01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41N LONG 075 51 14W)											
OCT 1990 26...	--	159	5.18	0.020	5.20	0.030	0.80	0.80	0.060	0.040	0.040
01480653 EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA. (LAT 40 05 48N LONG 075 46 44W)											
OCT 1990 26...	--	133	3.28	0.020	3.30	0.020	0.80	1.6	0.040	0.030	0.040
01480656 INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 33N LONG 075 46 52W)											
NOV 1990 13...	--	113	2.59	0.010	2.60	0.060	0.40	0.30	0.040	0.030	0.040
01480903 VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA. (LAT 39 59 00N LONG 075 39 55W)											
OCT 1990 11...	220	219	--	<0.010	2.40	<0.020	0.20	0.50	0.020	<0.010	<0.010
NOV 07...	213	222	2.78	0.020	2.80	0.060	0.40	0.40	0.060	0.040	0.050
DEC 11...	219	223	2.99	0.010	3.00	0.010	0.20	0.50	0.010	0.010	<0.010
JAN 1991 24...	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	183	184	--	<0.010	2.50	<0.010	--	--	--	--	<0.010
MAR 21...	222	204	2.49	0.010	2.50	<0.010	--	--	--	--	<0.010
APR 03...	168	185	2.49	0.010	2.50	<0.010	--	--	--	--	<0.010
MAY 09...	202	182	2.38	0.020	2.40	0.020	--	--	--	--	0.010
JUN 07...	178	192	2.39	0.010	2.40	<0.010	--	--	--	--	<0.010
JUL 12...	--	222	--	<0.010	2.50	0.020	--	--	--	--	0.010
01480950 EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 35N LONG 075 38 54W)											
OCT 1990 15...	--	166	2.18	0.020	2.20	0.040	0.40	0.70	0.320	0.320	0.340
01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA (LAT 39 51 15N LONG 075 35 58W)											
OCT 1990 15...	--	147	1.98	0.020	2.00	0.050	0.80	0.60	0.190	0.140	0.150

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1990 18...	1245	4.7	180	6.5	22.5	16.0	1.4	9.8	56	28
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1990 29...	0930	8.9	191	7.7	6.5	7.5	2.8	12.1	60	18
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1990 18...	13	5.8	7.2	0.4	20	3.6	28	7.4	15	11
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1990 29...	13	6.6	9.1	0.5	24	2.8	42	9.1	19	13
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1990 18...	109	6.18	0.020	6.20	0.010	0.70	1.7	0.420	0.400	0.410
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1990 29...	128	6.68	0.020	6.70	0.070	0.60	1.2	0.090	0.070	0.080
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)										
OCT 1990 18...	<10	<1	23	<0.5	<1.0	<5	<3	<10	27	<10
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)										
OCT 1990 29...	10	<1	29	<0.5	<1.0	<5	<3	<10	37	<10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
01494900 EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA (LAT 39 48 45N LONG 075 54 04W)									
OCT 1990 18...	10	<10	83	<6	<4	0.1	<10	1.0	3
01494950 WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA (LAT 39 46 45N LONG 075 55 27W)									
OCT 1990 29...	32	<10	100	<6	<4	<0.1	<10	<1.0	<3

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY WAT WH TOT FET DIS- FIELD MG/L AS CACO3 (00410)	FLUO- RIDE, DIS- SOLVED AS F) (00950)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	
403049075091100 TC-1 RAPP CREEK NEAR BEAVER RUN ROAD NEAR REVERE, PA (LAT 40 30 49N LONG 075 09 11W)										
JUN 1991	06...	0910	0.17	165	6.7	17.0	8.0	68	<0.10	106
AUG	28...	0910	0.06	290	7.5	21.0	7.2	56	<0.10	135
402950075082300 TC-2 BEAVER CREEK NEAR BEAVER RUN ROAD NEAR CLAY RIDGE, PA (LAT 40 29 50N LONG 075 08 23W)										
JUN 1991	06...	1100	0.21	195	7.3	16.0	8.9	68	<0.10	140
AUG	28...	1010	0.01	210	7.4	20.0	6.8	70	<0.10	172
402840075085000 TC-3 TINICUM CREEK AT SHEEP HOLE ROAD NEAR OTTSVILLE, PA (LAT 40 28 40N LONG 075 08 50W)										
JUN 1991	06...	0730	0.61	240	7.2	14.5	8.8	90	<0.10	166
AUG	28...	0735	0.31	400	7.7	20.5	5.0	94	<0.10	276
402808075063400 TC-4 TINICUM CREEK NEAR MUNICIPAL ROAD NEAR SUNDALE, PA (LAT 40 28 08N LONG 075 06 34W)										
JUN 1991	06...	1635	0.92	275	7.5	19.5	11.3	70	<0.10	166
AUG	28...	1615	0.32	325	8.6	24.5	11.0	79	<0.10	232
402908075042700 TC-5 TINICUM CREEK NEAR TINICUM CREEK ROAD NEAR SMITHTOWN, PA (LAT 40 29 08N LONG 075 04 27W)										
JUN 1991	06...	1400	0.88	240	9.1	21.5	11.6	68	<0.10	138
AUG	28...	1310	0.54	300	9.0	24.0	10.9	70	<0.10	198
402910075042600 TC-6 LITTLE TINICUM CREEK NEAR TINICUM CREEK ROAD NEAR SMITHTOWN, PA (LAT 40 29 10N LONG 075 04 26W)										
JUN 1991	06...	1315	0.08	250	7.3	17.0	9.6	50	<0.10	188
AUG	28...	1210	0.03	330	7.6	23.0	7.7	64	<0.10	219
402852075041400 TC-7 SMITHTOWN CREEK NEAR SMITHTOWN ROAD NEAR SMITHTOWN, PA (LAT 40 28 52N LONG 075 04 14W)										
JUN 1991	06...	1505	0.09	235	7.9	15.5	8.2	78	<0.10	134
AUG	28...	1440	0.28	290	7.6	20.0	6.4	102	<0.10	197

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	PHENOLS TOTAL (UG/L) (32730)
403049075091100 TC-1 RAPP CREEK NEAR BEAVER RUN ROAD NEAR REVERE, PA (LAT 40 30 49N LONG 075 09 11W)								
JUN 1991								
06...	0.030	<0.010	0.190	<0.010	870	400	210	3
AUG								
28...	0.010	<0.010	0.250	<0.010	520	360	180	2
402950075082300 TC-2 BEAVER CREEK NEAR BEAVER RUN ROAD NEAR CLAY RIDGE, PA (LAT 40 29 50N LONG 075 08 23W)								
JUN 1991								
06...	0.020	<0.010	0.360	0.010	800	110	550	<1
AUG								
28...	<0.010	<0.010	0.470	<0.010	970	140	510	4
402840075085000 TC-3 TINICUM CREEK AT SHEEP HOLE ROAD NEAR OTTSVILLE, PA (LAT 40 28 40N LONG 075 08 50W)								
JUN 1991								
06...	0.020	<0.010	0.600	<0.010	50	<10	40	<1
AUG								
28...	<0.010	<0.010	0.140	<0.010	<10	10	10	2
402808075063400 TC-4 TINICUM CREEK NEAR MUNICIPAL ROAD NEAR SUNDALE, PA (LAT 40 28 08N LONG 075 06 34W)								
JUN 1991								
06...	0.020	<0.010	0.200	<0.010	70	<10	40	1
AUG								
28...	<0.010	<0.010	0.097	0.040	<10	<10	20	3
402908075042700 TC-5 TINICUM CREEK NEAR TINICUM CREEK ROAD NEAR SMITHTOWN, PA (LAT 40 29 08N LONG 075 04 27W)								
JUN 1991								
06...	0.010	<0.010	<0.050	<0.010	10	<10	<10	2
AUG								
28...	<0.010	<0.010	<0.050	<0.010	110	20	30	3
402910075042600 TC-6 LITTLE TINICUM CREEK NEAR TINICUM CREEK ROAD NEAR SMITHTOWN, PA (LAT 40 29 10N LONG 075 04 26W)								
JUN 1991								
06...	0.020	<0.010	1.00	0.040	<10	<10	<10	1
AUG								
28...	<0.010	<0.010	0.390	0.020	60	<10	<10	3
402852075041400 TC-7 SMITHTOWN CREEK NEAR SMITHTOWN ROAD NEAR SMITHTOWN, PA (LAT 40 28 52N LONG 075 04 14W)								
JUN 1991								
06...	0.010	<0.010	1.30	0.040	70	<10	70	1
AUG								
28...	<0.010	<0.010	0.870	0.030	520	30	530	3

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)										
OCT 1990										
10...	0900	0.10	73	7.7	23.0	17.5	--	8.2	--	--
NOV										
08...	0915	0.06	70	7.9	6.0	6.0	10	12.4	17	2.7
JAN 1991										
24...	1530	0.19	70	6.8	2.5	4.0	--	12.9	--	--
FEB										
05...	0815	0.17	75	6.6	3.0	4.0	--	12.9	--	--
MAR										
20...	1320	0.19	67	7.6	9.5	13.5	--	11.4	--	--
APR										
03...	1450	0.29	65	6.9	11.5	14.5	--	10.8	--	--
MAY										
10...	1320	0.27	67	7.4	20.0	15.5	--	10.0	--	--
JUN										
06...	1420	0.16	68	6.9	17.5	17.0	--	9.5	--	--
JUL										
10...	0840	0.10	70	7.3	21.5	16.5	4.5	8.8	18	2.5
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)										
OCT 1990										
10...	0945	0.19	590	6.6	22.5	19.0	--	8.7	--	--
NOV										
08...	0830	0.15	590	7.1	4.5	5.5	4.7	11.4	210	47
JAN 1991										
24...	1600	0.40	580	7.6	1.5	3.0	--	14.0	--	--
FEB										
05...	0730	0.38	570	7.5	3.5	3.0	--	12.5	--	--
MAR										
20...	1350	0.48	595	7.9	10.0	14.0	--	13.6	--	--
APR										
03...	1530	0.64	510	8.0	12.0	16.0	--	13.3	--	--
MAY										
10...	1350	0.69	515	7.9	23.5	20.0	--	11.0	--	--
JUN										
06...	1315	0.10	438	8.4	19.0	24.0	2.5	12.0	140	30
JUL										
10...	0940	0.28	565	7.7	23.0	23.0	3.0	9.3	190	41
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)										
OCT 1990										
10...	1030	0.41	460	6.6	22.5	17.5	8.0	8.8	200	63
NOV										
07...	1345	0.33	439	7.3	9.5	10.0	0.60	11.7	200	63
DEC										
10...	1315	0.36	440	7.8	10.0	7.5	0.30	12.9	200	61
JAN 1991										
24...	1500	1.2	428	7.2	2.5	6.0	--	11.9	--	--
FEB										
04...	1340	0.56	419	7.8	15.0	10.5	--	13.0	--	--
MAR										
20...	1240	0.94	420	7.1	14.5	12.5	--	12.5	--	--
APR										
02...	1230	0.86	380	7.2	8.5	10.5	--	12.5	--	--
MAY										
08...	1315	1.0	397	7.3	18.0	16.5	--	10.6	--	--
JUN										
06...	1200	0.38	420	6.9	21.0	17.0	1.0	9.7	180	55
JUL										
10...	0730	0.37	440	7.6	19.5	16.5	1.0	8.6	200	60

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)										
OCT 1990										
10...	--	--	--	--	--	49	--	--	--	--
NOV										
08...	2.5	4.6	0.5	33	2.7	40	3.0	6.0	8.1	35
JAN 1991										
24...	--	--	--	--	--	12	--	--	--	--
FEB										
05...	--	--	--	--	--	12	--	--	--	--
MAR										
20...	--	--	--	--	--	110	--	--	--	--
APR										
03...	--	--	--	--	--	110	--	--	--	--
MAY										
10...	--	--	--	--	--	10	--	--	--	--
JUN										
06...	--	--	--	--	--	10	--	--	--	--
JUL										
10...	2.8	4.5	0.5	33	1.5	12	4.4	7.7	7.9	--
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)										
OCT 1990										
10...	--	--	--	--	--	157	--	--	--	--
NOV										
08...	23	31	0.9	24	2.4	189	26	71	4.9	312
JAN 1991										
24...	--	--	--	--	--	104	--	--	--	--
FEB										
05...	--	--	--	--	--	112	28	95	--	--
MAR										
20...	--	--	--	--	--	118	21	110	--	--
APR										
03...	--	--	--	--	--	106	27	89	--	--
MAY										
10...	--	--	--	--	--	109	20	82	--	--
JUN										
06...	16	33	1	34	1.2	88	22	80	7.0	251
JUL										
10...	22	28	0.9	24	2.1	142	23	75	7.3	--
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)										
OCT 1990										
10...	11	12	0.4	11	1.7	128	21	47	9.7	263
NOV										
07...	10	11	0.3	11	1.6	157	19	46	9.7	244
DEC										
10...	11	12	0.4	12	1.4	142	22	46	8.5	257
JAN 1991										
24...	--	--	--	--	--	128	--	--	--	--
FEB										
04...	--	--	--	--	--	132	22	48	--	--
MAR										
20...	--	--	--	--	--	131	--	51	--	--
APR										
02...	--	--	--	--	--	107	--	42	--	--
MAY										
08...	--	--	--	--	--	108	--	40	--	--
JUN										
06...	11	14	0.5	14	1.2	130	18	43	9.6	249
JUL										
10...	11	12	0.4	12	1.1	136	18	43	9.9	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN NITRATE DIS- SOLVED (MG/L) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) (00608)	NITRO- GEN,AM- MONIA + DIS- SOLVED (MG/L) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	PHOS- PHORUS TOTAL (MG/L) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) (00666)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDES FORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)									
OCT 1990									
10...	--	--	<0.010	0.700	0.030	0.40	0.40	0.090	0.020
NOV									
08...	57	--	<0.010	0.700	0.050	0.30	0.30	0.050	0.020
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
05...	--	--	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
MAY									
10...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
JUL									
10...	43	--	<0.010	0.890	0.040	--	--	--	--
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)									
OCT 1990									
10...	--	1.77	0.030	1.80	0.010	0.30	0.40	0.010	<0.010
NOV									
08...	332	2.28	0.020	2.30	0.060	0.40	0.40	<0.010	<0.010
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
05...	--	2.19	0.010	2.20	<0.010	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
MAY									
10...	--	1.99	0.010	2.00	0.050	--	--	--	--
JUN									
06...	249	1.28	0.020	1.30	0.010	--	--	--	--
JUL									
10...	299	2.07	0.030	2.10	0.020	--	--	--	--
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)									
OCT 1990									
10...	250	--	<0.010	1.60	<0.010	0.40	0.40	0.030	<0.010
NOV									
07...	262	--	<0.010	1.60	0.050	0.40	0.50	<0.010	<0.010
DEC									
10...	256	--	<0.010	1.90	0.020	0.20	0.40	0.010	<0.010
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
APR									
02...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	--	<0.010	1.90	0.020	--	--	--	--
JUN									
06...	239	1.99	0.010	2.00	0.010	--	--	--	--
JUL									
10...	245	--	<0.010	1.90	0.020	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
400226075360800 WVC-1 UNNAMED TRIBUTARY TO VALLEY CREEK AT SWEDSFORD ROAD NEAR EXTON, PA (LAT 40 02 26N LONG 075 36 08W)									
OCT 1990									
10...	0.020	--	<10	--	1	--	--	--	<10
NOV									
08...	0.010	<0.10	<10	--	<1	67	6	17	<4
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
05...	--	--	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
MAY									
10...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
JUL									
10...	0.010	--	--	0.020	--	45	8	10	<10
400212075355000 WVC-2 VALLEY CREEK AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR EXTON, PA (LAT 40 02 12N LONG 075 35 50W)									
OCT 1990									
10...	<0.010	--	70	--	3	--	--	--	2600
NOV									
08...	<0.010	0.30	70	--	5	9	14	110	2200
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
05...	<0.010	<0.10	40	--	--	--	--	--	800
MAR									
20...	--	0.10	40	0.71	--	--	--	--	1700
APR									
03...	--	0.10	50	--	1	--	--	--	1500
MAY									
10...	<0.010	<0.10	40	--	1	--	--	--	1400
JUN									
06...	<0.010	<0.10	40	--	<1	14	12	--	1500
JUL									
10...	0.020	--	70	1.5	1	21	42	80	4800
400155075363800 WVC-3 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR SHIP ROAD NEAR EXTON, PA (LAT 40 01 55N LONG 075 36 38W)									
OCT 1990									
10...	250	--	<0.010	1.60	<0.010	0.40	0.40	0.030	<0.010
NOV									
07...	262	--	<0.010	1.60	0.050	0.40	0.50	<0.010	<0.010
DEC									
10...	256	--	<0.010	1.90	0.020	0.20	0.40	0.010	<0.010
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
APR									
02...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	--	<0.010	1.90	0.020	--	--	--	--
JUN									
06...	239	1.99	0.010	2.00	0.010	--	--	--	--
JUL									
10...	245	--	<0.010	1.90	0.020	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)										
OCT 1990										
10...	1115	0.12	400	6.9	23.5	15.5	10	9.3	200	40
NOV										
08...	1115	0.23	391	7.1	6.0	9.5	16	11.1	200	40
DEC										
10...	1145	0.19	389	7.9	10.5	9.5	12	11.1	210	41
JAN 1991										
24...	1420	0.78	349	7.7	2.5	7.5	--	11.2	--	--
FEB										
04...	1300	0.64	360	7.8	14.5	12.0	--	11.4	--	--
MAR										
20...	1150	0.62	344	7.3	10.5	12.5	--	10.8	--	--
APR										
02...	1140	0.70	333	7.4	7.5	11.5	--	11.6	--	--
MAY										
10...	1240	0.69	340	7.7	20.0	14.5	--	11.5	--	--
JUN										
07...	1000	0.42	380	7.4	19.5	13.5	2.7	10.6	190	40
JUL										
10...	1030	0.25	400	8.0	25.0	15.0	4.0	9.8	210	40
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREET NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)										
OCT 1990										
10...	1200	0.33	498	6.6	24.0	19.0	4.5	9.1	220	62
NOV										
08...	1020	0.37	484	7.1	6.5	8.5	1.9	10.9	220	60
DEC										
10...	1230	0.57	510	7.7	11.5	7.5	1.0	11.7	230	64
JAN 1991										
24...	1335	2.1	392	7.2	4.0	5.0	--	13.5	--	--
FEB										
04...	1210	1.6	499	7.7	17.0	8.0	1.0	14.6	190	50
MAR										
20...	1100	1.9	464	7.1	9.5	10.0	2.0	13.0	170	44
APR										
02...	1045	2.2	444	7.3	7.5	9.5	5.1	13.3	170	43
MAY										
10...	1200	1.7	436	7.4	21.0	16.0	2.1	11.0	170	44
JUN										
07...	1045	0.85	460	7.4	22.5	16.5	2.0	9.6	200	55
JUL										
11...	1300	0.64	480	7.4	30.5	22.0	2.0	8.9	200	55
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)										
OCT 1990										
10...	1410	0.85	364	6.9	22.5	20.0	10	8.0	170	44
NOV										
06...	1345	0.94	416	7.2	15.5	12.0	5.5	10.0	180	48
DEC										
11...	1300	1.2	425	7.2	3.0	4.5	1.9	13.4	200	52
JAN 1991										
23...	1345	4.6	419	7.2	0.5	3.5	--	13.5	--	--
FEB										
05...	0915	3.6	405	7.6	8.0	5.0	3.0	12.6	180	44
MAR										
20...	1010	4.4	411	7.1	9.5	8.0	4.0	12.6	170	42
APR										
02...	0940	4.9	354	7.4	5.5	7.5	4.7	12.5	160	39
MAY										
08...	1230	4.5	352	7.6	16.5	15.0	4.3	10.9	150	37
JUN										
05...	1210	1.9	369	7.0	16.0	17.5	8.5	9.0	160	39
JUL										
11...	1120	1.2	400	7.7	27.5	20.5	12	8.4	170	43

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)										
OCT 1990										
10...	24	3.2	0.1	3	1.8	180	18	9.6	8.2	182
NOV										
08...	25	3.3	0.1	3	2.1	174	13	8.2	8.3	239
DEC										
10...	25	3.3	0.1	3	1.7	162	18	9.5	7.9	216
JAN 1991										
24...	--	--	--	--	--	146	--	--	--	--
FEB										
04...	--	--	--	--	--	145	--	--	--	--
MAR										
20...	--	--	--	--	--	140	--	8.9	--	--
APR										
02...	--	--	--	--	--	142	--	--	--	--
MAY										
10...	--	--	--	--	--	144	--	--	--	--
JUN										
07...	23	2.8	0.1	3	1.5	142	17	9.0	7.9	221
JUL										
10...	26	3.4	0.1	3	1.7	164	16	9.9	8.1	--
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREET NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)										
OCT 1990										
10...	16	16	0.5	13	2.1	151	25	55	8.4	287
NOV										
08...	16	15	0.4	13	2.0	147	23	51	8.0	275
DEC										
10...	16	15	0.4	13	1.6	170	24	48	8.5	287
JAN 1991										
24...	--	--	--	--	--	130	--	--	--	--
FEB										
04...	16	26	0.8	23	1.8	129	19	55	5.8	276
MAR										
20...	14	29	1	27	2.1	122	19	66	4.9	248
APR										
02...	15	23	0.8	23	1.9	118	21	52	5.5	239
MAY										
10...	14	18	0.6	19	1.7	124	17	47	5.8	239
JUN										
07...	16	16	0.5	15	1.6	151	25	49	8.5	262
JUL										
11...	16	17	0.5	15	1.5	164	19	48	8.3	--
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)										
OCT 1990										
10...	14	15	0.5	16	2.4	147	20	35	7.4	226
NOV										
06...	14	14	0.5	14	2.3	168	22	35	7.6	230
DEC										
11...	16	15	0.5	14	1.6	150	24	34	7.5	234
JAN 1991										
23...	--	--	--	--	--	115	--	--	--	--
FEB										
05...	16	18	0.6	18	1.5	134	22	39	6.3	229
MAR										
20...	15	22	0.7	22	1.8	118	19	45	5.7	232
APR										
02...	15	17	0.6	19	1.6	124	19	35	6.2	213
MAY										
08...	13	16	0.6	19	1.6	112	15	28	6.0	215
JUN										
05...	14	15	0.5	17	1.5	135	17	32	7.1	205
JUL										
11...	16	14	0.5	15	1.3	130	22	40	6.1	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN NITRATE DIS- SOLVED (MG/L) (AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)									
OCT 1990									
10...	241	--	<0.010	6.30	0.010	0.50	0.90	0.060	0.040
NOV									
08...	233	6.29	0.010	6.30	0.060	0.40	0.70	0.070	0.030
DEC									
10...	232	--	<0.010	6.30	0.040	0.70	0.60	0.090	0.030
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	<0.010	5.20	<0.010	--	--	--	--
MAR									
20...	--	--	<0.010	4.90	<0.010	--	--	--	--
APR									
02...	--	--	<0.010	4.80	<0.010	--	--	--	--
MAY									
10...	--	--	<0.010	5.20	0.020	--	--	--	--
JUN									
07...	214	6.29	0.010	6.30	0.010	--	--	--	--
JUL									
10...	230	--	<0.010	6.00	<0.010	--	--	--	--
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREET NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)									
OCT 1990									
10...	283	--	<0.010	1.70	0.020	0.40	0.30	0.070	<0.010
NOV									
08...	272	--	<0.010	1.80	0.060	0.20	0.40	0.010	0.010
DEC									
10...	289	--	<0.010	2.30	0.020	0.30	0.30	0.020	<0.010
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	262	--	<0.010	2.40	<0.010	--	--	--	--
MAR									
20...	260	1.79	0.010	1.80	<0.010	--	--	--	--
APR									
02...	241	1.99	0.010	2.00	<0.010	--	--	--	--
MAY									
10...	231	1.99	0.010	2.00	0.030	--	--	--	--
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)									
OCT 1990									
10...	235	1.97	0.030	2.00	0.040	0.40	0.50	0.040	<0.010
NOV									
06...	253	2.07	0.030	2.10	0.090	0.60	0.60	0.060	0.020
DEC									
11...	252	--	<0.010	2.70	0.020	0.40	0.50	0.030	<0.010
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
05...	241	--	<0.010	3.00	0.010	--	--	--	--
MAR									
20...	232	2.39	0.010	2.40	0.010	--	--	--	--
APR									
02...	218	--	<0.010	2.50	0.020	--	--	--	--
MAY									
08...	194	2.29	0.010	2.30	0.040	--	--	--	--
JUN									
05...	217	2.28	0.020	2.30	0.080	--	--	--	--
JUL									
11...	232	2.38	0.020	2.40	0.050	--	--	--	--
JUN									
07...	271	2.09	0.010	2.10	0.020	--	--	--	--
JUL									
11...	272	--	<0.010	1.70	<0.010	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
400205075370700 WVC-4 UNNAMED TRIBUTARY TO VALLEY CREEK AT BROOKVIEW STREET NEAR EXTON, PA (LAT 40 02 05N LONG 075 37 07W)									
OCT 1990									
10...	<0.010	<0.10	<10	0.020	<1	12	9	22	5
NOV									
08...	0.030	0.20	<10	--	<1	10	9	21	6
DEC									
10...	0.030	<0.10	<10	--	<1	8	8	--	4
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	0.010	--	--	--	--	--	--	--	--
MAR									
20...	0.020	--	--	--	--	--	--	--	--
APR									
02...	0.010	--	--	--	--	--	--	--	--
MAY									
10...	0.020	--	--	--	--	--	--	--	--
JUN									
07...	<0.010	<0.10	--	--	--	7	3	--	<4
JUL									
10...	0.020	--	--	0.030	--	7	8	20	<10
400157075370100 WVC-5 VALLEY CREEK AT LAKESIDE STREET NEAR EXTON, PA (LAT 40 01 57N LONG 075 37 01W)									
OCT 1990									
10...	<0.010	<0.10	20	0.17	<1	9	11	160	310
NOV									
08...	0.010	0.30	30	--	<1	12	6	160	340
DEC									
10...	<0.010	0.10	20	--	<1	6	7	--	27
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	<0.010	<0.10	--	--	--	54	12	--	170
MAR									
20...	<0.010	<0.10	--	--	--	22	15	--	290
APR									
02...	<0.010	<0.10	--	--	--	19	18	--	300
MAY									
10...	<0.010	<0.10	--	--	--	16	14	--	330
JUN									
07...	<0.010	<0.10	--	--	--	17	17	--	330
JUL									
11...	<0.010	--	--	0.24	--	8	7	140	490
400152075371600 WVC-6 VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 52N LONG 075 37 16W)									
OCT 1990									
10...	<0.010	<0.10	20	0.10	<1	22	34	100	210
NOV									
06...	0.010	<0.10	20	--	<1	35	39	110	110
DEC									
11...	<0.010	0.10	20	--	<1	10	23	--	19
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
05...	<0.010	0.40	30	--	--	13	23	--	69
MAR									
20...	<0.010	<0.10	40	--	--	18	33	--	100
APR									
02...	<0.010	<0.10	30	--	--	16	28	--	140
MAY									
08...	<0.010	<0.10	20	--	<1	20	23	--	96
JUN									
05...	<0.010	<0.10	20	--	<1	20	34	--	180
JUL									
11...	0.010	--	20	0.10	--	15	34	100	170

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)										
OCT 1990										
10...	1315	0.39	362	7.1	25.0	19.5	--	8.5	--	--
NOV										
06...	1245	0.35	358	6.8	13.5	11.5	2.8	10.5	150	40
JAN 1991										
23...	1310	1.6	339	7.2	0.0	3.0	--	13.7	--	--
FEB										
05...	1015	0.94	340	7.4	11.5	5.5	--	13.8	--	--
MAR										
20...	0900	1.4	340	7.2	8.5	7.5	--	12.9	--	--
APR										
02...	0845	1.7	312	7.1	5.5	7.0	--	12.9	--	--
MAY										
08...	1140	1.4	318	7.4	16.0	14.5	--	10.5	--	--
JUN										
05...	1120	0.64	330	7.6	18.5	16.0	3.0	10.0	130	35
JUL										
11...	1205	0.34	346	7.5	28.5	19.5	3.2	8.3	140	37
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)										
OCT 1990										
11...	0830	0.74	361	6.4	21.5	18.0	1.0	8.5	140	34
NOV										
06...	1145	1.1	340	7.3	10.5	12.5	0.40	12.2	130	32
DEC										
10...	1045	1.6	356	7.8	8.0	6.5	1.5	12.7	140	34
JAN 1991										
23...	1140	2.4	337	7.2	2.5	2.0	--	15.0	--	--
FEB										
05...	1400	1.9	315	8.5	19.0	11.0	1.5	15.6	130	30
MAR										
21...	1550	2.3	328	7.3	10.5	10.5	1.0	11.5	130	30
APR										
02...	1320	2.6	316	8.2	8.5	11.0	1.5	13.9	120	29
MAY										
10...	1110	2.0	314	8.3	20.5	16.0	1.7	11.9	140	31
JUN										
05...	1330	1.2	330	7.3	20.0	19.0	1.0	10.2	130	31
JUL										
09...	1330	0.85	338	8.1	25.5	24.5	1.5	9.1	130	31
400116075383800 WVC-9 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)										
OCT 1990										
11...	0930	2.0	428	6.4	23.0	18.5	1.4	7.0	190	45
NOV										
06...	1015	3.4	381	6.8	11.0	12.5	2.0	9.6	160	40
DEC										
10...	0830	3.4	419	7.6	8.0	4.5	1.0	12.1	190	48
JAN 1991										
23...	1000	8.2	442	7.2	-1.5	1.0	--	14.8	--	--
FEB										
04...	1105	6.6	418	8.4	15.5	5.5	1.2	17.1	180	44
MAR										
21...	0945	8.0	422	7.2	9.5	8.0	2.4	14.1	170	43
APR										
03...	0900	8.6	415	7.4	6.0	6.5	1.5	15.2	170	43
MAY										
10...	0945	7.5	400	7.4	19.5	13.5	1.4	9.8	170	42
JUN										
05...	0920	3.4	399	7.5	15.5	16.5	2.3	9.2	170	41
JUL										
11...	0915	2.0	405	7.4	26.0	19.5	1.4	8.7	180	43

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)										
OCT 1990										
10...	--	--	--	--	--	117	--	--	--	--
NOV										
06...	11	17	0.6	20	2.3	120	19	32	7.7	192
JAN 1991										
23...	--	--	--	--	--	90	--	--	--	--
FEB										
05...	--	--	--	--	--	92	23	32	--	--
MAR										
20...	--	--	--	--	--	104	--	33	--	--
APR										
02...	--	--	--	--	--	88	--	30	--	--
MAY										
08...	--	--	--	--	--	95	--	29	--	--
JUN										
05...	9.9	16	0.6	21	1.2	92	21	32	7.7	176
JUL										
11...	11	17	0.6	21	1.1	111	18	30	7.9	--
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)										
OCT 1990										
11...	14	14	0.5	17	3.3	116	20	35	10	208
NOV										
06...	13	12	0.5	16	3.6	131	19	28	9.8	176
DEC										
10...	14	13	0.5	16	2.4	106	22	34	12	196
JAN 1991										
23...	--	--	--	--	--	78	--	--	--	--
FEB										
05...	13	15	0.6	20	2.3	76	22	39	8.5	176
MAR										
21...	13	16	0.6	21	2.6	90	20	37	7.2	184
APR										
02...	12	14	0.6	20	2.5	75	19	32	5.5	174
MAY										
10...	14	14	0.5	18	3.0	80	18	33	7.8	181
JUN										
05...	13	14	0.5	19	2.3	92	19	38	13	190
JUL										
09...	13	13	0.5	17	2.8	90	20	35	10	--
400116075383800 WVC-9 VALLEY CREEK NEAR CLOVER MILL ROAD, NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)										
OCT 1990										
11...	18	15	0.5	15	2.8	135	22	35	7.0	238
NOV										
06...	15	13	0.4	15	3.2	151	21	29	5.7	205
DEC										
10...	18	14	0.4	13	2.1	138	24	34	8.2	239
JAN 1991										
23...	--	--	--	--	--	137	--	--	--	--
FEB										
04...	16	17	0.6	17	1.8	130	20	45	5.6	246
MAR										
21...	16	17	0.6	17	1.8	144	21	39	4.7	236
APR										
03...	16	16	0.5	17	1.8	132	21	34	4.9	225
MAY										
10...	16	14	0.5	15	1.9	120	17	32	6.2	227
JUN										
05...	16	14	0.5	15	1.7	135	20	36	8.3	215
JUL										
11...	18	14	0.5	14	1.8	148	22	40	5.8	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)									
OCT 1990									
10...	--	--	<0.010	1.60	0.010	0.20	0.30	0.020	<0.010
NOV 06...	208	1.58	0.020	1.60	0.050	0.30	0.30	0.020	<0.010
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--	--
APR 02...	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	<0.010	2.10	0.020	--	--	--	--
JUN 05...	187	1.99	0.010	2.00	0.020	--	--	--	--
JUL 11...	197	--	<0.010	1.90	0.020	--	--	--	--
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)									
OCT 1990									
11...	209	1.99	0.010	2.00	<0.010	0.30	0.30	0.110	0.100
NOV 06...	207	2.38	0.020	2.40	0.060	0.30	0.70	0.170	0.190
DEC 10...	208	--	<0.010	2.80	0.020	0.40	0.50	0.170	0.090
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB 05...	184	--	<0.010	2.00	<0.010	--	--	--	--
MAR 21...	189	1.99	0.010	2.00	<0.010	--	--	--	--
APR 02...	169	--	<0.010	2.30	<0.010	--	--	--	--
MAY 10...	179	2.28	0.020	2.30	0.040	--	--	--	--
JUN 05...	195	2.09	0.010	2.10	<0.010	--	--	--	--
JUL 09...	188	1.99	0.010	2.00	0.020	--	--	--	--
400116075383800 WVC-9 VALLEY CREEK NEAR CLOVER MILL ROAD, NEAR EXTON, PA (LAT 40 01 16N LONG 075 38 38W)									
OCT 1990									
11...	234	1.77	0.030	1.80	0.010	0.30	0.30	0.060	0.030
NOV 06...	228	2.17	0.030	2.20	0.110	0.60	0.60	0.060	0.040
DEC 10...	244	--	<0.010	2.80	0.020	0.40	0.30	0.050	0.050
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB 04...	238	--	<0.010	2.50	<0.010	--	--	--	--
MAR 21...	238	2.09	0.010	2.10	<0.010	--	--	--	--
APR 03...	226	--	<0.010	2.30	0.010	--	--	--	--
MAY 10...	212	2.37	0.030	2.40	0.060	--	--	--	--
JUN 05...	227	2.07	0.030	2.10	0.040	--	--	--	--
JUL 11...	244	2.28	0.020	2.30	0.040	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
400151075371500 WVC-7 UNNAMED TRIBUTARY TO VALLEY CREEK AT CHESTER COUNTY LIBRARY NEAR EXTON, PA (LAT 40 01 51N LONG 075 37 15W)									
OCT 1990									
10...	<0.010	--	20	--	<1	--	--	--	<10
NOV									
06...	<0.010	<0.10	20	--	<1	27	17	100	<4
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
05...	--	<0.10	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
APR									
02...	--	--	--	--	--	--	--	--	--
MAY									
08...	<0.010	--	--	--	--	--	--	--	--
JUN									
05...	<0.010	<0.10	--	--	--	18	10	--	<4
JUL									
11...	0.010	--	--	0.050	--	11	11	110	<10
400159075380800 WVC-8 UNNAMED TRIBUTARY TO VALLEY CREEK AT WATERLOO ROAD NEAR EXTON, PA (LAT 40 01 59N LONG 075 38 08W)									
OCT 1990									
11...	0.110	<0.10	20	0.030	<1	13	8	150	<4
NOV									
06...	0.180	<0.10	30	--	<1	29	8	140	<4
DEC									
10...	0.100	<0.10	<10	--	<1	14	10	--	<4
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
05...	0.030	<0.10	--	--	--	8	9	--	--
MAR									
21...	0.050	<0.10	--	--	--	15	16	--	--
APR									
02...	0.090	<0.10	--	--	--	10	12	--	--
MAY									
10...	0.080	<0.10	--	--	--	27	12	--	--
JUN									
05...	0.090	<0.10	--	--	--	15	12	--	<4
JUL									
09...	0.130	--	--	0.040	--	12	8	140	<10
400116075383800 WVC-9 VALLEY CREEK NEAR CLOVER MILL ROAD, EXTON, PA (LAT 40 01 16N LONG 075 38 38W)									
OCT 1990									
11...	0.040	<0.10	30	0.050	<1	31	23	110	85
NOV									
06...	0.050	<0.10	30	--	<1	59	24	120	35
DEC									
10...	0.040	0.10	20	--	<1	15	22	--	37
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
04...	<0.010	<0.10	--	--	--	7	21	--	38
MAR									
21...	0.010	<0.10	--	--	--	68	39	--	63
APR									
03...	<0.010	<0.10	--	--	--	10	33	--	62
MAY									
10...	0.020	<0.10	--	--	--	14	31	--	73
JUN									
05...	<0.010	<0.10	--	--	--	23	25	--	93
JUL									
11...	0.040	--	--	0.070	--	14	12	110	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)										
OCT 1990										
12...	1200	0.29	410	7.0	24.5	19.5	0.90	8.4	160	43
NOV										
06...	0900	0.55	380	6.7	7.5	11.0	1.0	10.1	140	38
DEC										
10...	0945	0.62	319	7.5	7.5	4.5	0.60	13.2	150	41
JAN 1991										
23...	1050	1.7	397	7.0	0.0	1.0	--	15.4	--	--
FEB										
05...	1230	1.2	385	8.1	19.0	8.0	1.0	14.4	140	37
MAR										
21...	1040	1.4	360	6.8	10.0	8.0	1.8	13.1	140	37
APR										
03...	1000	1.4	353	7.2	5.5	7.5	1.1	12.5	140	36
MAY										
10...	1030	1.2	350	7.3	20.0	13.5	2.7	10.3	130	35
JUN										
05...	1030	0.62	368	7.4	17.5	15.5	2.6	9.7	140	37
JUL										
11...	1020	0.32	373	7.5	26.0	18.5	2.0	9.0	150	40
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)										
OCT 1990										
11...	1545	3.8	406	7.1	22.5	19.5	2.6	8.6	180	44
NOV										
07...	1215	3.1	407	7.4	15.5	9.5	3.0	15.0	180	44
DEC										
07...	1000	6.2	417	7.4	6.5	4.5	1.5	13.2	180	47
JAN 1991										
24...	1220	12	415	7.8	6.0	3.5	--	15.4	--	--
FEB										
04...	1015	10	396	7.8	13.5	4.5	--	15.2	--	--
MAR										
21...	1505	11	381	7.9	13.5	10.0	--	16.0	--	--
APR										
03...	1410	12	360	8.1	13.0	11.0	--	16.7	--	--
MAY										
08...	1040	12	361	7.4	20.0	13.0	--	10.5	--	--
JUN										
06...	1020	4.7	375	7.3	21.5	16.0	1.5	9.3	160	39
JUL										
09...	1030	3.6	385	7.6	27.0	20.5	1.5	8.3	160	40
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)										
DEC 1990										
07...	1115	0.13	480	7.4	9.5	5.5	1.0	11.8	210	53
JAN 1991										
24...	1145	0.82	386	7.0	6.0	2.0	--	14.1	--	--
FEB										
04...	0920	0.44	397	7.4	12.0	2.5	--	13.6	--	--
MAR										
21...	1430	0.62	374	7.3	14.5	9.5	--	14.1	--	--
APR										
03...	1330	0.77	355	7.4	13.5	11.0	--	14.0	--	--
MAY										
08...	0945	0.75	401	7.2	20.5	11.5	--	10.4	--	--
JUN										
06...	0920	0.03	590	7.1	20.0	14.0	1.9	8.1	270	68
JUL										
09...	0930	0.06	660	7.8	25.0	19.0	5.0	5.7	330	80

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)										
OCT 1990										
12...	12	18	0.6	20	2.1	143	21	34	7.9	230
NOV										
06...	12	20	0.7	23	2.6	118	23	37	6.3	212
DEC										
10...	12	17	0.6	19	1.5	107	23	34	6.0	201
JAN 1991										
23...	--	--	--	--	--	96	--	--	--	--
FEB										
05...	11	22	0.8	26	1.4	95	24	44	5.1	166
MAR										
21...	11	21	0.8	25	1.3	99	21	40	5.7	205
APR										
03...	11	19	0.7	23	1.3	96	21	36	5.2	182
MAY										
10...	11	18	0.7	23	1.4	100	18	34	6.7	198
JUN										
05...	11	18	0.7	22	1.4	104	21	39	7.8	196
JUL										
11...	12	18	0.6	21	1.6	120	18	34	7.7	--
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)										
OCT 1990										
11...	16	14	0.5	15	2.7	140	22	34	6.4	221
NOV										
07...	16	13	0.4	14	2.2	134	21	33	5.9	227
DEC										
07...	16	15	0.5	15	2.0	130	25	31	7.5	<223
JAN 1991										
24...	--	--	--	--	--	128	--	--	--	--
FEB										
04...	--	--	--	--	--	138	23	36	--	--
MAR										
21...	--	--	--	--	--	116	20	37	--	--
APR										
03...	--	--	--	--	--	123	24	33	--	--
MAY										
08...	--	--	--	--	--	116	17	29	--	--
JUN										
06...	14	15	0.5	17	1.7	126	22	35	8.0	210
JUL										
09...	15	14	0.5	16	2.1	122	20	32	6.7	--
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)										
DEC 1990										
07...	19	17	0.5	15	3.3	166	39	37	9.0	266
JAN 1991										
24...	--	--	--	--	--	116	--	--	--	--
FEB										
04...	--	--	--	--	--	112	32	28	--	--
MAR										
21...	--	--	--	--	--	116	29	30	--	--
APR										
03...	--	--	--	--	--	99	37	26	--	--
MAY										
08...	--	--	--	--	--	112	28	33	--	--
JUN										
06...	25	18	0.5	12	2.9	216	48	40	8.0	344
JUL										
09...	31	20	0.5	12	3.7	248	52	43	7.5	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN NITRATE (MG/L) AS N) (00618)	NITRO- GEN, NITRITE (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)									
OCT 1990									
12...	233	2.09	0.010	2.10	<0.010	0.40	<0.20	0.010	<0.010
NOV									
06...	223	--	<0.010	2.80	0.050	0.30	1.4	<0.010	<0.010
DEC									
10...	212	--	<0.010	2.90	0.020	0.30	0.50	0.010	<0.010
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
05...	215	--	<0.010	3.00	<0.010	--	--	--	--
MAR									
21...	209	2.69	0.010	2.70	<0.010	--	--	--	--
APR									
03...	199	--	<0.010	2.70	<0.010	--	--	--	--
MAY									
10...	197	2.79	0.010	2.80	0.030	--	--	--	--
JUN									
05...	210	2.78	0.020	2.80	0.020	--	--	--	--
JUL									
11...	216	--	<0.010	2.80	0.020	--	--	--	--
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)									
OCT 1990									
11...	230	1.48	0.020	1.50	<0.010	0.50	0.40	0.070	0.030
NOV									
07...	225	1.89	0.010	1.90	0.050	0.40	0.40	0.100	0.100
DEC									
07...	232	--	<0.010	2.40	0.020	<0.20	0.40	0.030	0.020
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	<0.010	2.50	<0.010	--	--	--	--
MAR									
21...	--	1.98	0.020	2.00	<0.010	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	2.08	0.020	2.10	0.040	--	--	--	--
JUN									
06...	220	2.18	0.020	2.20	0.020	--	--	--	--
JUL									
09...	212	1.89	0.010	1.90	0.010	--	--	--	--
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)									
DEC 1990									
07...	287	--	<0.010	2.20	0.020	0.50	0.70	0.020	0.010
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
MAR									
21...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	2.18	0.020	2.20	0.030	--	--	--	--
JUN									
06...	351	2.46	0.040	2.50	0.040	--	--	--	--
JUL									
09...	395	2.08	0.020	2.10	0.030	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
400114075383100 WVC-10 UNNAMED TRIBUTARY TO VALLEY CREEK AT WHITFORD ROAD NEAR EXTON, PA (LAT 40 01 14N LONG 075 38 31W)									
OCT 1990									
12...	<0.010	<0.10	20	0.060	2	15	11	110	32
NOV									
06...	<0.010	0.30	30	--	1	90	18	100	26
DEC									
10...	<0.010	0.10	20	--	2	17	17	--	31
JAN 1991									
23...	--	--	--	--	--	--	--	--	--
FEB									
05...	<0.010	<0.10	30	--	--	13	13	--	27
MAR									
21...	<0.010	0.10	30	--	--	22	20	--	25
APR									
03...	<0.010	<0.10	30	--	<1	17	21	--	27
MAY									
10...	0.010	<0.10	30	--	1	12	20	--	24
JUN									
05...	<0.010	<0.10	30	--	<1	6	10	--	27
JUL									
11...	0.010	--	20	0.080	2	5	7	100	30
400043075392000 WVC-11 VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 20W)									
OCT 1990									
11...	0.030	<0.10	30	0.050	<1	24	13	100	68
NOV									
07...	0.110	<0.10	20	--	<1	29	12	110	42
DEC									
07...	0.020	0.10	20	--	<1	21	20	--	24
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	<0.010	<0.10	20	--	--	--	--	--	40
MAR									
21...	<0.010	0.30	--	--	--	--	--	--	50
APR									
03...	--	0.20	--	--	--	--	--	--	50
MAY									
08...	0.010	<0.10	20	--	<1	--	--	--	50
JUN									
06...	<0.010	<0.10	20	--	<1	17	18	--	69
JUL									
09...	0.030	--	20	0.11	--	15	13	100	--
400043075392300 WVC-12 UNNAMED TRIBUTARY TO VALLEY CREEK NEAR CLOVER MILL ROAD NEAR EXTON, PA (LAT 40 00 43N LONG 075 39 23W)									
DEC 1990									
07...	0.010	0.10	30	--	<1	22	21	--	8
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	<0.10	--	--	--	--	--	--	--
MAR									
21...	--	0.20	--	--	--	--	--	--	--
APR									
03...	--	0.10	--	--	--	--	--	--	--
MAY									
08...	<0.010	<0.10	--	--	--	--	--	--	--
JUN									
06...	0.010	<0.10	--	--	--	39	25	--	<4
JUL									
09...	0.020	--	--	0.050	--	13	18	120	<10

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
395854075394600 WVC-14 BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON, PA (LAT 39 58 54N LONG 075 39 46W)											
OCT 1990											
11...	1130	2.1	265	6.6	21.5	17.5	0.80	8.7	91	23	
NOV											
07...	1000	2.0	260	6.8	7.0	7.0	0.30	12.8	92	23	
DEC											
11...	1130	2.5	250	7.3	2.0	4.5	1.0	13.6	92	23	
JAN 1991											
24...	0945	6.6	261	6.9	1.5	3.5	--	13.0	--	--	
FEB											
11...	1030	4.8	250	6.8	2.5	4.0	0.30	14.0	88	22	
MAR											
21...	1245	5.4	249	7.0	15.0	9.0	1.0	9.9	85	21	
APR											
03...	1155	6.7	239	7.0	13.5	10.5	1.0	12.1	84	21	
MAY											
09...	1000	5.6	239	7.1	15.0	12.5	0.60	11.1	90	22	
JUN											
10...	1150	2.6	252	7.4	30.0	17.5	0.40	10.0	88	22	
JUL											
12...	0730	2.3	258	7.3	17.5	17.0	0.40	9.1	90	22	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 1990											
11...	8.0	12	0.5	22	1.6	59	20	25	9.2	152	
NOV											
07...	8.4	12	0.5	22	1.6	71	20	26	8.6	139	
DEC											
11...	8.3	12	0.5	22	1.4	122	18	25	8.9	141	
JAN 1991											
24...	--	--	--	--	--	40	--	--	--	--	
FEB											
11...	8.0	13	0.6	24	1.3	49	22	29	8.0	199	
MAR											
21...	7.8	13	0.6	25	1.3	53	20	28	8.2	138	
APR											
03...	7.6	13	0.6	25	1.3	48	21	26	8.4	141	
MAY											
09...	8.5	13	0.6	24	1.3	46	17	25	8.1	142	
JUN											
10...	8.0	12	0.6	23	1.1	58	24	24	9.4	138	
JUL											
12...	8.5	12	0.6	22	1.3	56	20	24	9.0	--	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + DIS. ORGANIC (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + DIS. ORGANIC (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)
395854075394600 WVC-14 BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON, PA (LAT 39 58 54N LONG 075 39 46W)									
OCT 1990									
11...	148	--	<0.010	3.00	<0.010	0.20	0.30	0.030	<0.010
NOV 07...	156	--	<0.010	3.10	0.050	0.60	0.70	<0.010	0.020
DEC 11...	186	--	<0.010	3.60	0.020	0.50	0.60	0.020	0.010
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB 11...	149	--	<0.010	3.60	0.010	--	--	--	--
MAR 21...	145	--	<0.010	3.20	<0.010	--	--	--	--
APR 03...	142	--	<0.010	3.30	<0.010	--	--	--	--
MAY 09...	136	--	<0.010	3.10	<0.010	--	--	--	--
JUN 10...	149	3.19	0.010	3.20	<0.010	--	--	--	--
JUL 12...	144	--	<0.010	3.10	<0.010	--	--	--	--
DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	BROMIDE DIS- SOLVED (MG/L) AS BR) (71870)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR) (01080)	LITHIUM DIS- SOLVED (UG/L) AS LI) (01130)
OCT 1990									
11...	<0.010	0.10	20	0.040	<1	19	7	110	6
NOV 07...	<0.010	<0.10	20	--	<1	36	7	110	5
DEC 11...	0.010	0.10	<10	--	<1	21	10	--	<4
JAN 1991									
24...	--	--	--	--	--	--	--	--	--
FEB 11...	<0.010	<0.10	--	--	--	17	12	--	--
MAR 21...	0.010	<0.10	--	--	--	18	11	--	--
APR 03...	<0.010	<0.10	--	--	--	15	11	--	--
MAY 09...	<0.010	<0.10	--	--	--	16	12	--	--
JUN 10...	<0.010	<0.10	--	--	--	11	6	--	<4
JUL 12...	0.020	--	--	0.060	--	11	6	100	<10

BERKS COUNTY

402615075530501. Local number, BE 623.

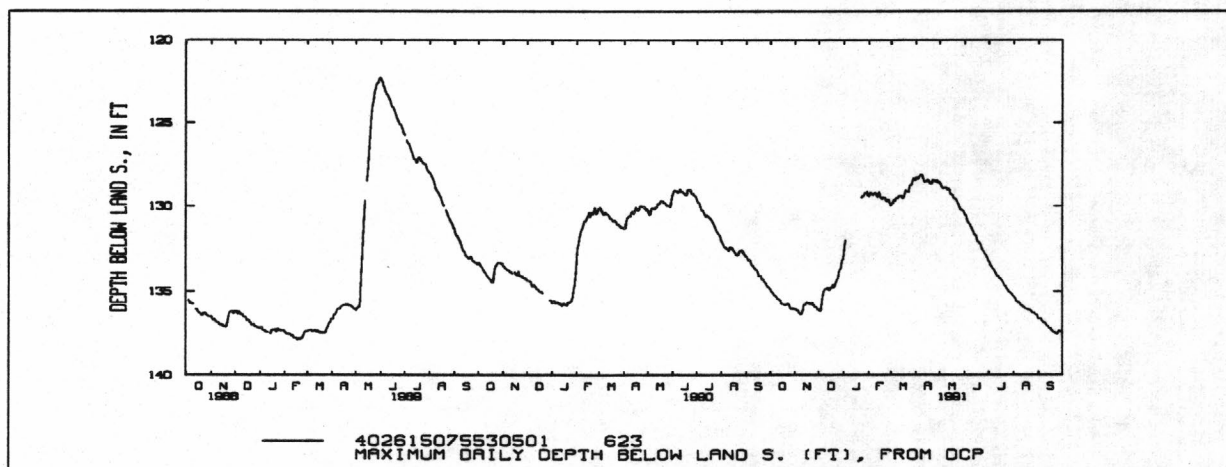
LOCATION.--Lat 40°26'15", long 75°53'05", Hydrologic Unit 02040203, at Wesner Road, Blandon.

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.**DATUM.**--Altitude of land-surface datum is 430 ft. Measuring point: Top of plywood shelf, 1.30 ft above land-surface datum. Prior to Apr. 30, 1981, top of casing, 1.30 ft above land-surface datum.**REMARKS.**--Missing record due to DCP downlink failure.**PERIOD OF RECORD.**--January 1975 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 113.55 ft below land-surface datum, June 6, 1984; lowest, 140.82 ft below surface datum, Dec. 23, 1981.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134.86	136.06	136.08	132.76	129.40	129.94	128.28	128.62	130.47	133.20	135.30	136.65
2	135.03	136.08	136.19	132.28	129.34	129.82	128.32	128.68	130.52	133.28	135.40	136.65
3	135.04	136.14	136.18	132.00	129.22	129.86	128.37	128.84	130.58	133.42	135.42	136.61
4	135.10	136.12	135.89	---	129.22	129.64	128.31	128.90	130.82	133.48	135.56	136.65
5	135.15	136.14	135.52	---	129.26	129.68	128.22	128.94	130.92	133.56	135.62	136.77
6	135.24	136.30	135.18	---	129.32	129.68	128.14	128.92	131.00	133.64	135.66	136.81
7	135.26	136.30	135.00	---	129.30	129.50	128.14	128.88	131.04	133.68	135.66	136.85
8	135.31	136.38	134.90	---	129.23	129.52	128.14	128.90	131.12	133.76	135.70	136.89
9	135.36	136.38	134.86	---	129.20	129.52	128.19	128.94	131.23	133.86	135.74	136.91
10	135.44	136.26	134.84	---	129.24	129.42	128.34	129.00	131.30	133.92	135.80	136.91
11	135.48	136.10	134.86	---	129.36	129.42	128.50	129.02	131.44	134.06	135.86	137.05
12	135.50	135.82	134.78	---	129.44	129.42	128.56	128.96	131.52	134.10	135.88	137.07
13	135.54	135.76	134.88	---	129.34	129.38	128.52	129.03	131.66	134.09	135.90	137.11
14	135.60	135.78	134.96	---	129.16	129.42	128.52	129.26	131.70	134.18	135.96	137.21
15	135.73	135.71	134.84	---	129.36	129.51	128.46	129.29	131.72	134.24	135.99	137.21
16	135.76	135.64	134.76	---	129.50	129.51	128.44	129.34	131.88	134.26	136.03	137.23
17	135.76	135.70	134.76	---	129.54	129.44	128.48	129.34	132.06	134.32	136.03	137.33
18	135.76	135.70	134.62	---	129.56	129.26	128.62	129.50	132.12	134.42	136.11	137.37
19	135.82	135.69	134.76	---	129.48	129.04	128.66	129.56	132.12	134.52	136.07	137.43
20	135.82	135.76	134.76	---	129.52	129.12	128.66	129.56	132.20	134.60	136.09	137.43
21	135.78	135.76	134.63	---	129.52	129.12	128.62	129.58	132.28	134.70	136.12	137.47
22	135.76	135.76	134.46	129.50	129.58	129.14	128.42	129.70	132.43	134.70	136.15	137.51
23	135.76	135.68	134.34	129.50	129.74	129.14	128.45	129.82	132.54	134.82	136.20	137.53
24	135.72	135.82	134.26	129.38	129.70	128.77	128.48	129.86	132.60	134.88	136.26	137.55
25	135.82	135.82	134.14	129.40	129.62	128.76	128.52	130.02	132.66	134.96	136.27	137.45
26	136.00	135.96	133.78	129.36	129.64	128.76	128.50	130.12	132.76	135.04	136.27	137.37
27	136.04	135.94	133.70	129.22	129.80	128.62	128.46	130.20	132.82	135.08	136.33	137.37
28	136.00	135.94	133.66	129.21	129.90	128.34	128.58	130.20	132.88	135.10	136.38	137.39
29	136.04	136.04	133.34	129.24	---	128.33	128.58	130.24	132.98	135.12	136.39	137.41
30	136.02	136.12	133.14	129.14	---	128.46	128.56	130.24	133.12	135.20	136.41	137.43
31	136.06	---	133.08	129.36	---	128.46	---	130.34	---	135.28	136.61	---
MEAN	135.56	135.91	134.60	130.08	129.39	129.16	128.39	129.37	131.76	134.26	135.94	137.13
MAX	136.06	136.38	136.19	132.76	129.90	129.94	128.66	130.34	133.12	135.28	136.61	137.55
MIN	134.80	135.54	132.80	128.96	129.04	128.20	128.10	128.52	130.34	133.12	135.28	136.58

WTR YR 1991 MEAN 132.77 HIGH 128.10 April 7 LOW 137.55 SEPT 24



BUCKS COUNTY

402643075150501. Local number, BK 929.

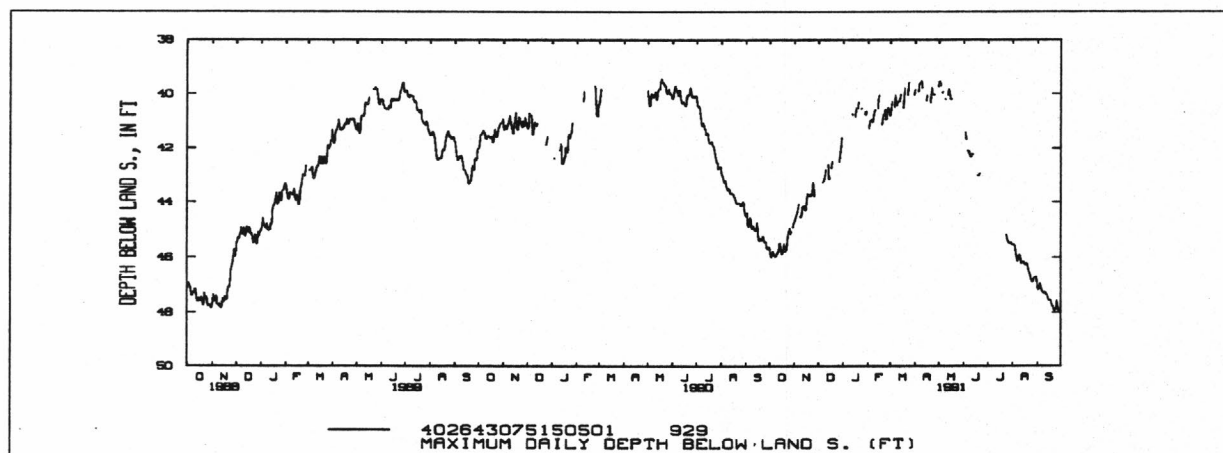
LOCATION.--Lat 40°26'43", long 75°15'05", Hydrologic Unit 02040105, at Nockamixon State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Brunswick Formation of Late Triassic age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 116 ft, cased to 27 ft, open hole.**INSTRUMENTATION.**--Digital recorder.**DATUM.**--Altitude of land-surface datum is 490 ft. Measuring point: Top of plywood shelf, 3.00 ft above land-surface datum. Prior to Mar. 17, 1980, to top of casing, 1.05 ft above land-surface datum. Prior to June 1970, land surface datum was approximately 16 feet lower.**REMARKS.**--Missing record due to float hanging up.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 39.13 ft below land-surface datum, March 28, 1991; lowest, 59.75 ft below land-surface datum, Nov. 26, 1968.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.69	44.69	---	---	---	40.79	39.86	39.58	---	---	45.53	47.13
2	45.90	44.59	---	---	41.29	40.55	---	39.55	---	---	45.52	47.17
3	46.01	44.50	---	---	41.00	40.29	---	39.71	41.42	---	45.55	47.11
4	45.85	44.44	43.30	---	40.97	---	---	---	41.68	---	45.61	46.94
5	45.79	44.30	---	---	40.95	---	39.93	39.96	---	---	45.86	47.05
6	45.90	44.09	43.29	---	41.04	40.50	39.63	39.92	42.09	---	46.04	47.17
7	45.94	---	43.25	---	40.96	40.04	39.61	---	42.20	---	46.13	47.25
8	45.96	44.53	43.18	---	40.77	40.42	39.63	40.20	42.11	---	46.02	47.26
9	45.94	44.54	43.04	---	40.62	40.42	39.52	40.21	42.33	---	45.92	47.31
10	45.87	44.43	42.80	---	40.60	40.30	39.79	40.21	42.33	---	45.92	47.25
11	45.83	44.17	---	---	---	40.29	---	---	42.25	---	46.09	47.29
12	45.78	44.20	---	40.75	---	40.28	---	40.04	42.21	---	46.22	47.36
13	45.51	44.14	42.62	40.79	40.54	40.16	40.42	39.84	---	---	46.16	47.35
14	45.48	44.29	43.17	---	40.14	40.02	---	39.92	---	---	46.15	47.48
15	45.68	44.29	43.12	---	40.04	---	40.27	40.17	---	---	46.17	47.54
16	45.87	44.01	---	40.86	---	---	40.04	40.21	42.46	---	46.25	47.53
17	45.83	43.68	42.77	40.54	---	40.52	---	40.20	---	---	46.27	47.52
18	45.72	43.79	42.51	40.54	41.15	40.24	---	---	43.03	---	46.21	47.62
19	45.51	43.74	---	40.54	40.98	39.79	---	---	43.05	---	46.25	47.75
20	45.79	43.77	---	40.30	40.77	---	40.32	40.76	43.01	---	46.32	47.77
21	45.74	43.79	---	---	40.79	40.14	40.05	---	42.96	---	46.50	47.88
22	45.71	43.78	---	---	40.58	---	39.79	40.71	---	---	46.57	47.95
23	45.44	43.57	42.18	40.56	40.95	40.04	40.03	---	---	---	46.67	47.86
24	45.05	43.29	---	40.54	40.94	39.59	40.00	---	---	45.16	46.81	47.87
25	45.12	43.41	---	---	40.60	---	40.04	---	---	45.31	46.88	47.56
26	44.94	43.79	---	40.79	40.50	---	---	---	---	45.40	46.85	47.71
27	45.14	---	42.53	---	40.63	---	39.93	---	---	45.47	46.78	47.87
28	45.05	43.57	42.21	40.66	40.79	39.29	---	---	---	45.49	46.73	47.97
29	---	---	41.97	40.79	---	---	---	---	---	45.49	46.73	47.97
30	44.90	---	41.62	40.64	---	---	39.74	---	---	45.46	46.69	48.04
31	44.73	---	---	---	---	40.04	---	---	---	45.51	46.82	---
MEAN	45.50	43.97	42.59	40.50	40.66	40.09	39.82	40.01	42.32	45.38	46.20	47.44
MAX	46.01	44.69	43.30	40.86	41.29	40.79	40.42	40.76	43.05	45.51	46.88	48.04
MIN	44.68	43.11	41.23	40.05	39.65	39.13	39.43	39.40	41.37	45.11	45.46	46.81

WTR YR 1991 MEAN 43.35 HIGH 39.13 MARCH 28 LOW 48.04 SEPT 30



BUCKS COUNTY

401157075032001. Local number, BK 1020

LOCATION.--Lat 40°11'55", long 75°03'07", Hydrologic Unit 02040201, at Naval Air Development Center, in Warminster Township.

Owner: United States Navy.

AQUIFER.--Sandstone and shale of Stockton formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 400 ft, cased to 57 ft, open hole.

INSTRUMENTATION.--Data collection platform.

DATUM.--Altitude of land-surface datum is 370 ft. Measuring point: Top of plywood shelf, 1.92 ft above land-surface datum.

REMARKS.--Missing record due to DCP downlink malfunction and float problems. Operated by Bucks County Planning Commission Sept. 1975 to March 1988.

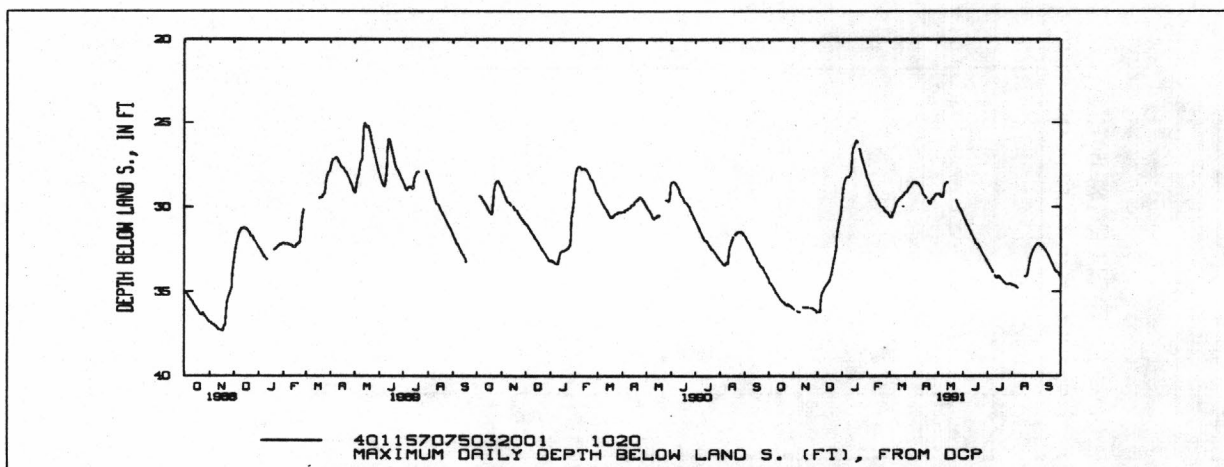
PERIOD OF RECORD.--September 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.98 ft below land-surface datum, May 13, 14, 1989: lowest, 41.36 ft below land-surface datum, September 26, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.29	35.99	36.18	29.28	28.28	30.54	28.54	29.21	30.55	33.25	34.59	32.18
2	34.49	36.05	36.21	28.92	28.35	30.59	28.54	29.21	30.66	33.32	34.59	32.19
3	34.47	---	36.21	28.60	28.52	30.60	28.54	29.24	30.74	33.41	34.64	32.18
4	34.55	---	36.21	28.42	28.63	30.55	28.58	29.34	30.86	33.50	34.65	32.18
5	34.62	36.12	35.44	28.31	28.76	30.35	28.58	29.40	30.98	33.59	34.67	32.20
6	34.68	36.16	35.16	28.25	28.90	30.31	28.60	29.40	31.08	33.67	34.71	32.26
7	34.76	36.18	35.01	28.20	28.98	30.14	28.68	29.30	31.18	33.75	34.76	32.30
8	34.86	36.21	34.95	28.25	29.10	30.00	28.76	28.86	31.28	33.83	34.79	32.36
9	34.93	36.18	34.85	28.25	29.20	29.81	28.83	28.66	31.37	---	---	32.41
10	35.03	---	34.73	28.14	29.30	29.71	28.93	28.58	31.47	34.01	---	32.49
11	35.09	---	34.67	28.04	29.36	29.66	29.08	28.55	31.59	34.09	34.29	32.54
12	35.15	---	34.59	27.90	29.46	29.57	29.22	28.53	31.67	34.19	---	32.62
13	35.25	35.92	34.54	26.88	29.56	29.51	29.29	28.53	31.77	34.19	34.21	32.70
14	35.30	35.92	34.46	26.56	29.56	29.46	29.35	---	31.89	34.11	---	32.80
15	35.38	35.92	34.42	26.43	29.66	29.43	29.44	---	31.97	34.05	---	32.88
16	35.46	35.92	34.33	26.40	29.76	29.40	29.49	---	32.07	34.11	34.11	32.98
17	35.52	35.92	34.12	26.16	29.92	29.33	---	---	32.17	34.17	34.11	33.10
18	35.58	35.93	33.97	26.05	29.97	29.33	29.62	---	32.23	34.25	34.07	33.18
19	35.59	35.93	33.72	26.08	30.00	29.21	29.74	---	32.21	34.29	34.05	33.30
20	35.64	35.93	33.39	26.18	30.02	29.15	29.80	---	32.29	34.34	33.89	33.40
21	35.69	---	33.18	---	30.06	29.13	29.80	---	32.36	34.39	33.55	33.51
22	35.74	35.94	32.98	26.54	30.12	29.12	29.57	---	32.45	34.45	33.23	33.62
23	35.79	35.95	32.70	26.66	30.24	29.05	29.51	29.58	32.55	34.49	33.03	33.72
24	35.79	35.96	32.48	26.90	30.26	28.94	29.51	29.70	32.65	34.53	32.87	33.82
25	35.72	35.97	31.73	27.08	30.32	28.86	29.44	29.82	32.73	34.58	32.75	33.82
26	35.76	36.04	31.39	27.24	30.32	28.82	29.38	29.94	32.83	---	32.61	33.80
27	35.82	36.06	31.16	27.40	30.41	28.78	29.29	30.06	32.89	34.57	32.50	33.88
28	35.83	36.07	30.84	27.58	30.48	28.63	29.23	30.10	32.99	34.52	32.40	34.00
29	35.87	36.11	30.61	27.74	---	28.62	29.23	30.18	33.07	34.53	32.33	34.10
30	35.89	36.22	30.40	27.90	---	28.54	29.23	30.30	33.15	34.55	32.26	34.18
31	35.97	---	29.82	28.12	---	28.54	---	30.38	---	34.56	32.20	---
MEAN	35.27	36.01	33.57	27.39	29.51	29.43	29.14	29.36	31.87	34.08	33.16	32.98
MAX	35.97	36.22	36.21	29.28	30.48	30.60	29.80	30.38	33.15	34.58	34.79	34.18
MIN	34.19	35.91	29.26	26.02	28.12	28.54	28.53	28.52	30.38	33.15	32.17	32.17

WTR YR 1991 MEAN 31.84 HIGH 26.02 JAN 18, 19 LOW 36.22 NOV 30



CARBON COUNTY

410123075425401. Local number, CB 104.

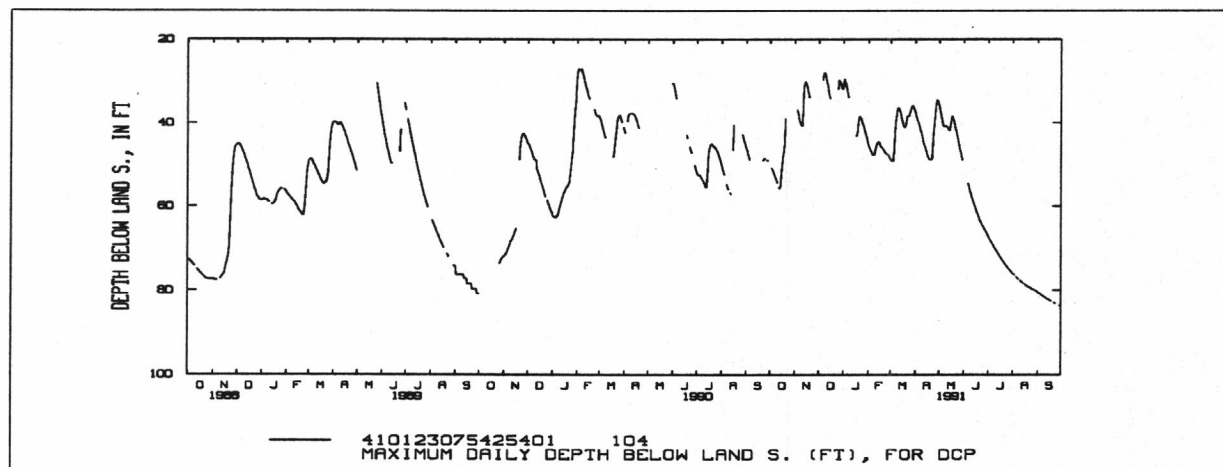
LOCATION.--Lat 41°01'23", long 75°42'54", Hydrologic Unit 02040106, at Hickory Run State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Lower Member of Mauch Chunk Formation of Late Mississippian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 125 ft, cased to 20 ft, open hole.**INSTRUMENTATION.**--Data collection platform.**DATUM.**--Altitude of land-surface datum is 1,305 ft. Measuring point: Top of plywood shelf, 3.12 ft above land-surface datum. Prior to May 28, 1980, top of casing, 3.00 ft above land-surface datum.**REMARKS.**--Missing record due to float hanging up on casing, and instrument problems.**PERIOD OF RECORD.**--September 1969 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 18.44 ft below land-surface datum, Apr. 17, 1983; lowest, 90.58 ft below land-surface datum, Jan. 31, 1981.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	30.57	45.25	48.82	37.35	35.85	---	67.13	75.94	80.45
2	---	---	---	29.57	45.74	49.09	38.15	36.71	---	67.46	76.14	80.56
3	50.83	---	---	30.17	46.23	49.09	38.84	37.76	---	67.84	76.35	80.69
4	51.22	36.85	---	30.93	46.70	49.10	39.44	38.80	---	68.17	---	80.83
5	51.75	37.76	---	31.64	47.14	47.17	40.05	39.69	---	68.51	76.75	80.95
6	52.29	39.07	29.71	32.71	47.54	42.92	40.73	40.64	54.55	68.85	76.95	81.08
7	52.80	39.63	28.21	33.84	47.75	40.00	41.47	40.94	55.26	69.18	77.11	81.20
8	53.33	40.28	27.90	---	47.75	38.45	42.09	40.94	56.01	69.52	77.30	81.34
9	53.89	40.58	28.29	---	47.05	37.13	42.78	40.75	56.71	69.86	---	81.47
10	54.41	40.60	29.22	---	46.10	36.35	43.67	40.75	57.38	70.14	77.66	81.60
11	---	37.72	30.08	---	45.32	36.34	44.47	41.00	58.01	70.46	77.82	81.73
12	55.50	32.20	30.95	---	44.92	36.76	45.17	41.44	58.68	70.74	77.96	81.87
13	55.68	30.34	32.19	---	44.66	37.34	45.75	41.85	59.30	71.07	78.12	81.98
14	55.11	30.08	33.30	---	44.56	38.21	46.40	41.85	59.80	71.40	78.26	82.10
15	52.21	30.49	34.19	---	44.99	39.20	47.00	40.47	60.33	71.72	---	82.20
16	49.75	30.97	---	43.26	45.37	40.07	47.68	39.21	60.89	71.98	78.57	82.30
17	48.03	31.93	---	43.28	45.74	40.71	48.25	38.35	61.46	72.26	78.72	82.43
18	46.87	32.74	---	42.32	45.92	41.03	48.68	38.74	61.96	72.56	78.87	82.52
19	45.07	33.77	---	40.42	46.10	41.03	48.80	39.38	62.44	72.85	79.02	---
20	38.92	---	---	39.01	46.53	40.33	48.80	40.13	62.93	73.11	79.12	---
21	---	---	---	38.42	46.77	39.23	48.80	40.96	63.39	73.37	79.16	82.87
22	---	---	---	38.73	47.11	38.41	48.47	41.89	63.86	73.62	79.30	82.97
23	---	---	---	39.02	47.36	38.31	44.95	42.82	64.31	73.90	79.40	83.08
24	---	---	---	39.66	47.46	38.27	41.74	43.66	64.66	74.16	79.53	---
25	---	---	31.83	40.30	47.62	37.65	39.96	44.58	65.00	74.40	79.64	---
26	---	---	29.87	40.79	47.81	36.99	37.13	45.49	65.34	74.63	79.76	83.39
27	---	---	29.86	41.46	48.16	36.35	35.23	46.35	65.70	74.88	79.82	---
28	---	---	30.38	42.33	48.53	35.85	34.56	47.25	66.03	75.09	79.93	83.59
29	---	---	30.96	43.00	---	35.85	34.64	48.05	66.38	75.30	80.05	83.70
30	---	---	31.59	43.59	---	36.34	35.15	48.89	66.76	75.52	80.15	83.78
31	---	---	31.77	44.58	---	36.74	---	---	---	75.73	80.29	---
MEAN	50.35	34.75	30.19	37.88	46.33	39.59	42.09	41.14	61.18	71.64	78.42	81.97
MAX	55.68	40.60	34.19	44.58	48.53	49.10	48.80	48.89	66.76	75.73	80.29	83.78
MIN	36.17	30.02	27.77	29.47	44.37	35.77	34.55	35.16	54.10	66.76	75.75	80.29

WTR YR 1991 MEAN 51.29 HIGH 27.77 DEC 8 LOW 83.78 SEPT 30



CHESTER COUNTY

395450075485401. Local number, CH 10.

LOCATION.--Lat 39°54'50", long 75°48'54", Hydrologic Unit 02040205, at intersection of Routes 82 and 841, Doe Run.
Owner: Robert J. Kleberg, Jr.

AQUIFER.--Cockeysville Marble of Paleozoic age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 34 ft, casing information not available.

INSTRUMENTATION.--Data collection platform.

DATUM.--Altitude of land-surface datum is 300 ft. Measuring point: Top of plywood shelf, 5.23 ft above land-surface datum. Prior to June 24, 1981, top of casing, 1.00 ft above land-surface datum.

REMARKS.--Missing record due to DCP failure.

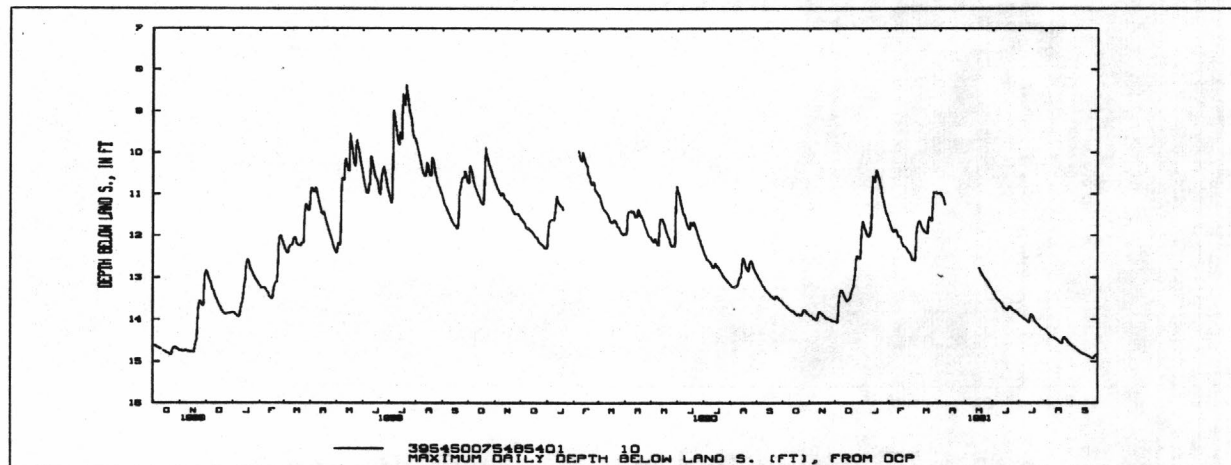
PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.19 ft below land-surface datum, July 20, 1989; lowest, 16.22 ft below land-surface datum, Nov. 3, 1963.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.59	13.90	14.05	11.71	11.64	12.59	10.98	---	13.32	13.88	14.27	14.64
2	13.62	13.91	14.06	11.66	11.66	12.59	10.96	---	13.34	13.91	14.28	14.65
3	13.66	13.92	14.08	11.73	11.74	12.60	11.01	---	13.40	13.92	14.31	14.67
4	13.66	13.93	14.04	11.82	11.80	12.48	11.04	---	13.43	13.93	14.33	14.68
5	13.68	13.95	13.56	11.87	11.87	11.92	11.07	---	13.47	13.95	14.36	14.70
6	13.71	13.98	13.38	11.94	11.91	11.78	11.16	---	13.50	13.96	14.38	14.72
7	13.72	13.98	13.31	11.99	11.91	11.68	11.25	---	13.52	13.99	14.40	14.73
8	13.75	14.00	13.30	12.02	11.86	11.64	---	---	13.54	13.99	14.42	14.75
9	13.76	14.01	13.32	12.02	11.86	11.66	---	---	13.56	14.01	14.44	14.76
10	13.78	14.01	13.37	11.97	11.90	11.71	---	---	13.59	14.03	14.44	14.78
11	13.79	13.91	13.42	11.89	11.97	11.78	---	---	13.61	14.05	14.44	14.79
12	13.81	13.83	13.46	11.57	12.02	11.83	---	---	13.64	14.07	14.45	14.81
13	13.81	13.82	13.50	10.57	12.03	11.86	---	---	13.69	14.07	14.46	14.82
14	13.82	13.84	13.55	10.64	12.02	11.90	---	---	13.71	13.97	14.48	14.82
15	13.85	13.87	13.56	10.71	12.06	11.91	---	---	13.73	13.89	14.50	14.83
16	13.87	13.87	13.54	10.71	12.16	11.93	---	12.77	13.75	13.89	14.52	14.84
17	13.89	13.90	13.52	10.43	12.21	11.95	---	12.80	13.76	13.91	14.54	14.85
18	13.90	13.91	13.50	10.44	12.25	11.95	---	12.86	13.78	13.95	14.56	14.86
19	13.89	13.94	13.40	10.51	12.26	11.61	---	12.89	13.75	14.00	14.57	14.87
20	13.89	13.97	13.32	10.59	12.27	11.55	---	12.93	13.70	14.04	14.58	14.88
21	13.89	13.99	13.27	10.65	12.29	11.58	---	12.97	13.69	14.07	14.49	14.89
22	13.90	13.98	13.20	10.77	12.31	11.64	---	12.99	13.71	14.09	14.42	14.90
23	13.90	13.99	13.02	10.84	12.37	11.64	---	13.02	13.74	14.11	14.42	14.92
24	13.85	14.00	12.92	10.99	12.39	11.11	---	13.05	13.77	14.13	14.45	14.93
25	13.78	14.00	12.59	11.10	12.41	10.95	---	13.08	13.78	14.16	14.48	14.93
26	13.77	14.02	12.48	11.17	12.45	10.97	---	13.11	13.80	14.19	14.50	14.89
27	13.79	14.03	12.51	11.26	12.51	10.97	---	13.14	13.81	14.19	14.54	14.86
28	13.81	14.04	12.54	11.38	12.57	10.94	---	13.18	13.83	14.21	14.56	14.84
29	13.84	14.04	12.55	11.46	---	10.98	---	13.22	13.84	14.23	14.58	14.86
30	13.86	14.05	12.55	11.48	---	10.98	---	13.24	13.85	14.24	14.60	14.88
31	13.88	---	12.00	11.57	---	10.99	---	13.28	---	14.25	14.62	---
MEAN	13.79	13.95	13.21	11.22	12.07	11.62	---	13.02	13.64	14.03	14.45	14.81
MAX	13.90	14.05	14.08	12.02	12.57	12.60	---	13.28	13.85	14.25	14.62	14.93
MIN	13.57	13.81	11.72	10.35	11.58	10.87	---	12.73	13.28	13.85	14.25	14.62

WTR YR 1991 MEAN 13.26 HIGH 10.35 JAN 17 LOW 14.93 SEPT 24, 25



DELAWARE COUNTY

395040075341801. Local number, DE 3.

LOCATION.--Lat 39°50'40", long 75°34'18", Hydrologic Unit 02040205, at Birmingham Township.

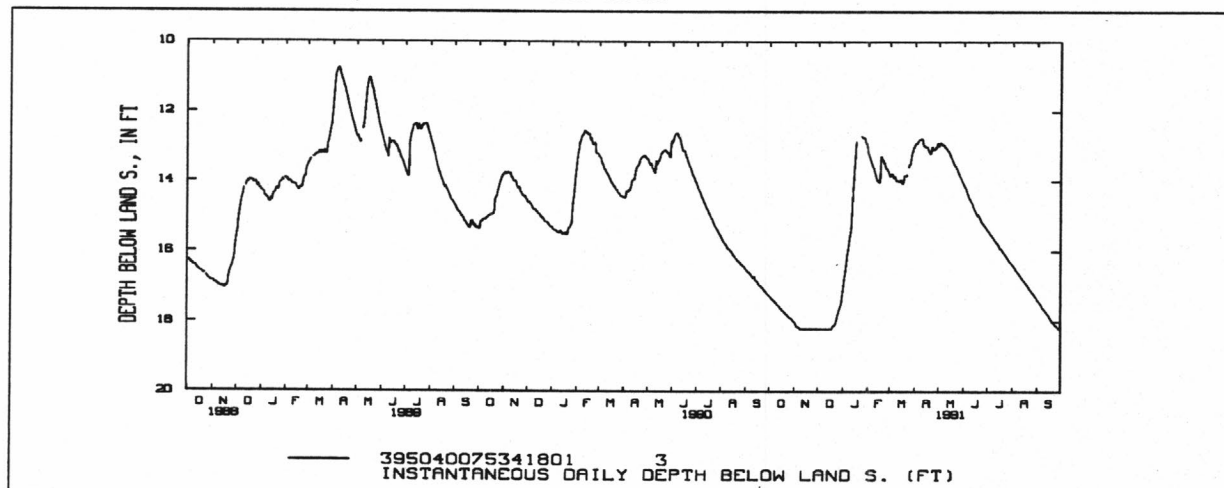
Owner: Mrs. Hope W. Ebert.

AQUIFER.--Oligoclase-mica schist of Wissahickon Formation (age uncertain, Early Paleozoic to Precambrian).**WELL CHARACTERISTICS.**--Dug unused water-table well, diameter 42 in, depth 18.4 ft, (formerly reported as 22 ft), cased with stone.**INSTRUMENTATION.**--Daily observer readings with chalked steel tape.**DATUM.**--Altitude of land-surface datum is 280 ft. Measuring point: Top of concrete base, 1.80 ft above land-surface datum.**REMARKS.**--None.**PERIOD OF RECORD.**--June 1951 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.90 ft below land-surface datum, Aug. 22, 1955; lowest measured, dry many times since 1964.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.26	18.00	>18.20	17.08	13.17	13.86	12.94	13.00	14.10	15.42	16.38	17.37
2	17.29	18.03	>18.20	16.85	13.24	13.79	12.91	12.90	14.14	15.43	16.41	17.40
3	17.33	18.08	>18.20	16.70	13.30	---	12.92	12.89	14.18	15.46	16.44	17.43
4	17.34	18.13	>18.20	16.53	13.39	13.80	12.89	12.93	14.23	15.51	16.47	17.45
5	17.36	18.15	>18.20	16.34	13.44	13.90	12.83	12.95	14.32	15.53	16.51	17.48
6	17.39	18.15	>18.20	16.14	13.52	13.92	12.82	12.94	14.38	15.56	16.56	17.53
7	17.42	18.16	>18.20	15.98	13.59	13.86	12.79	12.96	14.44	15.59	16.59	17.57
8	17.44	18.20	>18.20	15.83	13.62	13.96	12.80	13.01	14.50	15.62	16.62	17.60
9	17.46	>18.20	>18.20	15.65	13.70	13.99	12.78	13.04	14.53	15.66	16.64	17.63
10	17.49	>18.20	>18.20	15.50	13.79	13.98	12.79	13.05	14.58	15.69	16.67	17.65
11	17.51	>18.20	>18.20	15.34	13.87	13.99	12.90	13.09	14.62	15.72	16.71	17.68
12	17.54	>18.20	>18.20	14.89	13.96	14.00	12.97	13.12	14.67	15.77	16.74	17.72
13	17.55	>18.20	>18.20	14.42	13.99	14.00	13.00	13.15	14.74	15.77	16.77	17.75
14	17.59	>18.20	>18.20	14.07	13.96	13.96	13.00	13.19	14.80	15.81	16.80	17.78
15	17.61	>18.20	>18.20	13.66	14.04	14.01	13.02	13.25	14.84	15.86	16.83	17.78
16	17.64	>18.20	>18.20	13.29	13.99	14.07	13.03	13.32	14.90	15.90	16.86	17.86
17	17.67	>18.20	>18.20	12.87	13.29	14.04	13.06	13.35	14.94	15.92	16.89	17.89
18	17.69	>18.20	>18.20	---	13.31	13.96	13.13	13.41	14.99	15.94	16.92	17.93
19	17.70	>18.20	18.13	---	13.38	13.84	13.18	13.49	14.95	15.98	16.94	17.96
20	17.74	>18.20	18.13	---	13.39	13.85	13.22	13.52	15.01	16.01	16.98	17.99
21	17.75	>18.20	18.10	---	13.50	13.85	13.18	13.56	15.04	16.04	17.01	18.02
22	17.78	>18.20	18.08	---	13.48	13.82	13.01	13.58	15.10	16.08	17.05	18.05
23	17.80	>18.20	18.03	---	13.60	---	13.06	13.65	15.14	16.10	17.08	18.08
24	17.82	>18.20	17.93	12.72	13.65	13.60	13.08	13.67	15.18	16.13	17.11	18.11
25	17.85	>18.20	17.83	12.76	13.64	13.53	13.10	13.74	15.20	16.17	17.15	18.10
26	17.87	>18.20	17.74	12.75	13.69	13.50	13.08	13.80	15.24	16.20	17.18	18.15
27	17.89	>18.20	17.67	12.76	13.73	13.34	13.05	13.85	15.27	16.24	17.20	18.18
28	17.90	>18.20	17.59	12.77	13.81	13.19	13.00	13.90	15.30	16.27	17.23	>18.20
29	17.92	>18.20	17.51	12.89	---	13.15	12.90	13.95	15.34	16.30	17.26	>18.20
30	17.95	>18.20	17.44	12.91	---	13.04	12.93	13.99	15.36	16.32	17.29	>18.20
31	17.98	---	17.24	12.98	---	13.04	---	14.04	---	16.35	17.32	---
MEAN	17.63	18.18	18.03	14.55	13.61	13.75	12.98	13.36	14.80	15.88	16.86	17.82
MAX	17.98	18.20	18.20	17.08	14.04	14.07	13.22	14.04	15.36	16.35	17.32	18.20
MIN	17.26	18.00	17.24	12.72	13.17	13.04	12.78	12.89	14.10	15.42	16.38	17.37

WTR YR 1991 MEAN 15.66 HIGH 12.72 JAN 24 LOW >18.20 NOV 9 THRU DEC 18, SEPT 28, 29, 30

> Actual value is known to be greater than the value shown.



DELAWARE COUNTY

395512075293701, Local number, DE 723.

LOCATION.--Lat 39°55'12", long 75°29'37", Hydrologic Unit 02040203, at Glen Mills School, in Thornbury Township.
 Owner: Glen Mills School.

AQUIFER.--Felsic Hornblende bearing Gneiss of Precambrian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in, depth 300 ft, casing information not available.

INSTRUMENTATION.--Digital recorder.

DATUM.--Altitude of land-surface datum is 280 ft. Measuring point: Top of plywood shelf, 2.66 ft above land-surface datum. Prior to May 11, 1984, top of plywood shelf, 1.20 ft above land-surface datum.

REMARKS.--None.

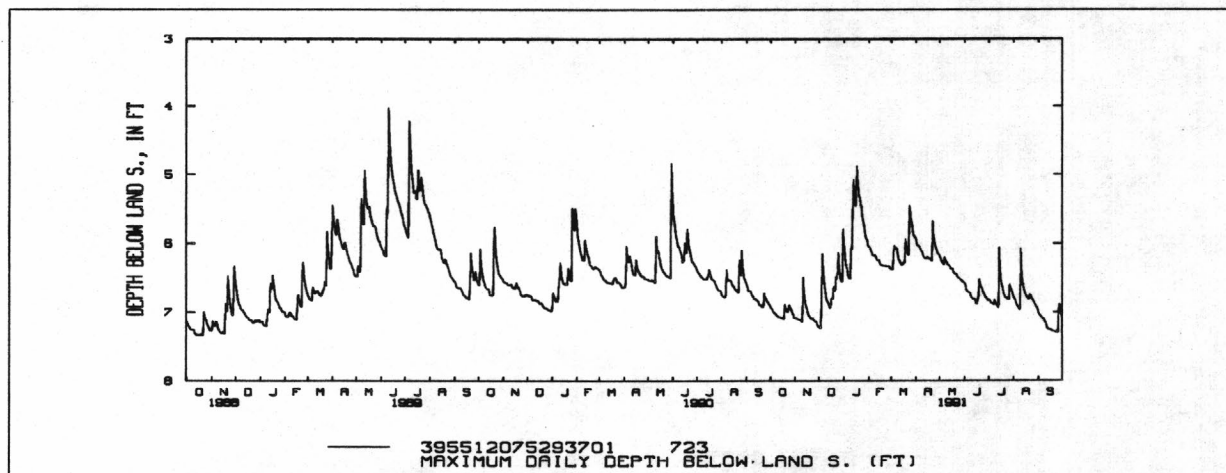
PERIOD OF RECORD.--April 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.78 ft below land-surface datum, April 25, 1983; lowest, 9.95 ft below land-surface datum, Aug. 3, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
 MAXIMUM VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.92	7.08	7.21	5.99	6.04	6.37	5.94	6.19	6.58	6.83	6.78	7.01
2	6.94	7.09	7.23	6.13	6.06	6.37	6.00	6.21	6.61	6.83	6.81	7.04
3	6.95	7.09	7.23	6.24	6.07	6.37	6.03	6.25	6.68	6.83	6.82	7.05
4	6.98	7.10	6.69	6.33	6.12	6.13	6.04	6.27	6.69	6.87	6.87	7.06
5	7.00	7.10	6.15	6.37	6.13	6.04	6.04	6.30	6.71	6.87	6.89	7.08
6	7.01	7.11	6.37	6.45	6.17	6.08	6.07	6.30	6.71	6.88	6.92	7.09
7	7.02	7.11	6.52	6.49	6.17	6.07	6.09	6.20	6.72	6.89	6.94	7.10
8	7.03	7.12	6.62	6.51	6.17	6.07	6.12	6.24	6.72	6.82	6.96	7.12
9	7.05	7.13	6.72	6.51	6.17	6.14	6.13	6.26	6.78	6.85	6.96	7.14
10	7.06	7.13	6.80	6.07	6.20	6.20	6.17	6.28	6.79	6.88	6.07	7.15
11	7.07	6.49	6.84	6.08	6.23	6.24	6.20	6.31	6.81	6.89	6.42	7.21
12	7.07	6.68	6.85	5.43	6.24	6.26	6.21	6.31	6.81	6.93	6.54	7.23
13	7.07	6.80	6.89	5.08	6.24	6.28	6.21	6.33	6.81	6.93	6.62	7.25
14	7.08	6.88	6.93	5.31	6.24	6.31	6.21	6.34	6.83	6.06	6.68	7.25
15	7.08	6.93	6.93	5.45	6.28	6.31	6.21	6.37	6.87	6.37	6.71	7.25
16	7.09	6.95	6.82	5.46	6.31	6.29	6.20	6.37	6.88	6.51	6.74	7.25
17	7.09	7.02	6.80	4.88	6.31	6.27	6.21	6.37	6.80	6.58	6.77	7.27
18	7.09	7.04	6.80	5.07	6.32	6.27	6.22	6.42	6.80	6.64	6.79	7.27
19	6.88	7.06	6.62	5.18	6.32	5.94	6.22	6.44	6.52	6.71	6.81	7.28
20	6.94	7.08	6.68	5.32	6.32	6.04	6.25	6.44	6.57	6.74	6.81	7.28
21	6.98	7.09	6.69	5.34	6.32	6.09	6.25	6.44	6.62	6.77	6.74	7.28
22	6.99	7.09	6.48	5.45	6.32	6.16	5.68	6.46	6.64	6.79	6.75	7.29
23	6.99	7.09	6.51	5.47	6.33	6.17	5.87	6.49	6.67	6.79	6.79	7.29
24	6.92	7.11	6.36	5.61	6.33	5.46	5.94	6.49	6.71	6.81	6.81	7.29
25	6.89	7.12	6.13	5.70	6.33	5.53	6.02	6.51	6.73	6.81	6.83	7.29
26	6.94	7.13	6.33	5.72	6.33	5.69	6.06	6.52	6.75	6.81	6.85	6.88
27	6.96	7.13	6.45	5.81	6.34	5.70	6.09	6.53	6.78	6.60	6.88	6.88
28	6.98	7.15	6.54	5.90	6.37	5.82	6.13	6.54	6.79	6.65	6.89	6.97
29	7.03	7.19	6.55	5.94	---	5.88	6.16	6.55	6.81	6.67	6.92	7.03
30	7.03	7.21	6.55	5.94	---	5.90	6.16	6.56	6.83	6.71	6.93	7.06
31	7.08	---	5.80	6.03	---	5.91	---	6.57	---	6.74	6.97	---
MEAN	6.99	7.01	6.56	5.69	6.23	6.03	6.07	6.37	6.72	6.69	6.74	7.13
MAX	7.09	7.21	7.23	6.51	6.37	6.37	6.25	6.57	6.88	6.93	6.97	7.29
MIN	6.76	6.27	5.60	4.60	6.03	5.42	5.50	6.17	6.46	5.33	5.69	6.67

WTR YR 1991 MEAN 6.51 HIGH 4.60 JAN 17 LOW 7.29 SEPT 22, 23, 24, 25



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.

DATUM.--Altitude of land-surface datum is 444 ft. Measuring point: Top of plywood shelf, 2.70 ft above land-surface datum. Prior to Apr. 22, 1981, measuring point was 3.50 ft. above land-surface datum.

REMARKS.--None.

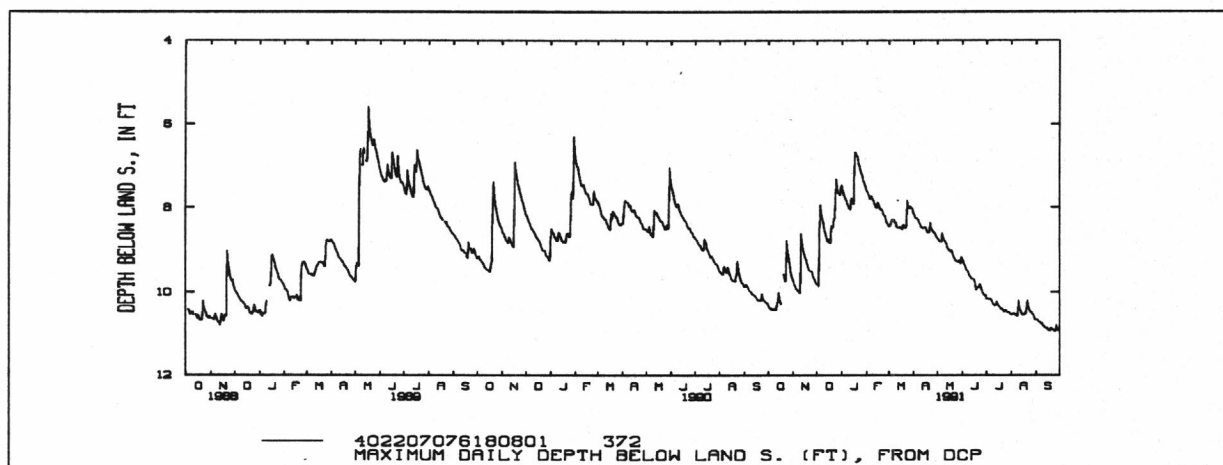
PERIOD OF RECORD.--July 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.02 ft below land-surface datum, Jan. 27, 1976; lowest, 11.32 ft below land-surface datum, Jan. 23, 30, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.33	9.72	9.81	7.46	7.60	8.44	8.14	8.73	9.24	10.16	10.55	10.66
2	10.37	9.79	9.83	7.57	7.63	8.44	8.18	8.75	9.26	10.16	10.53	10.66
3	10.39	9.83	9.85	7.66	7.66	8.42	8.22	8.78	9.32	10.15	10.53	10.68
4	10.41	9.88	8.59	7.72	7.74	8.34	8.26	8.80	9.36	10.18	10.51	10.71
5	10.39	9.94	7.94	7.76	7.78	8.28	8.26	8.80	9.42	10.18	10.51	10.71
6	10.43	9.93	8.08	7.80	7.80	8.32	8.28	8.80	9.46	10.18	10.56	10.73
7	10.40	9.96	8.21	7.84	7.72	8.28	8.30	8.61	9.49	10.18	10.55	10.77
8	10.40	9.98	8.29	7.91	7.78	8.34	8.36	8.70	9.51	10.23	10.57	10.74
9	10.42	10.02	8.37	7.95	7.81	8.36	8.39	8.76	9.56	10.27	10.57	10.80
10	10.41	10.02	8.48	8.01	7.85	8.37	8.44	8.78	9.63	10.31	10.20	10.81
11	10.42	8.62	8.57	8.04	7.92	8.46	8.46	8.82	9.63	10.33	10.38	10.83
12	10.28	8.78	8.63	8.02	7.99	8.48	8.48	8.84	9.67	10.31	10.42	10.86
13	10.19	8.92	8.72	7.77	8.00	8.48	8.49	8.91	9.68	10.31	10.48	10.86
14	10.01	9.01	8.79	7.86	8.00	8.48	8.48	8.96	9.69	10.23	10.52	10.87
15	10.16	9.10	8.80	7.91	7.88	8.46	8.48	8.98	9.69	10.31	10.54	10.87
16	10.24	9.18	8.75	7.91	7.92	8.48	8.46	9.02	9.73	10.33	10.55	10.90
17	10.28	9.20	8.83	6.68	7.99	8.50	8.51	9.03	9.79	10.35	10.54	10.93
18	---	9.28	8.83	6.68	8.04	8.50	8.56	9.00	9.95	10.37	10.52	10.94
19	---	9.34	8.43	6.73	8.04	8.40	8.58	9.02	9.91	10.40	10.50	10.87
20	9.56	9.42	8.47	6.78	8.05	8.44	8.59	9.10	9.89	10.42	10.38	10.88
21	9.66	9.48	8.48	6.79	8.08	8.46	8.59	9.14	9.89	10.41	10.20	10.90
22	9.74	9.49	8.27	6.95	8.16	8.48	8.36	9.19	9.87	10.44	10.34	10.90
23	9.74	9.49	8.26	7.00	8.18	8.41	8.48	9.23	9.81	10.48	10.40	10.92
24	8.78	9.50	7.80	7.09	8.20	7.84	8.52	9.27	9.88	10.44	10.45	10.96
25	8.98	9.53	7.33	7.16	8.26	7.96	8.54	9.27	9.93	10.44	10.47	10.93
26	9.13	9.62	7.49	7.20	8.34	8.01	8.58	9.27	10.00	10.46	10.48	10.79
27	9.24	9.67	7.62	7.26	8.38	8.01	8.59	9.29	10.03	10.48	10.52	10.87
28	9.34	9.70	7.67	7.36	8.40	7.98	8.62	9.24	10.07	10.48	10.54	10.92
29	9.51	9.76	7.70	7.42	---	8.01	8.66	9.30	10.10	10.50	10.56	10.93
30	9.60	9.80	7.70	7.46	---	8.02	8.69	9.32	10.08	10.51	10.65	10.94
31	9.65	---	7.50	7.53	---	8.04	---	9.16	---	10.53	10.66	---
MEAN	9.88	9.47	8.29	7.40	7.94	8.26	8.42	8.96	9.69	10.32	10.45	10.80
MAX	10.43	10.02	9.85	8.04	8.40	8.50	8.69	9.32	10.10	10.53	10.66	10.96
MIN	8.53	8.28	7.12	6.63	7.53	7.81	8.04	8.40	9.16	10.04	9.92	10.51

WTR YR 1991 MEAN 9.16 HIGH 6.63 JAN, 17, 18 LOW 10.96 SEPT 24



LEHIGH COUNTY

403429075392401. Local number, LE 644.

LOCATION.--Lat 40°34'29", long 75°39'24", Hydrologic Unit 02040106, at Haafsville.

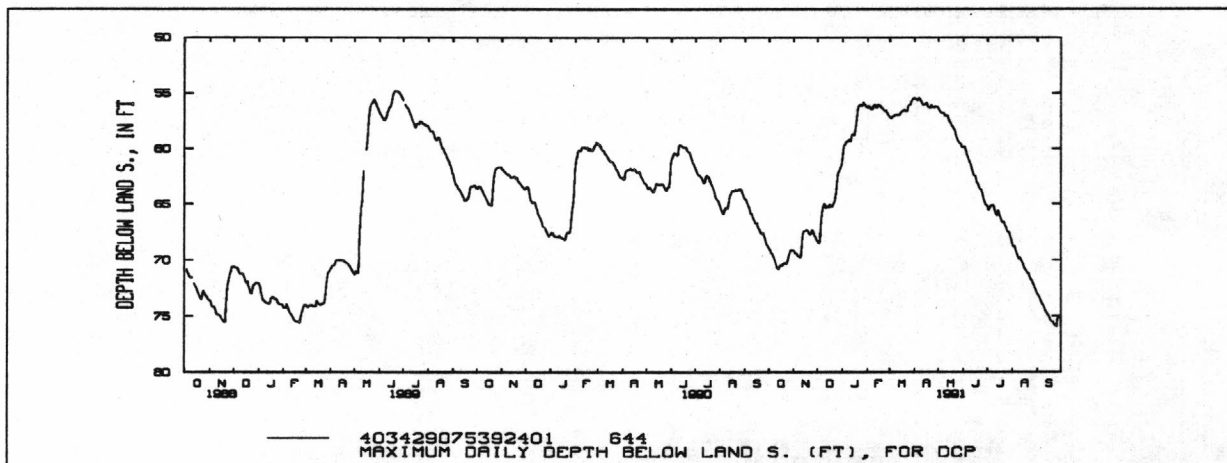
Owner: Charles J. Haaf.

AQUIFER.--Beekmantown Group of middle Ordovician age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 10 in, depth 184 ft, cased to 63 ft, open hole.**INSTRUMENTATION.**--Data collection platform.**DATUM.**--Altitude of land-surface datum is 470 ft. Measuring point: Top of plywood shelf, 2.65 ft above land-surface datum. Prior to Mar. 18, 1981, top of casing, 1.45 ft above land-surface datum.**REMARKS.**--Water-quality records for 1973-75 are available in files of district office.**PERIOD OF RECORD.**--January 1971 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 36.65 ft below land-surface datum, June 27, 1972; lowest, 93.42 ft below land-surface datum, Feb. 6, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.95	69.16	68.28	60.72	56.30	57.18	55.45	56.41	59.83	65.28	68.63	73.06
2	69.08	69.22	68.47	60.01	56.30	57.27	55.56	56.58	59.82	65.53	68.78	73.15
3	69.21	69.39	68.46	59.67	56.17	57.27	55.58	56.71	59.95	65.55	68.82	73.28
4	69.41	69.39	68.19	59.59	56.29	57.15	55.64	56.74	60.18	65.32	68.71	73.42
5	69.40	69.45	66.74	59.48	56.42	57.12	55.63	56.81	60.44	65.14	69.09	73.62
6	69.64	69.60	65.96	59.31	56.48	57.11	55.56	56.81	60.68	65.15	69.33	73.78
7	69.82	69.64	65.51	59.39	56.47	56.98	55.45	56.81	60.87	65.15	69.53	73.95
8	69.97	69.74	65.17	59.32	56.21	56.99	55.64	56.88	61.06	65.10	69.76	74.01
9	70.21	69.74	64.94	59.16	56.16	57.00	55.72	57.06	61.20	65.19	69.90	74.17
10	70.44	69.71	65.07	59.35	56.04	56.96	55.90	57.02	61.40	65.51	69.78	74.37
11	70.66	68.88	65.33	59.28	56.20	56.97	55.99	57.08	61.69	65.83	69.89	74.55
12	70.80	67.88	65.23	58.95	56.32	56.99	56.08	57.05	61.93	66.01	70.02	74.68
13	70.79	67.51	65.21	58.72	56.31	56.98	56.04	57.26	62.16	65.99	70.17	74.79
14	70.59	67.41	65.27	58.69	56.05	56.83	56.03	57.45	62.39	65.59	70.33	74.93
15	70.57	67.40	65.25	58.78	56.10	56.73	55.96	57.60	62.46	65.73	70.54	74.98
16	70.43	67.38	65.03	58.76	56.11	56.69	55.89	57.75	62.52	66.02	70.74	75.13
17	70.54	67.31	65.20	58.22	56.14	56.65	56.10	57.89	62.86	66.13	70.89	75.35
18	70.47	67.34	65.23	57.62	56.30	56.55	56.26	58.02	63.10	66.39	70.97	75.48
19	70.34	67.44	65.20	57.14	56.30	56.49	56.28	58.04	63.11	66.62	71.09	75.50
20	70.25	67.60	65.08	56.48	56.43	56.59	56.36	58.21	63.32	66.66	71.19	75.52
21	70.24	67.69	64.95	56.12	56.48	56.64	56.31	58.31	63.55	66.57	71.16	75.68
22	70.33	67.70	64.70	56.12	56.59	56.64	56.08	58.60	63.68	66.75	71.36	75.71
23	70.34	67.63	64.31	56.03	56.63	56.51	56.28	58.91	63.70	66.91	71.61	75.87
24	70.15	67.33	63.88	56.12	56.58	56.10	56.26	59.06	63.91	67.07	71.77	75.94
25	69.88	67.34	63.09	56.16	56.71	56.09	56.28	59.30	64.12	67.32	71.83	75.93
26	69.53	67.60	62.28	56.08	56.83	56.09	56.28	59.34	64.48	67.48	71.99	75.18
27	69.35	67.84	62.14	55.82	56.99	55.96	56.22	59.47	64.72	67.52	72.17	75.03
28	69.08	67.89	61.93	56.00	57.03	55.72	56.20	59.55	64.89	67.53	72.34	75.11
29	69.17	68.05	61.77	56.10	---	55.64	56.21	59.65	65.09	67.81	72.56	75.13
30	69.10	68.27	61.61	56.10	---	55.51	56.31	59.84	65.09	68.05	72.68	75.28
31	69.06	---	61.34	56.27	---	55.49	---	59.88	---	68.31	72.89	---
MEAN	69.81	68.16	64.67	57.76	56.28	56.53	55.91	57.85	62.36	66.17	70.56	74.66
MAX	70.80	69.74	68.47	60.72	57.03	57.27	56.36	59.88	65.09	68.31	72.89	75.94
MIN	68.80	67.06	60.72	55.66	55.80	55.32	55.26	56.28	59.71	64.81	68.32	72.90

WTR YR 1991 MEAN 63.39 HIGH 55.26 APRIL 1 LOW 75.94 SEPT 24



411223075234901. Local number, MO 190.

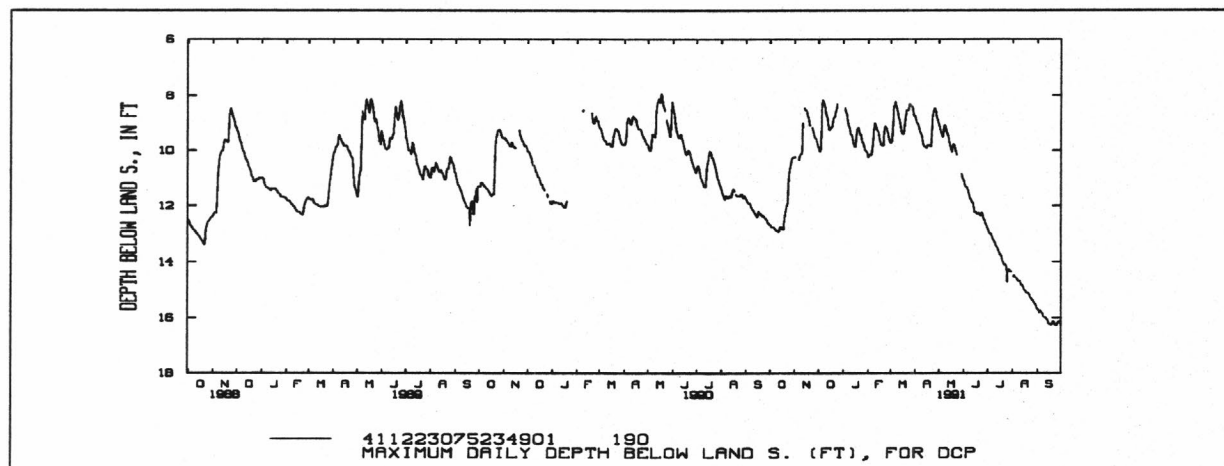
LOCATION.--Lat 41°12'23", long 75°23'49", Hydrologic Unit 02040106, at Tobyhanna State Park.

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.**DATUM.**--Altitude of land-surface datum is 1,990 ft. Measuring point: Top of plywood shelf, 2.96 ft above land-surface datum. Prior to Mar. 28, 1980, top of plywood cover, 2.57 ft above land-surface datum.**REMARKS.**--Missing record due to instrument malfunction.**PERIOD OF RECORD.**--October 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 6.83 ft below land-surface datum, Apr. 5, 1984; lowest, 16.87 ft below land-surface datum, Oct. 24, 25, 1980.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.68	10.23	9.90	---	10.25	9.72	8.79	9.07	11.09	12.83	---	15.68
2	12.74	10.23	10.03	---	10.20	9.72	8.92	9.16	11.21	12.92	14.53	15.72
3	12.77	---	10.03	8.45	10.16	9.55	9.01	9.32	11.32	12.97	14.49	15.82
4	12.77	---	9.70	8.63	10.16	9.18	9.04	9.41	11.32	13.01	14.55	15.76
5	12.77	10.33	8.28	8.69	10.14	8.41	9.11	9.51	11.35	13.01	---	15.74
6	12.79	10.33	8.16	8.89	9.98	8.35	9.22	9.51	11.43	13.09	14.58	15.81
7	12.85	10.21	8.23	9.04	9.69	8.23	9.34	9.17	11.53	13.18	14.64	15.85
8	12.87	10.12	8.33	9.14	9.22	8.39	9.40	9.09	11.66	13.22	14.68	15.94
9	12.87	10.12	8.45	9.23	9.02	8.49	9.47	9.13	11.74	13.29	14.68	15.97
10	12.90	10.11	8.68	9.43	9.04	8.62	9.65	9.28	11.79	13.31	14.67	15.97
11	12.93	9.02	8.76	9.43	9.17	8.79	9.79	9.36	11.86	13.43	14.78	15.99
12	12.93	---	8.83	9.51	9.27	8.89	9.85	9.44	11.89	13.47	14.83	16.03
13	12.84	8.47	9.10	9.71	9.30	9.01	9.85	9.55	11.96	13.49	14.82	16.07
14	12.75	8.54	9.25	9.78	9.36	9.19	9.91	9.73	12.20	13.58	14.89	16.11
15	12.76	8.56	9.25	9.87	9.54	9.37	9.91	9.87	12.23	13.66	14.97	16.21
16	12.82	8.59	9.17	9.87	9.67	9.40	9.82	9.97	12.22	13.73	15.01	16.24
17	12.83	8.75	9.17	9.46	9.79	9.40	9.82	10.06	12.27	13.74	15.02	16.25
18	12.83	8.79	9.13	9.27	9.82	9.30	9.82	9.83	12.29	13.82	15.11	16.26
19	12.44	8.95	8.89	9.19	9.82	8.99	9.82	9.76	12.29	13.96	15.10	16.23
20	12.22	9.11	8.82	9.18	9.80	8.74	9.83	9.81	12.25	14.00	15.11	16.13
21	12.09	---	8.80	9.33	9.32	8.56	9.83	9.91	12.33	14.10	15.14	16.13
22	11.96	9.19	8.60	9.42	9.10	8.57	9.21	10.06	12.35	14.06	15.17	16.17
23	11.86	9.19	8.56	9.43	9.19	8.57	8.74	10.18	12.25	14.12	15.28	16.28
24	11.20	9.29	8.31	9.62	9.20	8.40	8.58	---	12.27	14.13	15.28	16.27
25	10.81	9.40	---	9.72	9.32	8.31	8.49	---	12.39	14.72	15.36	16.27
26	10.58	9.55	---	9.73	9.39	8.40	8.50	---	12.49	14.26	15.36	16.17
27	10.46	9.55	---	9.84	9.58	8.40	8.63	---	12.53	14.26	15.43	16.14
28	10.33	9.61	---	9.99	9.67	8.43	8.80	---	12.63	14.30	15.47	16.14
29	10.26	9.73	---	10.03	---	8.52	8.87	10.84	12.69	14.33	15.50	16.18
30	10.26	9.84	---	10.03	---	8.74	8.99	10.95	12.77	14.35	15.53	16.19
31	10.22	---	---	10.12	---	8.76	---	11.05	---	---	15.67	---
MEAN	12.06	9.42	8.84	9.40	9.51	8.74	9.25	9.69	11.98	13.64	15.00	16.03
MAX	12.93	10.33	10.03	10.12	10.25	9.72	9.91	11.05	12.77	14.72	15.67	16.28
MIN	10.20	8.42	8.10	8.37	9.00	8.16	8.43	9.01	11.05	12.77	14.40	15.63

WTR YR 1991 MEAN 11.21 HIGH 8.10 DEC 24 LOW 16.28 SEPT 23



MONTGOMERY COUNTY

400808075210401. Local number, MG 225.

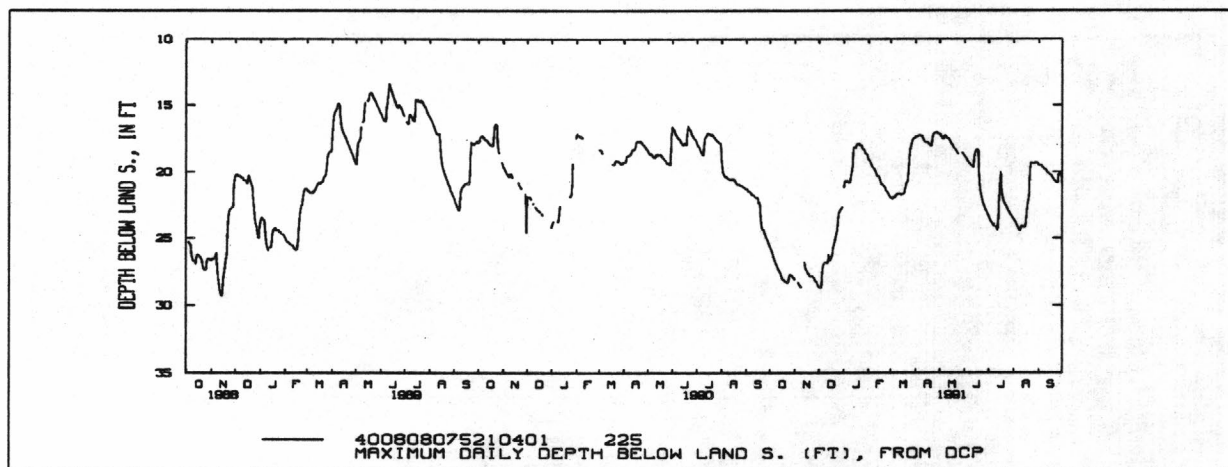
LOCATION.--Lat 40°08'08", long 75°21'04", Hydrologic Unit 02040203, at Willow and Locust Street, Norristown.

Owner: Norristown State Hospital.

AQUIFER.--Sandstone of Stockton Formation of Late Triassic age.**WELL CHARACTERISTICS.**--Drilled unused artesian well, diameter 12 in, depth 300 ft, casing information not available.**INSTRUMENTATION.**--Data collection platform.**DATUM.**--Altitude of land-surface datum is 165 ft. Measuring point: Top of plywood shelf, 2.35 ft above land-surface datum. Prior to Mar. 17, 1981, top of casing, 0.75 ft above land-surface datum.**REMARKS.**--Missing record due to instrument failure.**PERIOD OF RECORD.**--September 1956 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 11.00 ft below land-surface datum, May 31, 1984; lowest, 60.25 ft below land-surface datum, Nov. 5, 6, 1963.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.68	28.08	28.64	21.16	19.05	21.95	17.36	17.18	18.81	23.37	23.56	19.44
2	25.80	---	28.74	20.83	19.10	21.96	17.34	17.24	18.88	23.48	23.65	19.49
3	25.95	---	28.74	20.69	19.23	22.03	17.37	17.36	18.95	23.64	23.73	19.51
4	26.17	---	28.63	20.72	19.37	21.91	17.33	17.44	19.08	23.75	23.86	19.49
5	26.37	28.31	27.60	20.73	19.50	21.89	17.28	17.51	19.18	23.85	24.02	19.57
6	26.56	28.48	27.13	20.71	19.63	21.89	17.26	17.51	19.27	23.98	24.16	19.65
7	26.73	28.52	26.94	20.78	19.68	21.75	17.29	17.28	19.34	24.08	24.27	19.69
8	26.88	28.65	26.86	20.81	19.76	21.71	17.30	17.30	19.38	23.91	24.38	19.77
9	27.01	28.69	26.82	20.77	19.87	21.67	17.31	17.38	19.49	---	24.42	19.82
10	27.16	---	26.82	20.26	20.01	21.63	17.46	17.44	19.56	24.15	24.21	19.84
11	27.32	---	26.87	19.99	20.20	21.67	17.63	17.51	19.62	24.28	24.04	19.97
12	27.43	---	26.83	19.58	20.31	21.67	17.73	17.51	19.64	24.39	24.11	20.03
13	27.52	26.80	26.22	18.19	20.31	21.67	17.77	17.60	18.88	23.57	24.15	20.06
14	27.65	27.25	26.64	18.13	20.35	21.70	17.82	17.70	18.54	21.71	24.18	20.16
15	27.85	27.39	26.63	18.19	20.56	21.69	17.79	17.83	18.39	20.73	24.15	20.19
16	28.01	27.44	26.51	18.19	20.74	21.66	17.81	17.95	18.32	19.99	23.95	20.24
17	28.12	27.61	26.34	17.98	20.88	21.60	17.84	17.98	18.35	21.27	23.07	20.33
18	28.12	27.69	26.15	17.91	20.94	21.50	17.96	18.15	18.39	21.77	22.43	20.39
19	28.18	27.76	25.64	17.89	20.98	21.09	18.02	18.23	20.28	22.05	22.12	20.51
20	28.25	27.84	25.40	17.87	21.08	20.85	18.04	18.29	21.11	22.23	21.80	20.57
21	28.30	27.84	25.17	17.96	21.14	20.78	17.99	18.37	21.52	22.38	19.93	20.67
22	28.34	27.87	24.89	18.02	21.23	20.69	17.41	18.46	21.83	22.49	19.31	20.72
23	28.35	27.85	24.61	18.03	21.42	19.95	17.15	18.58	22.10	22.59	19.31	20.79
24	28.10	27.92	24.31	18.14	21.46	18.87	17.12	18.64	22.31	22.73	19.35	20.81
25	27.83	27.96	23.49	18.29	21.57	18.29	17.09	---	22.51	22.87	19.37	20.75
26	27.75	28.17	23.05	18.30	21.65	18.06	17.07	18.84	22.67	22.98	19.34	20.16
27	27.80	28.23	22.95	18.41	21.79	17.84	17.03	---	22.82	23.09	19.31	20.06
28	27.80	28.28	22.83	18.57	21.89	17.55	17.09	---	22.93	23.21	19.30	20.13
29	27.89	28.44	22.77	18.65	---	17.53	17.15	18.55	23.07	23.27	19.31	20.18
30	27.91	28.59	22.66	18.65	---	17.49	17.14	18.60	23.23	23.38	19.30	20.43
31	28.01	---	---	18.89	---	17.47	---	18.70	---	23.47	19.36	---
MEAN	27.35	27.90	25.74	19.02	20.41	20.49	17.41	17.85	20.16	22.79	22.06	20.05
MAX	28.35	28.69	28.74	21.16	21.89	22.03	18.04	18.84	23.23	24.39	24.42	20.81
MIN	24.70	25.99	21.91	17.79	18.87	17.33	16.94	17.10	18.19	19.41	19.19	19.37

WTR YR 1991 MEAN 21.77 LOW 28.74, DEC 2, 3 HIGH 16.94 APR 27



MONTGOMERY COUNTY

401310075181702. Local number, MG 884

LOCATION.--Lat 40°13'10", long 75°18'17", Hydrologic Unit 02040203, at Upper Gwyned Township, near West Point.
Owner: Merck, Sharp, and Dohme, Inc.

AQUIFER.--Shale of Brunswick Formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in to 10 in, depth 600 ft, casing information not available.

INSTRUMENTATION.--Data collection platform.

DATUM.--Altitude of land-surface datum is 351 ft. Measuring point: Top of plywood shelf, 2.55 ft above land-surface datum. Prior to May 1, 1981, top of casing, 1.30 ft above land-surface datum.

REMARKS.--Well originally drilled to 300 ft. Water-level data for August 1956 to December 1965 published in U.S. Geological Survey Water-Supply Papers under local number MG-127. Well deepened to 600 ft in December 1965 and assigned local number MG-884. Missing record due to DCP malfunction.

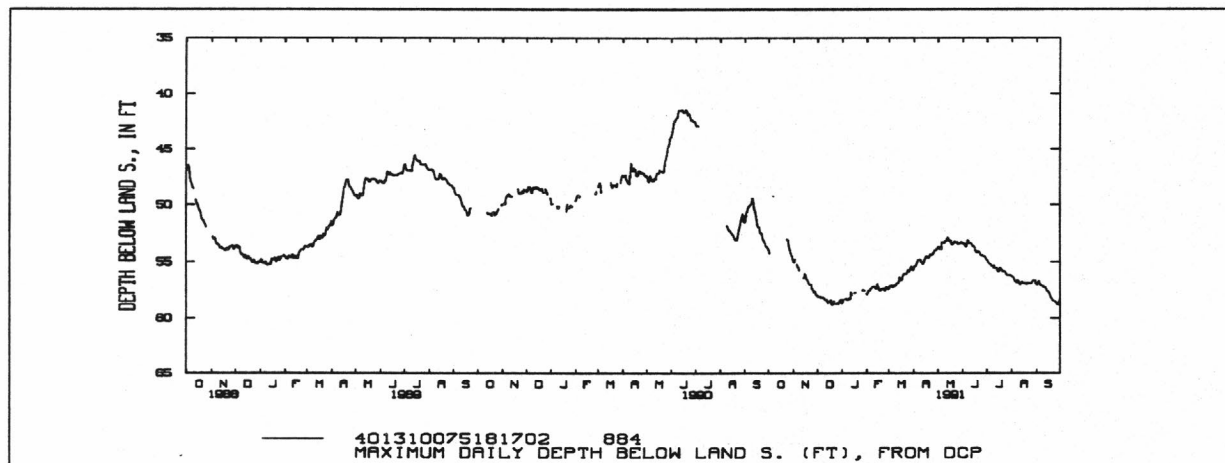
PERIOD OF RECORD.--March 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.03 ft below land-surface datum, Apr. 29, 1987; lowest, 93.17 ft below land-surface datum, Oct. 20, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.96	54.96	57.96	58.61	57.86	57.34	55.43	53.67	53.41	54.85	56.29	57.02
2	54.25	55.03	58.12	58.33	57.76	57.10	55.39	53.67	53.41	54.88	56.33	57.03
3	---	54.75	58.12	58.30	57.51	57.09	55.31	53.85	53.37	55.09	56.37	56.82
4	---	---	58.06	---	57.51	57.06	55.17	53.90	53.58	55.13	56.53	56.71
5	---	55.17	58.15	58.32	57.49	57.22	55.01	53.89	53.65	55.17	56.71	56.93
6	---	55.47	58.14	58.23	57.33	57.17	54.85	53.28	53.49	55.25	56.80	57.03
7	---	55.43	58.17	58.33	57.27	57.07	54.83	53.29	53.10	55.33	56.81	57.08
8	---	55.75	58.13	58.33	57.18	57.10	54.84	53.33	53.16	55.37	56.61	57.15
9	---	---	58.21	58.29	57.13	57.09	54.75	53.32	53.32	55.51	56.65	57.19
10	---	---	58.29	58.26	57.15	56.90	54.99	53.19	53.37	55.31	56.85	57.17
11	---	---	58.38	58.25	57.26	56.87	55.05	53.21	53.37	55.52	56.96	57.26
12	---	---	58.29	57.65	57.36	56.87	55.15	52.97	53.39	55.58	56.99	57.29
13	---	56.45	58.47	57.93	57.19	56.74	55.05	52.87	53.57	55.55	56.81	57.37
14	---	56.41	58.65	---	56.91	56.35	54.82	52.96	53.64	55.77	56.78	57.60
15	---	56.04	58.49	---	57.23	56.56	54.67	53.16	53.59	55.84	56.85	57.63
16	---	56.11	58.52	57.77	57.49	56.60	54.51	53.19	53.77	55.85	56.91	57.67
17	---	56.50	58.55	57.73	57.53	56.53	54.50	53.12	54.05	55.60	56.89	57.85
18	---	56.57	58.37	57.73	57.54	56.23	54.63	53.44	54.15	55.54	56.88	57.93
19	---	56.72	58.79	---	57.39	56.07	54.63	53.48	54.13	55.69	56.95	58.17
20	---	56.92	58.81	57.43	57.38	56.08	54.60	53.37	54.10	55.75	56.95	58.25
21	---	56.98	58.64	---	57.39	56.08	54.34	53.26	54.10	55.83	56.87	58.39
22	---	57.01	58.46	---	57.31	56.06	54.31	53.19	54.21	55.88	56.87	58.45
23	53.02	56.99	---	---	57.55	56.06	54.39	53.29	54.41	55.81	56.85	58.52
24	53.06	57.36	58.68	57.48	57.47	55.69	54.33	53.29	54.43	55.95	56.89	58.59
25	53.03	57.39	58.71	---	57.21	55.87	54.29	53.29	54.46	56.06	56.90	58.51
26	53.53	57.68	58.68	57.55	57.21	55.88	54.09	53.41	54.45	56.15	56.83	58.70
27	53.81	57.68	58.71	57.44	57.30	55.69	53.94	53.41	54.53	56.19	56.65	58.80
28	54.09	57.63	58.63	57.49	57.40	55.40	53.98	53.38	54.52	56.19	56.66	58.83
29	54.41	57.88	58.44	57.58	---	55.40	53.96	53.38	54.57	56.19	56.67	58.63
30	54.49	57.99	58.30	---	---	55.69	53.81	53.27	54.74	56.19	56.62	58.31
31	54.79	---	58.61	57.81	---	55.73	---	53.28	---	56.25	56.85	---
MEAN	---	56.43	58.32	57.84	57.29	56.32	54.55	53.26	53.80	55.59	56.70	57.69
MAX	---	57.99	58.81	58.61	57.86	57.34	55.43	53.90	54.74	56.25	56.99	58.83
MIN	---	54.63	57.03	56.85	56.61	55.09	53.61	52.73	53.01	54.74	56.22	56.64

WTR YR 1991 MEAN 56.16 HIGH 52.73 MAY 6 LOW 58.83 SEPT 28



NORTHAMPTON COUNTY

403511075210001. Local number, NP 83.

LOCATION.--Lat 40°35'11", long 75°21'00", Hydrologic Unit 02040106, at Bethlehem.

Owner: Lehigh University.

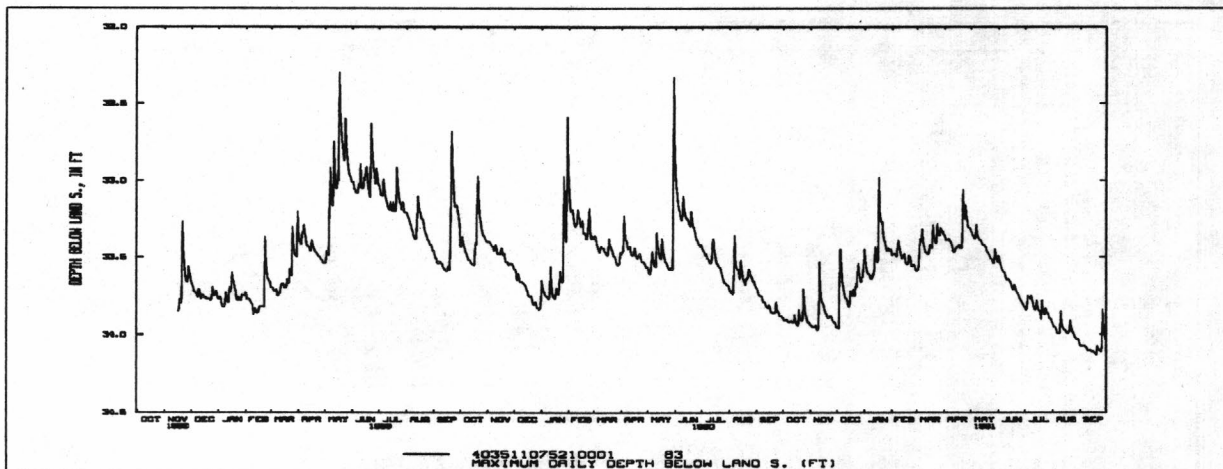
AQUIFER.--Dolomite of Leithsville Formation of Early and Middle Cambrian area.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 8 in, depth 106 ft.**INSTRUMENTATION.**--Digital recorder.**DATUM.**--Altitude of land-surface datum is 288 ft. Measuring point: Top of casing, 4.55 ft above land-surface datum.**REMARKS.**--No missing record. Well does not drop below 34.00 ft due to stream (Saucon Creek) at that elevation.**PERIOD OF RECORD.**--November 1988 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 30.43 ft below land-surface datum, May 30, 1989; lowest,

34.13 ft below land-surface datum, Sept. 19, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.89	33.94	33.95	33.45	33.49	33.59	33.35	33.33	33.49	33.83	33.93	34.07
2	33.91	33.94	33.96	33.52	33.48	33.58	33.37	33.34	33.52	33.84	33.95	34.07
3	33.91	33.95	33.96	33.57	33.48	33.56	33.39	33.36	33.54	33.83	33.95	34.07
4	33.91	33.95	33.45	33.60	33.48	33.43	33.39	33.37	33.56	33.75	33.95	34.07
5	33.90	33.95	33.45	33.61	33.49	33.38	33.39	33.38	33.58	33.76	33.97	34.07
6	33.91	33.95	33.58	33.61	33.50	33.40	33.38	33.38	33.59	33.76	33.99	34.07
7	33.92	33.94	33.66	33.62	33.44	33.32	33.39	33.29	33.60	33.77	33.99	34.08
8	33.92	33.97	33.69	33.64	33.39	33.39	33.40	33.34	33.60	33.75	33.99	34.08
9	33.92	33.97	33.73	33.64	33.43	33.42	33.41	33.37	33.63	33.78	33.99	34.10
10	33.91	33.95	33.76	33.62	33.45	33.45	33.43	33.38	33.64	33.80	33.85	34.10
11	33.92	33.53	33.77	33.61	33.48	33.47	33.46	33.39	33.65	33.83	33.92	34.10
12	33.92	33.69	33.77	33.58	33.51	33.47	33.47	33.39	33.64	33.84	33.95	34.10
13	33.92	33.76	33.80	33.43	33.50	33.48	33.46	33.40	33.65	33.84	33.96	34.10
14	33.87	33.79	33.82	33.49	33.49	33.48	33.44	33.42	33.66	33.78	33.97	34.11
15	33.92	33.80	33.82	33.53	33.48	33.46	33.44	33.42	33.67	33.82	33.97	34.11
16	33.93	33.81	33.72	33.53	33.54	33.42	33.43	33.42	33.69	33.84	33.98	34.11
17	33.94	33.84	33.75	32.98	33.54	33.44	33.43	33.43	33.71	33.85	33.99	34.12
18	33.94	33.86	33.75	33.20	33.55	33.44	33.42	33.44	33.71	33.87	33.99	34.12
19	33.84	33.87	33.71	33.25	33.54	33.29	33.44	33.46	33.68	33.90	33.99	34.13
20	33.89	33.89	33.75	33.27	33.49	33.36	33.44	33.47	33.70	33.78	33.97	34.07
21	33.90	33.89	33.75	33.27	33.50	33.38	33.44	33.48	33.72	33.83	33.91	34.09
22	33.91	33.89	33.67	33.35	33.52	33.41	33.06	33.49	33.73	33.85	33.95	34.10
23	33.91	33.88	33.69	33.39	33.56	33.41	33.22	33.51	33.74	33.87	33.98	34.10
24	33.71	33.88	33.59	33.40	33.56	33.28	33.25	33.51	33.75	33.83	33.99	34.11
25	33.79	33.89	33.54	33.43	33.55	33.34	33.16	33.52	33.77	33.86	34.00	34.08
26	33.86	33.91	33.61	33.46	33.55	33.36	33.23	33.54	33.78	33.86	34.02	33.84
27	33.88	33.92	33.64	33.44	33.57	33.36	33.26	33.54	33.79	33.87	34.02	33.95
28	33.90	33.92	33.66	33.44	33.59	33.31	33.31	33.45	33.80	33.89	34.03	34.00
29	33.92	33.93	33.63	33.46	---	33.33	33.31	33.48	33.81	33.90	34.03	34.03
30	33.92	33.95	33.63	33.45	---	33.33	33.31	33.51	33.82	33.90	34.03	34.04
31	33.93	---	33.54	33.45	---	33.35	---	33.53	---	33.92	34.05	---
MEAN	33.88	33.84	33.64	33.42	33.49	33.37	33.33	33.41	33.66	33.81	33.96	34.04
MAX	33.94	33.97	33.96	33.64	33.59	33.59	33.47	33.54	33.82	33.92	34.05	34.13
MIN	33.44	32.66	32.50	32.76	33.34	33.09	32.72	33.12	33.37	33.52	33.70	33.31

WTR YR 1991 MEAN 33.65 HIGH 32.50 DEC 4 LOW 34.13 SEPT 19



PHILADELPHIA COUNTY

395342075102101. Local number, PH 12.

LOCATION.--Lat 39°53'42", long 75°10'21", Hydrologic Unit 02040202, at Barracks and East Fourth Streets, Philadelphia. Owner: U.S. Naval Base.

AQUIFER.--Middle Sand Unit of Potomac-Raritan-Magothy aquifer system of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in, depth 104 ft, cased to 94 ft, screened 94-104 ft.

INSTRUMENTATION.--Digital recorder.

DATUM.--Altitude of land-surface datum is 8.64 ft. Measuring point: Top of casing, 1.80 ft above land-surface datum.

REMARKS.--Mean daily fluctuation caused by tidal loading, 0.20 ft. Missing record due to malfunction of digital recorder.

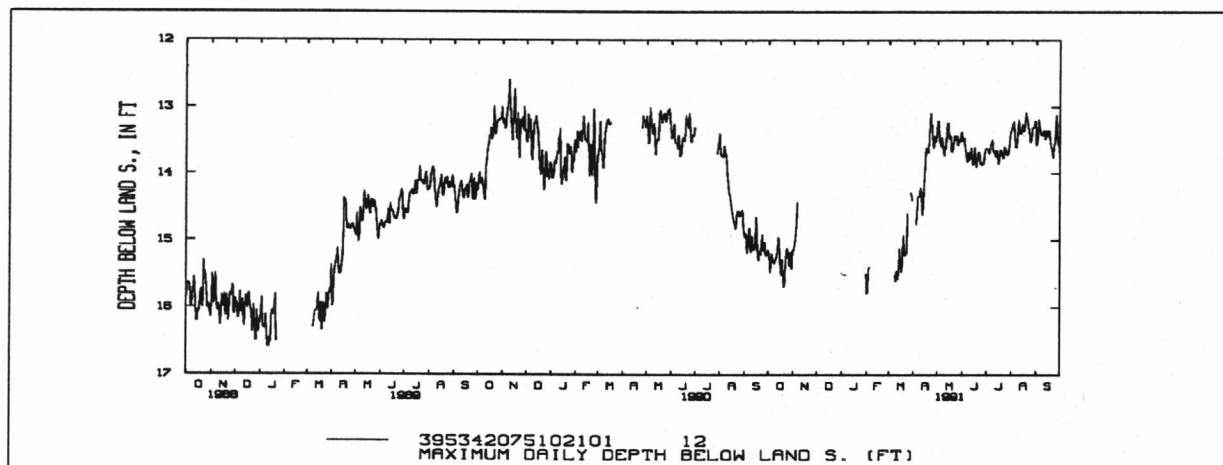
PERIOD OF RECORD.--January 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.39 ft below land-surface datum, Nov. 16, 1989; lowest, 39.60 ft below land-surface datum, July 20, 1955.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.18	15.15	---	---	15.79	---	---	13.21	13.50	13.63	13.35	13.57
2	15.29	15.09	---	---	15.76	---	---	13.21	13.50	13.63	13.26	13.55
3	15.48	15.02	---	---	15.43	---	---	13.46	13.47	13.65	13.25	13.40
4	15.29	14.91	---	---	15.40	---	14.76	13.54	13.61	13.70	13.22	13.19
5	15.20	14.75	---	---	---	---	14.60	13.59	13.70	13.62	13.43	13.29
6	15.27	14.43	---	---	---	---	14.36	13.46	13.80	13.56	13.60	13.37
7	15.33	---	---	---	---	---	14.35	13.57	13.82	13.53	13.60	13.42
8	15.34	---	---	---	---	15.52	14.34	13.67	13.68	13.49	13.49	13.42
9	15.30	---	---	---	---	15.60	14.21	13.73	13.80	13.64	13.35	13.43
10	15.27	---	---	---	---	15.45	14.24	13.59	13.75	13.67	13.19	13.36
11	15.24	---	---	---	---	15.50	14.40	13.62	13.65	13.71	13.35	13.35
12	15.17	---	---	---	---	15.57	14.62	13.34	13.61	13.75	13.40	13.48
13	14.96	---	---	---	---	15.32	14.46	13.25	13.84	13.65	13.38	13.40
14	14.99	---	---	---	---	15.12	14.13	13.24	13.87	13.66	13.31	13.35
15	15.20	---	---	---	---	15.36	13.90	13.46	13.80	13.81	13.26	13.44
16	15.47	---	---	---	---	15.47	13.62	13.48	13.60	13.86	13.36	13.35
17	15.52	---	---	---	---	15.42	13.62	13.43	13.80	13.75	13.35	13.37
18	15.28	---	---	---	---	15.09	13.68	13.66	13.90	13.64	13.20	13.50
19	15.52	---	---	---	---	14.93	13.68	13.67	13.81	13.66	13.08	13.59
20	15.69	---	---	---	---	15.22	13.53	13.58	13.76	13.72	13.16	13.65
21	15.64	---	---	---	---	15.22	13.23	13.51	13.67	13.71	13.22	13.71
22	15.38	---	---	---	---	15.17	13.09	13.43	13.70	13.77	13.30	13.76
23	15.20	---	---	---	---	15.19	13.29	13.49	13.82	13.60	13.35	13.56
24	15.12	---	---	---	---	14.60	13.27	13.49	13.86	13.61	13.51	13.56
25	15.13	---	---	---	---	---	13.55	13.43	13.87	13.68	13.53	13.22
26	15.26	---	---	---	---	---	13.61	13.57	13.85	13.71	13.46	13.12
27	15.38	---	---	---	---	---	13.44	13.52	13.85	13.72	13.32	13.39
28	15.18	---	---	---	---	14.29	13.53	13.49	13.77	13.68	13.31	13.56
29	15.37	---	---	---	---	14.33	13.49	13.52	13.64	13.61	13.30	13.56
30	15.42	---	---	---	---	14.40	13.38	13.39	13.63	13.44	13.23	13.69
31	15.16	---	---	15.50	---	---	---	13.37	---	13.36	13.21	---
MEAN	15.18	---	---	---	---	15.00	13.76	13.39	13.66	13.58	13.26	13.36
MAX	15.69	---	---	---	---	15.60	14.76	13.73	13.90	13.86	13.60	13.76
MIN	14.77	---	---	---	---	14.07	12.79	13.00	13.29	13.27	12.93	12.89

WTR YR 1991 MEAN 13.90 HIGH 12.79 APRIL 21, 22 LOW OBSERVED 15.79 FEB 1



PIKE COUNTY

410940074583401. Local number, PI 200.

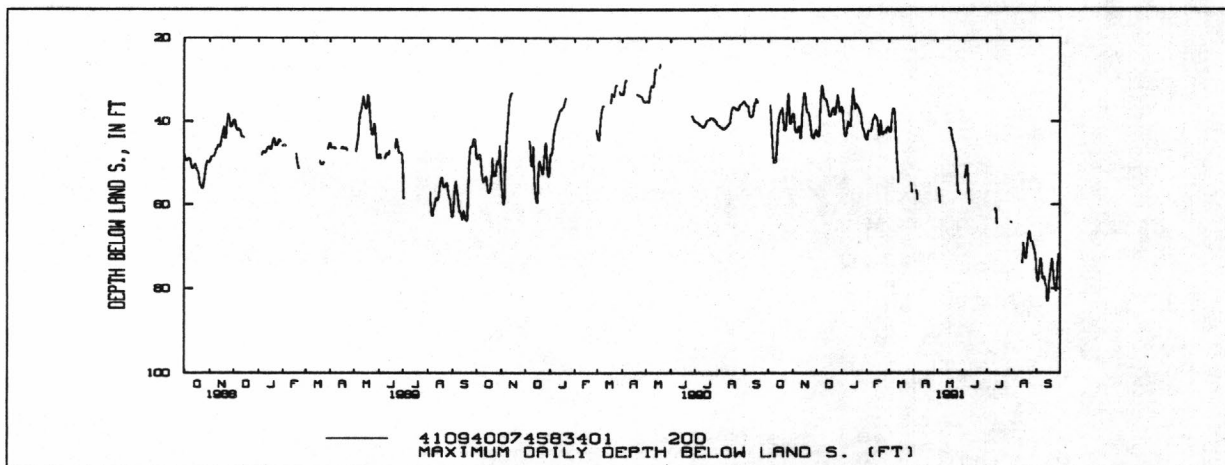
LOCATION.--Lat 41°09'40", long 74°58'34", Hydrologic Unit 02040104, at Pocono Mountain Lake Estates.

Owner: Pocono Mountain Lake Estates.

AQUIFER.--Sandstone and siltstone of Towamensing Member of Catskill Formation of Late Devonian age.**WELL CHARACTERISTICS.**--Drilled unused artesian well, diameter 8 in, depth 799 ft, cased to 86 ft, open hole.**INSTRUMENTATION.**--Digital recorder.**DATUM.**--Altitude of land-surface datum is 1,180 ft. Measuring point: Top of plywood shelf, 1.40 ft above land-surface datum.**REMARKS.**--Missing record due to float hanging up on casing.**PERIOD OF RECORD.**--July 1981 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 24.88 ft below land-surface datum, Apr. 18, 1983; lowest, 83.04 ft below land-surface datum, Sept. 15, 1991.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	38.04	42.36	36.48	44.40	41.72	---	---	---	---	64.37	76.30
2	---	38.31	43.47	37.09	44.38	42.47	---	55.83	---	---	---	78.19
3	---	40.00	43.65	39.93	42.29	42.53	---	56.48	---	---	---	78.33
4	36.13	42.22	43.39	42.35	42.29	40.95	56.46	59.61	53.56	---	---	77.02
5	39.99	42.72	37.76	43.61	42.37	38.19	56.71	---	52.20	---	---	74.74
6	43.97	42.73	33.54	43.61	42.37	36.97	58.71	---	50.65	---	---	72.79
7	48.04	42.00	31.30	42.92	42.02	36.85	---	---	50.68	---	---	73.61
8	49.88	41.18	31.70	41.48	40.88	37.37	---	---	53.27	---	---	76.28
9	49.98	41.18	33.53	39.93	39.45	40.18	---	---	58.02	---	---	77.61
10	49.84	44.08	34.40	40.98	39.55	45.37	---	---	59.81	---	---	77.69
11	49.47	43.92	34.56	41.19	38.33	48.45	---	---	---	61.26	---	77.17
12	46.69	40.52	34.69	41.14	38.69	51.03	---	---	---	60.84	---	78.97
13	42.70	37.01	35.05	38.88	39.08	54.69	---	---	---	61.30	---	79.53
14	40.11	34.40	35.62	34.64	39.33	---	---	---	---	64.57	73.97	82.95
15	38.74	33.15	36.76	32.09	39.92	---	---	41.60	---	---	72.22	83.04
16	37.93	33.16	38.37	34.35	42.47	---	---	41.62	---	---	69.16	81.28
17	37.41	34.73	38.77	34.95	43.36	---	---	41.72	---	---	70.85	78.22
18	37.29	36.94	38.77	36.99	42.38	---	---	42.04	---	---	72.74	76.31
19	36.72	37.68	38.24	35.71	39.88	---	---	43.85	---	---	72.78	74.73
20	39.60	37.85	37.43	35.98	43.01	---	---	44.56	---	---	71.19	72.98
21	41.99	37.99	36.92	36.31	43.13	---	---	44.99	---	---	68.69	73.65
22	42.17	39.55	36.67	36.79	42.99	---	---	46.05	---	---	67.33	76.36
23	42.14	40.72	38.17	37.19	42.45	---	---	47.05	---	---	66.32	78.49
24	40.35	42.21	38.44	37.78	42.66	---	---	47.63	---	---	66.81	79.90
25	35.72	43.87	36.85	38.31	42.68	---	---	51.37	---	---	68.64	80.57
26	33.31	44.04	34.92	39.67	42.14	---	---	55.48	---	---	68.84	79.97
27	34.15	44.04	33.66	41.43	41.59	---	---	57.13	---	---	68.89	75.56
28	40.30	43.22	34.76	41.90	41.30	---	---	57.29	---	---	69.57	71.83
29	40.52	42.84	36.58	42.58	---	54.80	---	57.51	---	---	70.43	72.07
30	39.97	42.05	37.59	43.41	---	56.96	---	---	---	---	71.00	72.16
31	38.67	---	37.63	44.12	---	---	---	---	---	64.06	73.01	---
MEAN	40.14	39.37	36.22	38.40	41.10	43.48	---	48.73	---	---	69.02	75.90
MAX	49.98	44.08	43.65	44.12	44.40	56.96	---	59.61	---	---	73.97	83.04
MIN	32.43	32.73	30.54	31.17	37.76	36.59	---	41.12	---	---	63.97	70.33

WTR YR 1991 MEAN 48.04 HIGH 30.54 DEC 8 LOW 83.04 SEPT 15



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.

DATUM.--Altitude of land-surface datum is 1,290 ft. Measuring point: Top of plywood shelf, 2.78 ft above land-surface datum. Prior to June 26, 1980, top of casing, 2.30 ft above land-surface datum.

REMARKS.--Missing record due to DCP downlink failure.

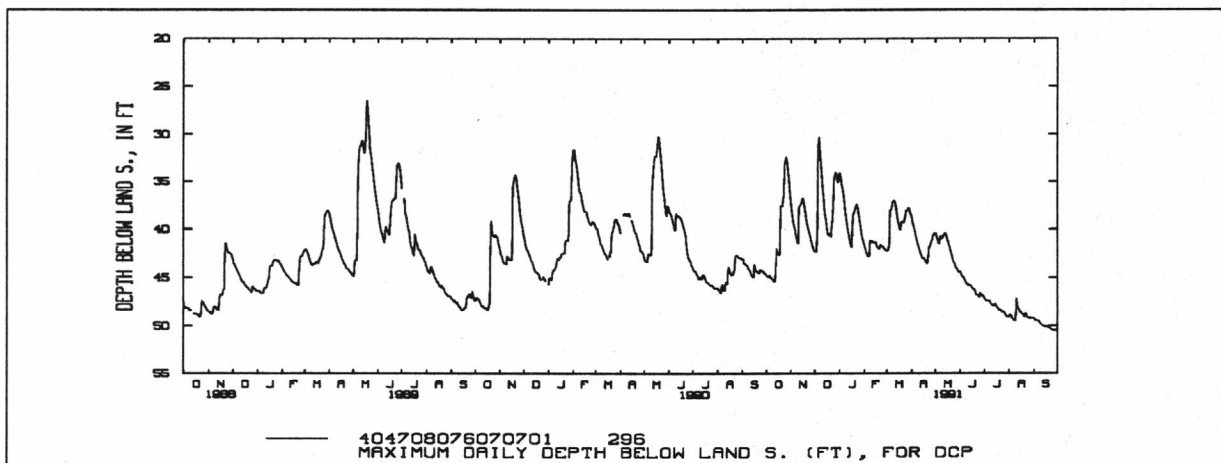
PERIOD OF RECORD.--July 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.27 ft below land-surface datum, May 18, 1989; lowest, 55.86 ft below land-surface datum, Nov. 14, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.73	37.10	42.30	34.11	41.68	42.23	38.73	40.41	44.39	47.13	49.07	49.21
2	44.84	38.00	42.30	34.52	41.97	42.23	39.16	40.49	44.61	47.29	48.81	49.33
3	44.93	38.71	42.30	34.90	42.27	42.01	39.51	40.87	44.81	47.34	48.91	49.44
4	44.93	39.30	40.23	35.47	42.55	41.69	39.81	41.05	44.90	47.38	49.00	49.44
5	44.79	39.73	31.02	35.83	42.78	38.05	40.19	41.45	44.93	47.42	49.27	49.47
6	44.92	40.07	30.30	36.45	42.78	37.96	40.59	41.52	45.15	47.44	49.27	49.48
7	45.00	40.50	31.19	37.18	42.73	37.87	40.98	40.69	45.27	47.44	49.45	49.49
8	45.14	40.99	32.48	37.97	41.18	37.23	41.30	40.92	45.47	47.46	49.45	49.69
9	45.19	41.33	33.53	38.71	41.15	37.09	41.63	40.92	45.65	47.65	49.45	49.77
10	45.40	41.41	34.71	39.46	41.20	37.01	41.90	40.83	45.71	47.73	47.18	49.82
11	45.42	37.61	35.86	40.00	41.25	37.12	42.15	40.67	45.82	47.87	47.61	49.98
12	45.20	37.59	36.84	40.43	41.32	37.46	42.46	40.59	45.71	47.92	48.13	49.98
13	43.57	37.47	37.86	40.93	41.32	37.96	42.69	40.40	45.85	47.92	48.26	50.04
14	41.98	37.19	38.61	41.36	41.32	38.50	42.93	40.45	45.85	47.73	48.46	50.10
15	42.45	36.89	39.11	41.73	41.31	39.19	43.02	40.73	45.89	47.71	48.51	50.09
16	42.56	36.73	39.88	41.81	41.54	39.55	42.92	41.09	46.07	47.91	48.61	50.07
17	42.62	37.13	40.50	39.76	41.81	40.00	43.09	41.30	46.19	48.04	48.72	50.08
18	42.48	37.61	40.60	38.40	41.93	40.06	43.22	41.55	46.19	48.18	48.80	50.15
19	37.63	38.17	40.40	38.24	42.04	39.24	43.37	41.93	46.26	48.36	48.86	50.16
20	37.53	38.74	40.64	38.01	41.89	39.26	43.49	42.25	46.44	48.30	49.09	50.20
21	37.55	39.31	40.73	37.65	41.59	39.34	43.49	42.56	46.79	48.33	48.64	50.27
22	37.08	39.75	39.78	37.40	41.64	39.31	42.89	42.86	46.79	48.42	48.71	50.30
23	36.43	40.03	38.90	37.52	41.76	39.11	41.82	43.20	46.79	48.53	49.06	50.42
24	33.03	40.40	37.30	37.91	41.80	38.63	41.80	43.45	46.93	48.49	49.10	50.46
25	32.78	40.61	34.61	38.43	41.92	38.12	41.61	43.54	47.02	48.56	49.12	50.44
26	32.42	41.10	34.23	39.14	42.02	38.02	41.23	43.78	46.57	48.58	49.22	50.42
27	32.73	41.41	33.99	39.66	42.12	38.00	41.01	44.07	46.71	48.78	49.26	50.48
28	33.41	41.77	34.22	40.23	42.15	37.77	40.62	44.10	46.79	48.90	49.19	50.48
29	34.35	41.96	34.82	40.75	---	37.87	40.59	44.26	46.83	49.07	49.20	50.48
30	35.10	42.24	35.09	41.09	---	38.20	40.45	44.42	46.92	49.07	49.21	50.52
31	36.31	---	34.34	41.33	---	38.39	---	44.42	---	49.05	49.21	---
MEAN	40.13	39.13	36.45	38.33	41.72	38.65	41.48	41.84	45.91	48.00	48.76	49.97
MAX	45.42	42.24	42.30	41.81	42.78	42.23	43.49	44.42	47.02	49.07	49.45	50.52
MIN	32.31	36.32	29.23	33.81	40.92	34.99	38.40	40.33	44.14	46.92	46.69	49.21

WTR YR 1991 MEAN 42.52 HIGH 29.23 Dec 5 LOW 50.52 SEPT 30



WAYNE COUNTY

414333075153201. Local number, WN 64.

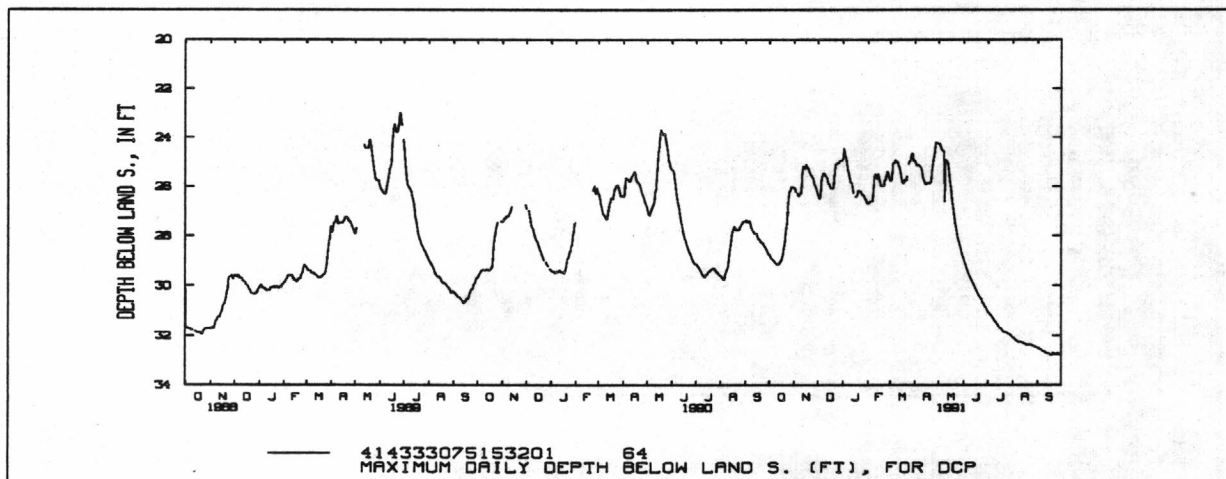
LOCATION.--Lat 41°43'33", long 75°15'32", Hydrologic Unit 02040103, at State Game Land Number 159.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Glacial Outwash of Quaternary age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 52 ft, cased to 52 ft, open end.**INSTRUMENTATION.**--Data collection platform.**DATUM.**--Altitude of land-surface datum is 1,350 ft. Measuring point: Top of plywood shelf, 2.63 ft above land-surface datum. Prior to Apr. 30, 1980, top of plywood cover, 2.57 ft above land-surface datum.**REMARKS.**--Missing record due to DCP downlink malfunction and renovation of gaging station.**PERIOD OF RECORD.**--October 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 7.88 ft below land-surface datum, Nov. 17, 1972; lowest, 32.81 ft below land-surface datum, Sept. 18, 1981.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.75	26.07	26.34	24.86	26.72	25.77	24.97	24.27	28.97	31.06	32.08	32.52
2	28.83	26.11	26.48	24.45	26.70	25.77	25.09	24.27	29.07	31.08	32.10	32.54
3	28.89	26.23	26.50	24.59	26.64	25.67	25.15	24.35	29.15	31.10	32.14	32.54
4	28.91	---	26.32	24.79	26.62	25.09	25.16	24.47	29.27	31.16	32.16	32.56
5	28.95	26.29	25.76	24.87	26.62	25.07	25.12	24.53	29.35	31.20	32.20	32.58
6	28.99	26.39	25.59	25.09	26.62	25.05	25.15	24.55	29.45	31.24	32.22	32.61
7	29.03	26.39	25.49	25.33	26.56	24.93	25.19	24.57	29.53	31.29	32.24	32.63
8	29.07	26.31	25.47	25.47	26.04	25.01	25.25	26.61	29.59	31.33	32.26	32.65
9	29.11	26.31	25.49	25.61	25.61	25.01	25.26	24.92	29.67	31.39	32.28	32.67
10	29.13	26.15	25.57	25.81	25.51	25.01	25.48	24.95	29.75	31.43	32.26	32.67
11	29.15	25.47	25.61	25.87	25.59	25.13	25.68	24.99	29.81	31.47	32.26	32.71
12	29.15	25.19	25.63	25.87	25.71	25.19	25.77	25.05	29.89	31.53	32.28	32.71
13	29.13	25.23	25.81	26.08	25.61	25.31	25.83	25.21	29.93	31.55	32.28	32.73
14	29.07	25.29	25.91	26.28	25.49	25.51	25.92	25.57	30.01	31.61	32.30	32.75
15	29.01	25.19	25.91	---	25.69	25.71	25.92	25.87	30.09	31.67	32.32	32.75
16	28.97	25.11	26.05	26.44	25.81	25.85	25.86	26.15	30.15	31.69	32.34	32.77
17	28.85	25.23	26.09	26.42	25.97	25.87	25.86	26.45	30.23	31.71	32.36	32.79
18	28.73	25.25	---	26.40	25.99	25.87	25.89	26.75	30.29	31.75	32.38	32.81
19	28.47	25.29	26.08	26.32	25.99	25.75	25.89	26.99	30.35	31.81	32.38	32.79
20	28.31	25.43	26.08	26.18	25.95	25.77	25.85	27.23	30.42	31.83	32.38	32.71
21	27.97	25.50	25.64	26.22	25.95	25.75	25.82	27.45	30.46	31.85	32.38	32.73
22	27.67	25.56	25.22	26.23	25.75	25.59	25.38	27.65	30.50	31.87	32.37	32.76
23	27.45	25.56	25.08	26.21	25.73	---	25.16	27.85	30.54	31.88	32.38	32.76
24	26.89	25.66	25.08	26.29	25.61	25.09	24.91	28.03	30.66	31.88	32.38	32.76
25	26.47	25.70	25.08	26.35	25.41	24.99	24.75	28.17	30.70	31.90	32.40	32.76
26	26.19	25.92	25.02	26.35	25.41	24.97	24.45	28.27	30.76	31.92	32.42	32.72
27	26.19	25.96	25.04	26.37	25.57	24.71	24.22	28.37	30.82	31.92	32.44	32.76
28	26.03	26.04	24.96	26.49	25.69	24.66	24.22	28.49	30.86	31.96	32.46	32.78
29	26.03	26.16	24.96	26.55	---	24.68	24.25	28.67	30.90	31.98	32.46	32.78
30	26.03	26.28	24.95	26.57	---	24.94	24.25	28.75	31.00	32.00	32.48	32.80
31	26.05	---	24.94	26.68	---	24.96	---	28.85	---	32.07	32.50	---
MEAN	28.05	25.71	25.53	25.84	25.89	25.21	25.90	26.27	30.04	31.60	32.34	32.69
MAX	29.15	26.39	26.50	26.68	26.72	25.87	25.92	28.85	31.00	32.07	32.50	32.81
MIN	25.93	25.07	24.69	24.37	25.35	24.37	24.14	24.19	28.87	31.00	32.04	32.69

WTR YR 1991 MEAN 27.90 HIGH 24.14 APR 27 LOW 32.81 SEPT 18



ACCESS TO WATSTORE DATA	19	CHESTER CREEK, NEAR CHESTER	212
ACCURACY OF THE RECORDS	14	EAST BRANCH, AT GREEN HILL	290
ACRE-FOOT, DEFINITION OF	20	AT MILLTOWN	290
ADENOSINE TRIPHOSPHATE, DEFINITION OF	20	AT WESTTOWN SCHOOL	290
ALDENVILLE, WEST BRANCH LACKAWAXEN RIVER, AT ..	271	NEAR WEST CHESTER BELOW GOOSE CREEK	290
NEAR	40	CHESTER SPRINGS, PICKERING CREEK NEAR	285
ALGAE, DEFINITION OF	20	CHESTERVILLE, WEST BRANCH WHITE CLAY	
ALGAL GROWTH POTENTIAL, DEFINITION OF	20	CREEK NEAR	290
ALLEGHENY CREEK AT GILBRALTER	274	CHLOROPHYLL, DEFINITION OF	20
ALLEN TOWN, JORDAN CREEK AT	109	CHRISTINA RIVER BASIN, GAGING STATION IN	221
LEHIGH RIVER AT	268, 272	RESERVOIR IN	260
LITTLE LEHIGH CREEK NEAR	104	CLASSIFICATION OF RECORDS	15
LITTLE LEHIGH CREEK AT TENTH STREET BRIDGE ..	106	CLAYRIDGE, BEAVER CREEK NEAR BEAVER RUN ROAD ..	
ANALOMINK, BRODHEAD CREEK NEAR	71	NEAR	302
ANALYSES OF SAMPLES COLLECTED AT ,		COATESVILLE, SUCKER RUN NEAR	270
WATER-QUALITY PARTIAL-RECORD STATIONS	285	WEST BRANCH BRANDYWINE CREEK AT	223
AQUASHICOLA CREEK AT PALMERTON	100	COLLEGEVILLE, SKIPPACK CREEK NEAR	193
AQUIFER, DEFINITION OF	20	COLOR UNIT, DEFINITION OF	21
ARTESIAN, DEFINITION OF	20	CONTENTS, DEFINITION OF	21
AUBURN, BEAR CREEK NEAR	274	CONTINUOUS RECORD STATION, DEFINITION OF	21
AVONDALE, EAST BRANCH WHITE CLAY CREEK		CONTROL, DEFINITION OF	21
AT	290	CONTROL STRUCTURE, DEFINITION OF	21
BACTERIA, DEFINITION OF	20	COOKS CREEK AT DURHAM FURNANCE	122
BARNESVILLE, PINE CREEK AT	274	COOPERATION	1
BARRYVILLE, NY DELAWARE RIVER ABOVE		COVENTRYVILLE, FRENCH CREEK AT	275
LACKAWAXEN RIVER NEAR	37	NEAR	285
DELAWARE RIVER AT	57	SOUTH BRANCH AT	285
BATH, EAST BRANCH MONOCACY CREEK NEAR	273	CRESSONA, WEST BRANCH SCHUYLKILL RIVER NEAR ..	269
BEAR CREEK NEAR AUBURN	274	CREST-STAGE PARTIAL-RECORD STATIONS	268
NEAR WHITE HAVEN	272	CRUM CREEK, AT WHITEHORSE	290
BEAVER CREEK NEAR BEAVER RUN ROAD NEAR		NEAR NEWTOWN SQUARE	210
CLAYRIDGE	302	CUBIC FEET PER SECOND PER SQUARE MILE,	
BEAVER RUN TRIBUTARY AT QUAKERTOWN	273	DEFINITION OF	21
BED MATERIAL, DEFINITION OF	20	CUBIC FOOT PER SECOND, DEFINITION OF	21
BELTZVILLE LAKE	120	CUPOLA, EAST BRANCH BRANDYWINE CREEK NEAR	295
BELVIDERE, NJ, DELAWARE RIVER AT	75	DARBY CREEK BASIN, GAGING STATIONS IN	208
BERNE, SCHUYLKILL RIVER AT	163	DARBY CREEK, AT WATERLOO MILLS NEAR DEVON	208
BERNVILLE, LITTLE NORTHKILL CREEK NEAR	269, 274	DATA COLLECTION PLATFORM, DEFINITION OF	21
NORTHKILL CREEK AT	269, 274	DEFINITION OF TERMS	20
TULPEHOCKEN CREEK, AT	274	DELAWARE RIVER, ABOVE LACKAWAXEN RIVER	
NEAR	166	NEAR BARRYVILLE, NY	37
BETHLEHEM, LEHIGH RIVER AT	112	AT BARRYVILLE, NY	57
MONOCACY CREEK AT	111	AT BELVIDERE, NJ	75
BIG ELK CREEK AT LEWISVILLE	275	AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA ..	152
NEAR LEWISVILLE	276	AT CALLICOON, NY	34
EAST BRANCH AT ELKVIEW	300	AT CHESTER	214
WEST BRANCH NEAR OXFORD	300	AT FORT MIFFLIN AT PHILADELPHIA	204
BIOCHEMICAL OXYGEN DEMAND, DEFINITION OF	20	AT LORDVILLE, NY	32
BIOMASS, DEFINITION OF	20	AT MONTAGUE, NJ	65
BIRDSBORO, SCHUYLKILL RIVER AT	269	AT POND EDDY, NY	59
BLAKESLEE, TOBYHANNA CREEK NEAR	83	AT PORT JERVIS, NY	61
BLUE MARSH LAKE	202	AT REEDY ISLAND JETTY, DE	261
BRANDYWINE CREEK, AT CHADDS FORD	251	AT TRENTON, NJ	128
EAST BRANCH AT DORLAN	275	BELOW TOCKS ISLAND DAMSITE, NEAR DELAWARE ..	
AT GLENMOORE	295	WATER GAP	70
AT WAWASET	295	DELAWARE WATER GAP, DELAWARE RIVER BELOW	
BELOW DOWNINGTOWN	239	TOCKS ISLAND DAMSITE, NEAR	70
NEAR CUPOLA	295	DEVON, DARBY CREEK AT WATERLOO MILLS NEAR	208
NEAR DOWNINGTOWN	236	DILLDOWN CREEK NEAR LONG POND	91
NEAR CHADDS FORD	295	DISCHARGE, DEFINITION OF	21
WEST BRANCH, AT COATESVILLE	223	DISCHARGE AT PARTIAL-RECORD STATIONS AND	
AT MODENA	225	MISCELLANEOUS SITES	268
AT ROCK RUN	295	DISSOLVED, DEFINITION OF	21
AT WAWASET	295	DISSOLVED-SOLIDS CONCENTRATION, DEFINITION	
NEAR HONEY BROOK	222	OF	21
BROAD RUN AT VALLEY CREEK ROAD NEAR EXTON	320	DOE RUN, BUCK RUN AT	295
BRODHEAD CREEK BASIN, GAGING STATIONS IN	71	NEAR	275
BRODHEAD CREEK AT MINISINK MILLS	73	DOE RUN AT SPRINGDELL	295
NEAR ANALOMINK	71	DOWNINGTOWN, EAST BRANCH BRANDYWINE CREEK,	
BUCK RUN, AT DOE RUN	295	BELOW	239
NEAR	275	NEAR	236
BUSH KILL AT SHOEMAKERS	68	MARSH CREEK NEAR	235
BUSHKILL CREEK NEAR EASTON	272	VALLEY CREEK AT MULSTEINS MEADOWS, NEAR	295
BUSHKILL, LITTLE BUSH KILL AT	271	AT RAVINE ROAD NEAR	248
BYBERRY CREEK AT CHALFONT ROAD, PHILADELPHIA ..	273	DOWNSTREAM ORDER SYSTEM	10
CALKINS CREEK AT MILANVILLE	271	DRAINAGE AREA, DEFINITION OF	21
CALLICOON, NY, DELAWARE RIVER AT	34	DRAINAGE BASIN, DEFINITION OF	21
CARVERSVILLE, PAUNNACUSSING CREEK AT	127	DROUGHT IN PENNSYLVANIA	2
CATASAUQUA CREEK AT CATASAUQUA	272	DUBLIN, EAST BRANCH PERKIOMEN CREEK NEAR	187
CELLS/VOLUME, DEFINITION OF	20	DURHAM FURNANCE, COOKS CREEK AT	122
CFS-DAY, DEFINITION OF	20	DYBERRY CREEK, ABOVE RESERVOIR NEAR HONESDALE ..	268, 271
CHADDS FORD, BRANDYWINE CREEK, AT	251	NEAR HONESDALE	47
NEAR	295	EAGLE, PICKERING CREEK NEAR	285
CHALFONT, NORTH BRANCH NESHAMINY CREEK AT	141	EARLVILLE, MANATAWNY CREEK AT	274
PINE RUN AT	139	EAST BRANCH BRANDYWINE CREEK, AT DORLAN	275
CHARLESTOWN, PICKERING CREEK AT CHARLESTOWN		AT GLENMOORE	295
ROAD BRIDGE AT	285	AT WAWASET	295
CHEMICAL OXYGEN DEMAND, DEFINITION OF	20	BELOW DOWNINGTOWN	239
CHESTER, CHESTER CREEK NEAR	212	NEAR CUPOLA	295
DELAWARE RIVER AT	214	NEAR DOWNINGTOWN	236

EAST BRANCH CHESTER CREEK, AT GREEN HILL	290	NEAR SCHNECKSVILLE	107
AT MILLTOWN	290	NEAR STETTLERSVILLE	273
AT WESTTOWN SCHOOL	290		
NEAR WEST CHESTER, BELOW GOOSE CREEK	290	KENNETT SQUARE, RED CLAY CREEK NEAR	221
EAST BRANCH BIG ELK CREEK AT ELKVIEW	300	WEST BRANCH AT	290
EAST BRANCH MONOCACY CREEK NEAR BATH	273	NEAR	275
EAST BRANCH PERKIOMEN CREEK NEAR DUBLIN	187	KRESGEVILLE, MIDDLE CREEK AT	272
NEAR SCHWENKSVILLE	189	POHOPOCO CREEK AT	94
EAST BRANCH RED CLAY CREEK NEAR FIVE POINT	290		
EAST BRANCH WHITE CLAY CREEK AT AVONDALE	290	LABORATORY MEASUREMENTS	16
AT LANDENBERG	275	LACKAWAXEN RIVER, AT HAWLEY	51
AT WICKERTON	290	AT ROWLAND	276
EAST GREENVILLE, PERKIOMEN CREEK AT	185	NEAR HONESDALE	49
EAST STERLING, WALLENPAUPACK CREEK NEAR	276	WEST BRANCH, AT PROMPTON	43
EASTON, BUSHKILL CREEK NEAR	272	AT ALDENVILLE	271
LEHIGH RIVER AT	115	NEAR	40
EAST TEXAS, LITTLE LEHIGH CREEK NEAR	103	LACKAWAXEN RIVER BASIN, GAGING STATIONS IN	40
ELKVIEW, EAST BRANCH BIG ELK CREEK AT	300	LAKES AND RESERVOIRS IN	55
EQUINUNK CREEK NEAR EQUINUNK	271	LAKE WALLENPAUPACK	55
EXPLANATION OF THE RECORDS	10	LAKES AND RESERVOIRS:	
EXTON, BROAD RUN AT VALLEY CREEK ROAD NEAR	320	BELTZVILLE LAKE	120
UNNAMED TRIBUTARY TO VALLEY CREEK		BLUE MARSH LAKE	202
AT BROOKVIEW STREET NEAR	308	FRANCIS E. WALTER RESERVOIR	120
AT CHESTER COUNTY LIBRARY NEAR	312	GENERAL EDGAR JADWIN RESERVOIR	55
AT SWEDES FORD ROAD NEAR	304	GREEN LANE RESERVOIR	202
AT WATERLOO ROAD NEAR	312	LAKE WALLENPAUPACK	55
AT WHITFORD ROAD NEAR	316	MARSH CREEK RESERVOIR	260
NEAR CLOVER MILL ROAD NEAR	316	NOCKAMIXON RESERVOIR	126
NEAR SHIP ROAD NEAR	304	PENN FOREST RESERVOIR	120
VALLEY CREEK,		PROMPTON RESERVOIR	55
AT CHESTER COUNTY LIBRARY NEAR	308	STILL CREEK RESERVOIR	202
AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR	304	WILD CREEK RESEVOIR	120
AT LAKESIDE STREET NEAR	308	LANDENBERG, EAST BRANCH WHITE CLAY CREEK, AT ..	275
NEAR COLVER MILL ROAD NEAR	312	MIDDLE BRANCH WHITE CLAY CREEK NEAR	270
		WHITE CLAY CREEK NEAR	276
FIVE POINT, EAST BRANCH RED CLAY, NEAR	290	LANDINGVILLE, SCHUYLKILL RIVER AT	159
FORT MIFFLIN, DELAWARE RIVER AT	204	LAND-SURFACE DATUM DEFINITION OF	22
FRANCIS E. WALTER RESERVOIR	120	LANGHORNE, NESHAMINY CREEK NEAR	145
FRANKFORD CREEK, AT CASTOR AVENUE, PHILADELPHIA	151	LATITUDE-LONGITUDE SYSTEM	11
FRENCH CREEK,		LEHIGH RIVER, AT ALLENTOWN	268, 272
AT CONVENTRYVILLE	275	AT BETHLEHEM	112
AT RAILROAD BRIDGE AT PHOENIXVILLE	285	AT EASTON	115
NEAR CONVENTRYVILLE	285	AT GLENDON	114
NEAR PHOENIXVILLE	183, 184	AT LEHIGHTON	93
NEAR PUGHTOWN	285	AT STODDARTSVILLE	77
NEAR ST PETERS	275	AT WALNUTPORT	102
SOUTH BRANCH AT CONVENTRYVILLE	285	BELOW FRANCIS E. WALTER LAKE NEAR WHITE HAVEN	87
FURNACE CREEK AT ROBESONIA	170	LEHIGH RIVER BASIN, GAGING STATIONS IN	77
		LAKES AND RESERVOIRS IN	120
GAGE HEIGHT, DEFINITION OF	21	LEHIGHTON, LEHIGH RIVER AT	93
GAGING STATION, DEFINITION OF	21	MAHONING CREEK AT	272
GAGING STATION RECORDS	32	LENHARTSVILLE, MAIDEN CREEK NEAR	274
GENERAL EDGAR JADWIN RESERVOIR	55	MAIDEN CREEK TRIBUTARY AT	274
GIBRALTER, ALLEGHENY CREEK AT	274	LEWISVILLE, BIG ELK CREEK AT	275
GLENDON, LEHIGH RIVER AT	114	LINFIELD, SCHUYLKILL RIVER AT VINCENT DAM AT ..	181
GLENMOORE, EAST BRANCH BRANDYWINE CREEK, AT ..	295	LITTLE BUSH KILL AT BUSHKILL	271
MARSH CREEK NEAR	234	LITTLE LEHIGH CREEK AT TENTH STREET BRIDGE,	
GOOSE CREEK NEAR WEST CHESTER	290	ALLENTOWN	106
GOSHENVILLE, RIDLEY CREEK AT	290	NEAR ALLENTOWN	104
GRATERFORD, PERKIOMEN CREEK AT	190	NEAR EAST TEXAS	103
GREEN HILL, EAST BRANCH CHESTER CREEK		LITTLE NESHAMINY CREEK AT WALTON ROAD NEAR	
AT	290	JACKSONVILLE	143
GREEN LANE, MACOBY CREEK AT	275	LITTLE NORTHKILL CREEK NEAR BERNVILLE	269
GREEN LANE RESERVOIR	202	LITTLE SCHUYLKILL RIVER, AT PORT CLINTON	269
GROUND-WATER LEVEL DATA	322	AT TAMAQUA	161
		LITTLE TINICUM CREEK NEAR TINICUM ROAD	
HARDNESS, DEFINITION OF	21	NEAR SMITHTOWN	302
HAWLEY, LACKAWAXEN RIVER AT	51	LITTLE VALLEY CREEK AT HOWELLVILLE	282
HELLERTOWN, SAUCON CREEK NEAR	269	LONG POND, DILLDOWN CREEK NEAR	91
HENRYVILLE, PARADISE CREEK AT	271	TUNNKHANNOCK CREEK NEAR	81
HILLEGASS, NORTHWEST BRANCH PERKIOMEN		LORDVILLE, NY, DELAWARE RIVER AT	32
CREEK AT	186	LOW-FLOW PARTIAL-RECORD STATIONS	271
HOKENDAQUA CREEK NEAR NORTHAMPTON	272	LUDWIGS CORNER UNNAMED TRIBUTARY TO PICKERING	
HONESDALE, DYBERRY CREEK ABOVE RESERVOIR NEAR ..	268, 271	CREEK NEAR	275
DYBERRY CREEK NEAR	47		
LACKAWAXEN RIVER NEAR	49	MACOBY CREEK AT GREEN LANE	275
HONEY BROOK, WEST BRANCH BRANDYWINE CREEK NEAR	222	MAHONING CREEK AT LEHIGHTON	272
HOWELLVILLE, LITTLE VALLEY CREEK, AT	285	MAIDEN CREEK AT VIRGINVILLE	164
HYDROLOGIC BENCH-MARK NETWORK, DEFINITION OF ..	21	AT WILEYS BRIDGE	276
HYDROLOGIC BENCH-MARK STATIONS	10	NEAR LENHARTSVILLE	274
HYDROLOGIC CONDITIONS, SUMMARY OF	6	NEAR TEMPLE	274
HYDROLOGIC UNIT, DEFINITIONS OF	21	TRIBUTARY AT LENHARTSVILLE	274
		MANATAWNY CREEK AT EARLVILLE	274
IDENTIFYING ESTIMATED DAILY DISCHARGE	14	NEAR POTTSTOWN	179
INDIAN RUN NEAR SPRINGTON	295	SEEPAGE INVESTIGATION IN	277
INTRODUCTION	1	MANATAWNY, PINE CREEK NEAR	274
		MARSH CREEK, NEAR DOWNINGTOWN	235
JACKSONVILLE, LITTLE NESHAMINY CREEK AT WALTON		NEAR GLENMORE	234
ROAD NEAR	143	MARSH CREEK RESERVOIR	260
JACOBY CREEK AT PORTLAND	272	MARSHALL CREEK AT MINISINK HILLS	272
JERICO CREEK AT WASHINGTON CROSSING	273	MARTINS CREEK BELOW LITTLE MARTINS CREEK AT	
JORDAN CREEK, AT ALLENTOWN	109	MARTINS CREEK	272

INDEX--Continued

MCMICHAEL CREEK AT STROUDSBURG	271	SCHUYLKILL RIVER, ABOVE PASSYUNK AVENUE AT	201
MEASURING POINT, DEFINITION OF	22	AT	197
MEDIA, RIDLEY CREEK AT	211	WISSAHICKON CREEK AT MOUTH	195
MERLIN, PICKERING CREEK AT	285	PHOENIXVILLE, FRENCH CREEK, AT RAILROAD	
METAMORPHIC STAGE, DEFINITION OF	22	BRIDGE AT	285
METHYLENE BLUE ACTIVE SUBSTANCE, DEFINITION OF	22	NEAR	183
MICROGRAMS PER GRAM, DEFINITION OF	22	PICKERING CREEK NEAR	285
MICROGRAMS PER LITER, DEFINITION OF	22	SCHUYLKILL RIVER AT	269
MIDDLE BRANCH WHITE CLAY CREEK NEAR LANDENBERG	270	PHYTOPLANKTON, DEFINITION OF	23
MILANVILLE, CALKINS CREEK AT	271	PICKERING CREEK, AT CHARLESTOWN ROAD BRIDGE	
MILFORD, VANDERMARK CREEK AT	268	AT CHARLESTOWN	285
MILL CREEK, AT MOUNTAINHOME	268	AT MERLIN	285
AT RUSHLAND	273	NEAR CHESTER SPRINGS	285
NEAR WYCOMBE	144	NEAR EAGLE	285
MILLIGRAMS PER LITER, DEFINITION OF	22	NEAR PHOENIXVILLE	285
MILLTOWN, EAST BRANCH CHESTER CREEK AT	290	UNNAMED TRIBUTARY TO, NEAR LUDWIGS CORNER ..	275
MINISINK HILLS, BRODHEAD CREEK AT	73	PICOCURIE, DEFINITION OF	23
MARSHALL CREEK AT	272	PIGEON CREEK AT PARKER FORD	274
MISCELLANEOUS RECORD SITE, DEFINITION OF	22	NEAR	285
MISCELLANEOUS SITES,		PINE CREEK AT BARNESVILLE	274
DISCHARGE MEASUREMENTS AT	276	NEAR MANATAWNY	274
MODENA, WEST BRANCH BRANDYWINE CREEK AT	225	PINE RUN AT CHALFONT	139
MONOCACY CREEK, AT BETHLEHEM	111	PIPERSVILLE, TOHICKON CREEK NEAR	124
EAST BRANCH NEAR BATH	273	PLANKTON, DEFINITION OF	23
MONTAGUE, NJ DELAWARE RIVER AT	65	POCONO CREEK NEAR STROUDSBURG	272
MOSELEM CREEK NEAR SHOEMAKERSVILLE	274	POHOPOCO CREEK, AT KRESGEVILLE	94
MOUNTAINHOME, MILL CREEK AT	268	BELTZVILLE DAM NEAR PARRYVILLE	97
NATIONAL GEODETIC VERITCAL DATUM OF OF 1929		POLYCHLORINATED BIPHENYLS, DEFINITION OF	23
(NGVD), DEFINITION OF	22	POND EDDY, NY, DELAWARE RIVER AT	59
NATIONAL STREAM-QUALITY ACCOUNTING NETWORK	10	POQUESSING CREEK AT GRANT AVENUE PHILADELPHIA .	147
DEFINITION OF	22	PORT CARBON, SCHUYLKILL RIVER AT	274
NATIONAL TRENDS NETWORK	10	PORT CLINTON, LITTLE SCHUYLKILL RIVER AT	269
DEFINITION OF	22	PORT JERVIS, NY, DELAWARE RIVER AT	61
NESHAMINY CREEK, NEAR LANGHORNE	145	PORT KENNEDY, SCHUYLKILL RIVER AT	269
AT RUSHLAND	273	PORTLAND, JACOBY CREEK AT	272
NEAR	142	POTTSTOWN, SCHUYLKILL RIVER AT	180
NORTH BRANCH AT CHALFONT	141	MANATAWNY CREEK NEAR	179
BELOW LAKE GALENA NEAR NEW BRITIAN	138	POTTSVILLE, SCHUYLKILL RIVER AT	269
NESHAMINY CREEK BASIN, GAGING STATIONS IN	138	PROMPTON, WEST BRANCH LACKAWAXEN RIVER AT	43
NEW BRITIAN, NORTH BRANCH NESHAMINY CREEK BELOW		PROMPTON RESERVOIR	55
LAKE GALENA NEAR	138	PUBLICATIONS ON TECHNIQUES OF WATER-	
NEWTOWN SQUARE, CRUM CREEK NEAR	210	RESOURCES INVESTIGATIONS	26
NOCKAMIXON RESERVOIR	126	PUGHTOWN, FRENCH CREEK NEAR	285
NORRISTOWN, SCHUYLKILL RIVER AT	270	QUAKERTOWN, BEAVER RUN TRIBUTARY AT	273
STONY CREEK AT	270	TOHICKON CREEK NEAR	273
NORTH BRANCH, NESHAMINY CREEK AT CHALFONT	141	RADIOCHEMICAL PROGRAM	10
BELOW LAKE GALENA NEAR NEW BRITIAN	138	DEFINITION OF	23
NORTHAMPTON, HOKENDAUQUA CREEK NEAR	272	RAPP CREEK NEAR BEAVER RUN ROAD NEAR REVERE ..	302
NORTHWEST BRANCH PERKIOMEN CREEK AT HILLEGASS .	186	READING, SCHUYLKILL RIVER AT	178
NORTHKILL CREEK AT BERNVILLE	269	TULPEHOCKEN CREEK, AT BLUE MARSH DAMSITE NEAR	
ON SITE MEASUREMENT AND SAMPLE COLLECTION	15	NEAR	176
ORGANISM, DEFINITION OF	22	RECOVERABLE FROM BOTTOM MATERIAL, DEFINITION OF	
ORGANISM COUNT/AREA, DEFINITION OF	22	RECORDS, EXPLANATION OF	10
ORGANISM COUNT/VOLUME, DEFINITION OF	22	OF STAGE AND WATER DISCHARGE	11
OTHER RECORDS AVAILABLE	15	OF SURFACE WATER QUALITY	15
OTTSVILLE, TINICUM CREEK NEAR	123	OF GROUND WATER LEVELS	17
TINICUM CREEK AT SHEEP HOLE ROAD NEAR	302	RECURRENCE INTERVAL, DEFINITION OF	23
OXFORD, WEST BRANCH BIG ELK CREEK NEAR	300	RED CLAY CREEK, EAST BRANCH NEAR FIVE POINT ..	290
PALMERTON, AQUASHICOLA CREEK AT	100	NEAR KENNETT SQUARE	221
PARADISE CREEK AT HENRYVILLE	271	SEEPAGE INVESTIGATION IN	279
PARAMETER CODE, DEFINITION OF	22	WEST BRANCH AT KENNETT SQUARE	290
PARK CREEK NEAR WARRINGTON	273	NEAR	275
PARKER FORD, PIGEON CREEK, AT	274	REEDY ISLAND JETTY, DE DELAWARE RIVER AT	261
NEAR	285	REMARKS CODES	17
PARRYVILLE, POHOPOCO CREEK BELOW BELTZVILLE		RESERVOIRS, SEE LAKES AND RESERVOIRS.	
DAM NEAR	97	REVERE, RAPP CREEK NEAR BEAVER RUN ROAD	302
PARTIAL-RECORD STATION, DEFINITION OF	22	RIDLEY CREEK, AT DUTTON MILL NEAR WEST CHESTER	
PARTICLE-SIZE, DEFINITION OF	22	AT MEDIA	211
PARTICLE-SIZE CLASSIFICATION, DEFINITION OF	22	AT GOSHENVILLE	290
PAUNNACUSSING CREEK AT CARVERSVILLE	127	ROBESONIA FURNACE CREEK AT	170
PENN FOREST RESERVOIR	120	ROCK CREEK ABOVE CURTIS ARBORETUM NEAR	
PENNYPACK CREEK, AT LOWER RHAWN STREET		PHILADELPHIA	273
BRIDGE, PHILADELPHIA	149	ROCK RUN, WEST BRANCH BRANDYWINE CREEK	
PERCENT COMPOSITION, DEFINITION OF	23	AT	295
PRIPHYTON, DEFINITION OF	23	ROWLAND, LACKAWAXEN RIVER AT	276
PERKIOMEN CREEK, AT GRATERFORD	190	RUNOFF IN INCHES, DEFINITION OF	23
AT EAST GREENVILLE	185	RUSHLAND, MILL CREEK AT	273
EAST BRANCH NEAR DUBLIN	187	NESHAMINY CREEK AT	273
NEAR SCHWENKSVILLE	189	NEAR	142
NORTHWEST BRANCH AT HILLEGASS	186	ST. PETERS, FRENCH CREEK NEAR	275
PESTICIDES, DEFINITION OF	23	SANDY RUN NEAR WHITE HAVEN	272
PHILADELPHIA, BYBERRY CREEK AT CHALFONT ROAD ..	273	SAUCON CREEK NEAR HELLERTOWN	269
DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT		SCHNECKSVILLE, JORDAN CREEK NEAR	107
AT FORT MIFFLIN AT	204	SCHUYLKILL RIVER ABOVE PASSYUNK AVENUE AT	
FRANKFORD CREEK AT CASTOR AVENUE AT	151	PHILADELPHIA	201
PENNYPACK CREEK, AT LOWER RHAWN STREET		AT BERNE	163
BRIDGE	149	AT BIRDSBORO	269
POQUESSING CREEK, AT GRANT AVENUE	147	AT LANDINGVILLE	159
ROCK CREEK ABOVE CURTIS ARBORETUM NEAR	273	AT NORRISTOWN	270

AT PHILADELPHIA	197	TUNKHANNOCK CREEK NEAR LONG POND, PA	81
AT PHOENIXVILLE	269	UNAMI CREEK AT SUMNEYTOWN	275
AT PORT CARBON	274	UNNAMED, TRIBUTARY TO PICKERING CREEK	
AT PORT KENNEDY	269	NEAR LUDWIGS CORNER	275
AT POTTS TOWN	180	UNNAMED TRIBUTARY TO VALLEY CREEK	
AT POTTSVILLE	269	AT BROOKVIEW STREET NEAR EXTON	308
AT READING	178	AT SWEDES FORD ROAD NEAR EXTON	304
AT TEMPLE	269	AT WATERLOO ROAD NEAR EXTON	312
AT VINCENT DAM AT LINFIELD	181	NEAR SHIP ROAD NEAR EXTON	304
LAKES AND RESERVOIRS IN	202		
WEST BRANCH NEAR CRESSONA	269		
SCHWENKSVILLE, EAST BRANCH PERKIOMEN CREEK NEAR	189	VALLEY CREEK, ABOVE MULLSTEINS MEADOW NEAR	
SEDIMENT DEFINITION OF	23	DOWNINGTOWN	295
SEEPAGE INVESTIGATIONS	277	AT PENNSYLVANIA TURNPIKE BRIDGE NEAR	
SEVEN-DAY, TEN YEAR LOW FLOW, DEFINITION OF	24	VALLEY FORGE	194
SHOEMAKERS, BUSH KILL AT	68	AT CHESTER COUNTY LIBRARY NEAR EXTON	308
SHOEMAKERSVILLE, MOSELEM CREEK NEAR	274	AT CHURCH FARM SCHOOL AT PRIVATE ROAD NEAR	
SHOHOLA CREEK AT SHOHOLA	271	EXTON	304
SKIPPACK CREEK NEAR COLLEGEVILLE	193	AT LAKESIDE STREET NEAR	308
SKIPPACK, ZACHARIAS CREEK NEAR	275	AT RAVINE ROAD NEAR DOWNINGTOWN	248
SMITHTOWN CREEK NEAR SMITHTOWN ROAD NEAR		NEAR CLOVER MILL ROAD NEAR	312
SMITHTOWN	302	NEAR VALLEY FORGE	285
SMITHTOWN, LITTLE TINICUM CREEK NEAR TINICUM		UNNAMED TRIBUTARY TO VALLEY ROAD	
CREEK ROAD NEAR	302	AT BROOKVIEW STREET NEAR EXTON	308
SMITHTOWN CREEK NEAR SMITHTOWN ROAD		AT CHESTER COUNTY LIBRARY NEAR EXTON	258
SMITHTOWN	302	AT SWEDES FORD ROAD NEAR EXTON	304
TINICUM CREEK NEAR TINICUM CREEK ROAD		AT WHITFORD ROAD NEAR EXTON	316
NEAR	302	NEAR CLOVER MILL ROAD NEAR	316
SODIUM-ADSORPTION-RATIO, DEFINITION OF	24	NEAR SHIP ROAD NEAR EXTON	304
SOLUTE, DEFINITION OF	24	VALLEY FORGE, TROUT CREEK NEAR	275
SOUTH BRANCH-FRENCH CREEK AT CONVENTRYVILLE	285	VALLEY CREEK AT PENNSYLVANIA	
SPECIAL NETWORKS AND PROGRAMS	10	TURNPIKE BRIDGE NEAR	194
SPECIFIC CONDUCTANCE, DEFINITION OF	24	VALLEY CREEK NEAR	285
SPRING CITY, STONY RUN NEAR	285	VANDERMARK CREEK AT MILFORD	268
SPRINGDELL, DOE RUN AT	295	VIRGINVILLE, MAIDEN CREEK AT	164
SPRINGTOWN, INDIAN RUN NEAR	295		
STAGE-DISCHARGE RELATION, DEFINITION OF	24	WALLENPAUPACK CREEK, AT WILSONVILLE	53
STATION IDENTIFICATION NUMBERS	10	NEAR EAST STERLING	276
STETTLERSVILLE, JORDAN CREEK NEAR	273	WATER TEMPERATURE	16
STILL CREEK RESERVOIR	202	WALNUTPORT, LEHIGH RIVER AT	102
STODDARTSVILLE, LEHIGH RIVER AT	77	WARRINGTON, PARK CREEK NEAR	273
STONY CREEK, AT NORRISTOWN	270	WASHINGTON CROSSING, JERICHO CREEK AT	273
STONY RUN, NEAR SPRING CITY	285	WATER YEAR, DEFINITION OF	25
STROUDSBURG, MC MICHAEL CREEK AT	271	WAWASET, EAST BRANCH BRANDYWINE CREEK AT	295
POCONO CREEK NEAR	272	WEST BRANCH BRANDYWINE CREEK AT	295
STREAM FLOW, DEFINITION OF	24	WDR, DEFINITION OF	25
SUBSTRATE, DEFINITION OF	24	WEIGHTED AVERAGE, DEFINITION OF	25
SUCKER RUN NEAR COATESVILLE	270	WEST BRANCH BIG ELK CREEK NEAR OXFORD	300
SUMMARY OF HYDROLOGIC CONDITIONS	6	WEST BRANCH BRANDYWINE CREEK,	
SUMNEYTOWN, UNAMI CREEK AT	275	AT COATESVILLE	223
SUNDALE, TINICUM CREEK NEAR MUNICIPAL ROAD NEAR	302	AT MODENA	225
SURFACE AREA, DEFINITION OF	24	AT ROCK RUN	295
SURFICIAL BED MATERIAL, DEFINITION OF	24	AT WAWASET	295
SUSPENDED, DEFINITION OF	24	NEAR HONEY BROOK	222
SUSPENDED, RECOVERABLE, DEFINITION OF	24	WEST BRANCH LACKAWAXEN RIVER, AT PROMPTON	43
SUSPENDED SEDIMENT, DEFINITION OF	24	AT ALDENVILLE	271
SUSPENDED-SEDIMENT CONCENTRATION, DEFINITION		NEAR ALDENVILLE	40
OF	24	WEST BRANCH RED CLAY CREEK, AT KENNETT	
SUSPENDED-SEDIMENT, DISCHARGE, DEFINITION OF	24	SQUARE	290
SUSPENDED-SEDIMENT, LOAD, DEFINITION OF	24	NEAR	275
SUSPENDED, TOTAL DEFINITION OF	25	WEST BRANCH SCHUYLKILL RIVER NEAR CRESSONA	269
		WEST BRANCH WHITE CLAY CREEK NEAR	
TAMAQUA, LITTLE SCHUYLKILL RIVER AT	161	CHESTERVILLE	290
TAXONOMY, DEFINITION OF	25	WEST CHESTER EAST BRANCH CHESTER CREEK	
TECHNIQUES OF WATER RESOURCE INVESTIGATIONS	26	BELOW GOOSE CREEK NEAR	290
TEMPLE, MAIDEN CREEK NEAR	274	NEAR GOOSE CREEK NEAR	290
SCHUYLKILL RIVER AT	269	RIDLEY CREEK AT DUTTON MILL NEAR	290
THERMOGRAPH, DEFINITION OF	25	WEST READING, WYOMISSING CREEK AT	274
TIME-WEIGHTED AVERAGE, DEFINITION OF	25	WESTTOWN SCHOOL, EAST BRANCH CHESTER CREEK	
TINICUM CREEK NEAR OTTSVILLE	123	AT	290
AT SHEEP HOLE ROAD NEAR OTTSVILLE	302	WHITE CLAY CREEK NEAR LANDENBERG	276
NEAR MUNICIPAL ROAD NEAR SUNDALE	302	EAST BRANCH AT AVONDALE	290
NEAR TINICUM CREEK ROAD NEAR SMITHTOWN	302	AT LANDENBERG	275
TOBYHANNA CREEK NEAR BLAKESLEE	83	AT WICKERTON	290
TOCKS ISLAND DAM SITE, DELAWARE RIVER		MIDDLE BRANCH NEAR LANDENBERG	270
BELOW , NEAR DELAWARE WATER GAP	70	WEST BRANCH NEAR CHESTERVILLE	290
TOHICKON CREEK, NEAR PIPERSVILLE	124	WHITE HAVEN, BEAR CREEK NEAR	272
NEAR QUAKERTOWN	273	LEHIGH RIVER BELOW FRANCIS E. WALTER LAKE	
RESERVOIR IN BASIN	126	NEAR	87
TONS PER ACRE-FOOT, DEFINITION OF	25	SANDY RUN NEAR	272
TONS PER DAY, DEFINITION OF	25	WHITHORSE, CRUM CREEK AT	290
TOTAL, DEFINITION OF	25	WICKERTON, EAST BRANCH WHITE CLAY CREEK	
TOTAL DISCHARGE, DEFINITION OF	25	AT	290
TOTAL, RECOVERABLE, DEFINITION OF	25	WILD CREEK RESERVOIR	120
TRENTON, DELAWARE RIVER AT	128	WILEYS BRIDGE, MAIDEN CREEK AT	276
TRITIUM NETWORK	10	WILSONVILLE, WALLENPAUPACK CREEK AT	53
DEFINITION OF	25	WISSAHICKON CREEK AT MOUTH, PHILADELPHIA	195
TROUT CREEK NEAR VALLEY FORGE	275	WSP, DEFINITION OF	25
TULPEHOCKEN CREEK AT BERNVILLE	274	WYCOMBE, MILL CREEK NEAR	144
AT BLUE MARSH DAMSITE NEAR READING	172	WYOMISSING CREEK AT WEST READING	274
NEAR BERNVILLE	166		
NEAR READING	176	ZACHARIAS CREEK NEAR SKIPPACK	275

October 1, 1978

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

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

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

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