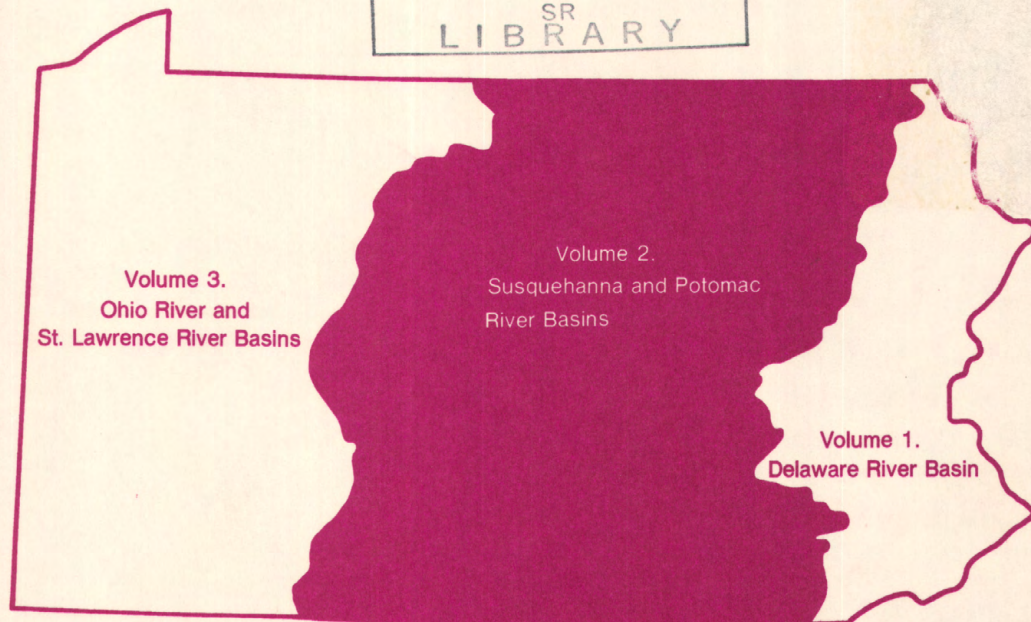
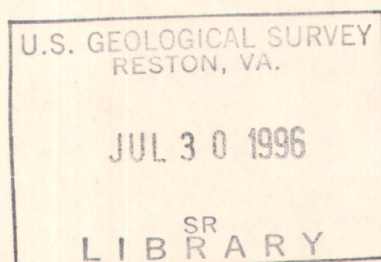




Water Resources Data Pennsylvania Water Year 1994

Volume 2. Susquehanna and Potomac River Basins



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-94-2
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the U.S. Army Corps of Engineers,
Baltimore District, the Susquehanna River Basin Commission, and
with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1994

1993

[illegible]

1994

[illegible]

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	1	2	3	4	5	6	7				1	2	3	4
3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
24	25	26	27	28	29	30	29	30	31					26	27	28	29	30		

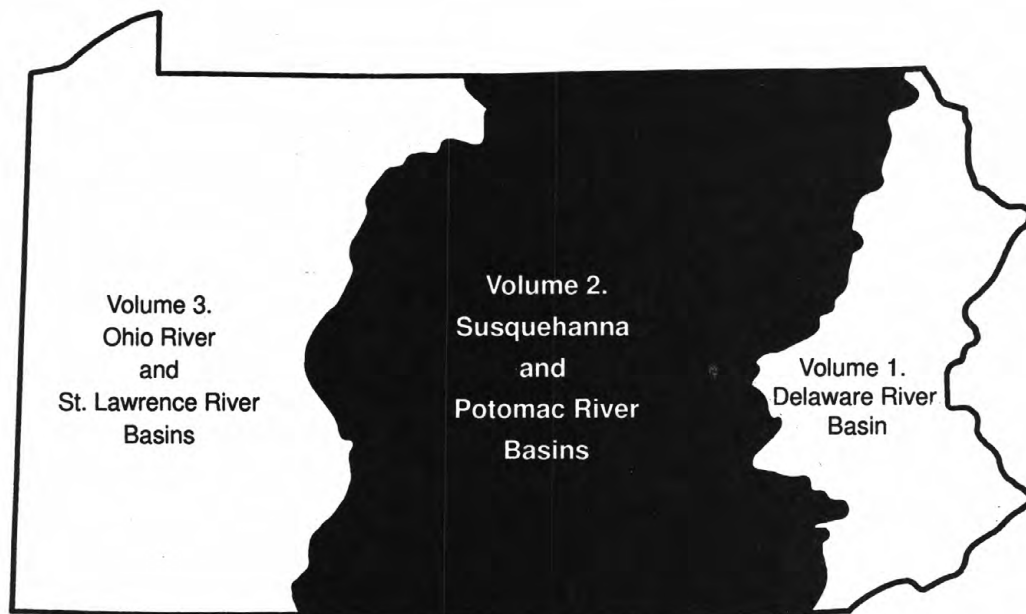
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Water Resources Data Pennsylvania Water Year 1994

Volume 2. Susquehanna and Potomac River Basins

by R.R. Durlin and W.P. Schaffstall



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-94-2

Prepared in cooperation with the Pennsylvania Department of Environmental Resources, the U.S. Army Corps of Engineers, Baltimore District, the Susquehanna River Basin Commission, and with other State, municipal, and Federal agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

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1996

PREFACE

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

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

Volume 2 was prepared in cooperation with the Commonwealth of Pennsylvania and other agencies under the general supervision of Gary N. Paulachok, District Chief, Pennsylvania District; Randall R. Durlin, Chief of the Hydrologic Surveillance Section, Lemoyne Subdistrict, and William P. Schaffstall, Chief, Williamsport Field Office. It is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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(See ANSI-Z39.18)

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

NORTH ATLANTIC SLOPE BASINS

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

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CHANGES TO THE BASIC DATA COLLECTION NETWORK FOR THE 1994 WATER YEAR

SUSQUEHANNA RIVER BASIN

STATION	STATION TYPE	COUNTY	DATA TYPE	CHANGE / DATE	
01531500	Susquehanna River at Towanda	water-quality	Bradford	achemical analyses	end Sept. 1993
01537000	Toby Creek at Luzerne	surface water	Luzerne	daily streamflow	end Sept. 1993
01542000	Moshannon Creek at Osceola Mills	surface water	Clearfield	daily streamflow	end Sept. 1993
01554500	Shamokin Creek near Shamokin	surface water	Northumberland	daily streamflow	end Sept. 1993
01562000	Rays. Br. Juniata River at Saxton	surface water	Bedford	chemical analyses	end Sept. 1993
01568400	Dehart Reservoir near Carsonville	surface water	Dauphin	levation/contents	end Sept. 1993
01571000	Paxton Creek near Penbrook	water-quality	Dauphin	achemical analyses	end Sept. 1993
01573260	Quittapahilla Creek near Bellegrove	surface water	Lebanon	daily streamflow	end Sept. 1994
01567000	Juniata River at Newport	water-quality	Perry	daily temperature	end Sept. 1993
				daily conductance	end June 1993
				suspended sediment	end June 1993
01576000	Susquehanna River at Marietta	water-quality	Lancaster	achemical analyses	end Sept. 1993
01576521	Big Spring Run near Willow Street	surface water	Lancaster	daily streamflow	began 1993
				chemical analyses	began June 1993
01576525	S. Fk. Unnamed trib. to Big Spring	surface water	Lancaster	chemical analyses	began June 1993
	Run at Lampeter				
01576526	N. Fk. Unnamed trib. to Big Spring	surface water	Lancaster	chemical analyses	began Sept. 1993
	Run near Willow Street				
01576527	N. Fk. Unnamed trib. to Big Spring	surface water	Lancaster	daily streamflow	began 1993
	Run at Lampeter			chemical analyses	began June 1993
01576528	Unnamed tributary to Big Spring	surface water	Lancaster	chemical analyses	began Sept. 1993
	Run near Willow Street				
01576529	Unnamed tributary to Big Spring	surface water	Lancaster	daily streamflow	began June 1993
	Run near Lampeter			chemical analyses	began 1993
LN 1669		ground water	Lancaster	water levels, quality	end 1993
LN 1670		ground water	Lancaster	water levels, quality	end 1993
LN 1673		ground water	Lancaster	water levels, quality	end 1993
LN 1676		ground water	Lancaster	water levels, quality	end 1993
LN 1677		ground water	Lancaster	water levels, quality	end 1993
LN 1679		ground water	Lancaster	water levels, quality	end 1993
LN SP61		spring	Lancaster	water levels, quality	end 1993
LN 2037		ground water	Lancaster	water levels, quality	began 1993
LN 2038		ground water	Lancaster	water levels, quality	began 1993
LN 2039		ground water	Lancaster	water levels, quality	began 1993
LN 2040		ground water	Lancaster	water levels, quality	began 1993
LN 2041		ground water	Lancaster	water levels, quality	began 1993
LN 2042		ground water	Lancaster	water levels, quality	began 1993
LN 2043		ground water	Lancaster	water levels, quality	began 1993
LN 2044		ground water	Lancaster	water levels, quality	began 1993

- a Although no longer published by the U.S. Geological Survey, water-quality data collection is being performed by the Susquehanna River Basin Commission.
b Although no longer published by the U.S. Geological Survey, reservoir data is available from the City of Harrisburg, Bureau of Water.

PARTIAL-RECORD GROUND-WATER STATIONS:

Miscellaneous water-level and water-quality data for the 1994 water year for the Lower Susquehanna River Basin NAWQA project has been collected in the following counties: Dauphin, Juniata, Lancaster, Lebanon, Northumberland, Perry, Schuylkill, Snyder, and York.

Several sites in Lancaster and Chester Counties operated as part of the Pequea-Mill Creek Project (water-quality) have been discontinued.

CHANGES TO THE BASIC DATA COLLECTION NETWORK FOR THE 1994 WATER YEAR--Continued

POTOMAC RIVER BASIN

<u>STATION</u>	<u>STATION TYPE</u>	<u>COUNTY</u>	<u>DATA TYPE</u>	<u>CHANGE / DATE</u>
01603500 Evitts Creek near Centerville	surface water	Bedford	flow measurements	began 1993

WATER RESOURCES DATA - PENNSYLVANIA, 1994

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
SUSQUEHANNA RIVER BASIN			
Anna S mine discharge #1 near Antrim	01548416	mine discharge	1978-81
Antes Creek near Jersey Shore	01549755	53.3	1974-77
Applemans Run above Light Street	01539200	1.72	1972-74
Applemans Run below Light Street	01539210	1.99	1972-74
Aughwick Creek near Orbisonia	01564000	174	1930-38
Bald Eagle Creek near Fawn Grove	01577400	.43	1986-89
Beck Creek near Cleona	01573086	7.87	1963-81
Blockhouse Creek at Buttonwood	01549300	22.3	1973-77
Blockhouse Creek tributary at Liberty	01549100	1.08	1973-77
Bowery Run near Quarryville	01578400	5.98	1963-81
Bradley Run near Ashville	01541308	6.77	1968-80
Brush Creek at Gapsville	01561000	36.8	1930-58
Brush Run, Site 2, near McSherrystown	01573810	.38	1985-91
Butler Creek at Gibson	01533800	7.38	1974-79
Cocolamus Creek near Millerstown	01566500	57.2	1931-58
Codorus Creek at Pleasureville	01575585	267	1985-90
Conodoguinet Creek tributary No. 1 near Enola	01570100	.77	1969-76
Conodoguinet Creek tributary No. 2 near Enola	01570200	.76	1969-76
Conodoguinet Creek tributary No. 2A near Enola	01570230	.70	1969-76
Conodoguinet Creek tributary No. 2B near Enola	01570260	.65	1969-76
Conodoguinet Creek tributary No. 3 near Enola	01570300	.38	1969-76
Crooked Creek at Tioga	01518500	122	1954-74
Dunning Creek at Yount	01560500	191	1930-39
East Branch Chillisquaque Creek near Washingtonville	01553600	9.48	1960-78
East Branch Codorus Creek tributary near Winterstown	01574800	5.17	1969-75
Elk Run near Mainesburg	01517000	10.2	1955-78
Fishing Creek at Bloomsburg	01540000	355	1914-28
Grafius Run at Williamsport	01551000	3.14	1940-53
Great Trough Creek near Marklesburg	01562500	84.6	1930-57
Hunter Drift discharge near Antrim	01548418	mine discharge	1978-81
Kishacoquillas Creek at Reedsville	01565000*	164	1940-70, 1984-85
Lackawanna River at Moosic	01535500	264	1914-28

WATER RESOURCES DATA - PENNSYLVANIA, 1994
DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
SUSQUEHANNA RIVER BASIN--Continued			
Larrys Creek at Cogan House	01549780	6.80	1961-78
Little Conestoga Creek, Site 3A, near Morgantown	0157608335	1.42	1984-91
Little Fishing Creek at Evers Grove	01539500	56.5	1941-58
Little Juniata River at Tipton	01556500	93.7	1946-62
Little Juniata River near Tyrone	01557000	101	1940-45
Little Lost Creek at Oakland Mills	01565700	6.52	1964-81
Little Nescopeck Creek tributary near Freeland	01538510	mine discharge	1974-79
Lower Little Swatara Creek at Pine Grove	01572000	34.3	1920-32, 1981-84
Manada Creek at Manada Gap	01573500	13.5	1938-58
Middle Br. Wyalusing Creek trib. near Birchardsville	01532850	5.67	1965-79
Mitchell Mine discharge #2 near Antrim	01548413	mine discharge	1978-81
Moshannon Creek at Oceola Mills	01542000	68.8	1941-93
Muddy Creek at Castle Fin	01577500*	133	1929-38, 1968-71
Nescopeck Creek near St. Johns	01538500	49.0	1920-26
North Bald Eagle Creek at Milesburg	01546000	119	1911-28, 1934
North Branch Mehoopany Creek near Lovelton	01533500	35.2	1941-58
N. Branch Sugar Creek trib. near Columbia Crossroads	01531250	8.83	1963-68
North Fork Beech Creek near Snow Shoe	01547770	20.8	1969-70
Paxton Creek near Penbrook	01571000‡	11.2	1940-50, 1985-89
Pequea Creek at Martic Forge	01576787†	148	1977-81
Pequea Creek tributary near Mt. Nebo	01576788	0.20	1979-86
Pine Creek near Waterville	01549000	750	1909-20
Raystown Branch Juniata River near Huntingdon	01563000a	957	1947-71
Sand Spring Run near White Deer	01553130	4.93	1968-81
Schell Run at Tyrone	01557100	1.68	1958-62
Shamokin Creek near Shamokin	01554500	54.2	1938-93
Shaver Creek near Petersburg	01558500	46.4	1930-38
Solomon Creek at Wilkes-Barre	01537500	15.7	1940-90
South Branch Tunkhannock Creek near Montdale	01533950	12.6	1961-78
South Fork Beech Creek near Snow Shoe	01547800	12.2	1969-81
Spring Creek near Bellefonte	01547000	136	1911-19
Standing Stone Creek near Huntingdon	01559500	128	1930-58
Steam Valley Run at Buttonwood	01549350	5.34	1973-77
Stony Creek above Pump-storage Reservoir near Dauphin	01568700	11.5	1974-80

‡ Operated since October 1991 as a continuous-record discharge station and water-quality site.

† Reestablished as a continuous-record station and published in this volume.

a Records considered equivalent with station 01563200 Raystown Branch Juniata River below Raystown Dam near Huntingdon, published in this volume.

WATER RESOURCES DATA - PENNSYLVANIA, 1994
DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
SUSQUEHANNA RIVER BASIN--Continued			
Stony Creek at Water Tank Trail near Dauphin	01568750	21.9	1974-76, 1985-86
Stony Creek near Dauphin	01569000	33.2	1938-45, 1967-74
Sulphur Springs Creek near Manns Choice	01559700	5.28	1962-78
Susquehanna River near McCalls Ferry	01577000	26800	1904-11
Swarr Run near Landisville	01576697	8.67	1985-89
Swatara Creek above highway bridge 895 at Pine Grove	01571919	72.6	1982-84
Swatara Creek below Ravine	01571827	46.3	1985-87
Swatara Creek near Suedberg	01572030	124	1985-87
Toby Creek at Luzerne	01537000	32.4	1941-93
Trexler Run near Ringtown	01540200	1.77	1963-81
Tuscarora Creek near Port Royal	01566000*	214	1911-58
White Deer Creek above Sand Spring Run near White Deer	01553120	17.8	1968-73
White Deer Creek near White Deer	01553140	40.0	1968-73
Wilson Creek above Sand Run near Antrim	01548408	12.6	1978-82
POTOMAC RIVER BASIN			
Conococheague Creek near Fayetteville	01614090	5.05	1961-81
Evitts Creek near Centerville	01603500*	30.2	1933-82
Licking Creek near Sylvan	01613500*	158	1930-41
Wills Creek below Hyndman	01601000	146	1951-67

WATER RESOURCES DATA - PENNSYLVANIA, 1994

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS

The following continuous-record water-quality stations (listed in alphabetical order by stream name) have been discontinued. Daily records were collected and published for the period shown for each constituent. Discontinued stations with less than 3 years of record, or stations with data collection less than daily, have not been included. If a station had one constituent with 3 or more years of record, all constituents having daily values will be listed for that station regardless of the length of record. 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); Turb (Turbidity, in JCU); Sed (sediment concentration and discharge).

Station name	Station number	Drainage area (mi ²)	Type of Record	Period of record (water years)
SUSQUEHANNA RIVER BASIN				
Applemans Run above Light Street	01539200	1.72	Turb, Sed	1972-74
Applemans Run below Light Street	01539210	1.99	Turb, Sed	1972-74
Bald Eagle Creek at Blanchard	01547500	339	Temp ^c Temp ^a Sed	1957 1967-81 1982-85 1956-58
Bald Eagle Creek below Spring Creek at Milesburg	01547200	265	Temp ^c Temp ^c Sed	1956-58 1967-68 1956-58
Bald Eagle Creek near Milesburg	01547400	296	Temp ^a	1967-90
Basswood Run near Antrim	01548417	.57	Sed	1978-80
Beech Creek at Monument	01547950	152	SC ^a , pH ^a , Temp ^a DO ^a	1969-80 1976-78
Bixler Run near Loysville	01567500	15.0	Temp ^c Temp ^c Sed	1957-62 1963-65 1954-71
Blockhouse Creek at Buttonwood	01549300	22.3	Temp ^a Turb, Sed	1973-77 1973-77
Blockhouse Creek near English Center	01549500	37.7	Temp ^a Turb, Sed	1973-77 1973-77
Blockhouse Creek tributary at Liberty	01549100	1.08	Temp ^a Turb, Sed	1973-77 1973-77
Conestoga River at Lancaster	01576500	324	SC Temp Sed	1948-50, 1964-70, 1974-75 1948-50, 1959-70, 1974-75 1974-75
Conodoguinet Creek tributary No. 1 near Enola	01570100	.77	Turb Sed	1972-75 1969-76
Conodoguinet Creek tributary No. 2 near Enola	01570200	.76	Turb Sed	1973-75 1973-76
Conodoguinet Creek tributary No. 2A near Enola	01570230	.70	Turb Sed	1973-75 1973-76
Conodoguinet Creek tributary No. 2B near Enola	01570260	.65	Turb Sed	1973-75 1973-76
Conodoguinet Creek tributary No. 3 near Enola	01570300	.38	Turb Sed	1972-75 1969-76
Corey Creek near Mainesburg	01516500	12.2	Temp ^c Temp Sed	1960-61 1959, 1962 1954-67

^a Max, Min, Mean values.

^b Most years.

^c Max, Min values.

WATER RESOURCES DATA - PENNSYLVANIA, 1994

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

Station name	Station number	Drainage area (mi ²)	Type of Record	Period of record (water years)
SUSQUEHANNA RIVER BASIN				
Cowanesque River near Lawrenceville	01520000	298	Temp ^a	1972-86
Elk Run near Mainesburg	01517000	10.2	Temp ^c Temp Sed	1958-59 1957, 1960-62 1955-67
Fishing Creek near Bloomsburg	01539000	274	Sed	1967-69
Juniata River at Huntingdon	01559000	816	Temp	1948-51, 1981-86 ^b
Lackawanna River at Old Forge	01536000	332	Temp	1949-51
Lower Little Swatara Creek at Pine Grove	01572000	34.3	SC Temp, Sed	1981, 1983-84 1981-84
Marsh Creek at Blanchard	01547700	44.1	Temp Sed	1957 1956-58
Raystown Branch Juniata River below Raystown Dam near Huntingdon	01563200	960	Temp ^a	1978-86 ^b
Raystown Branch Juniata River near Huntingdon	01563000	957	Temp	1947-50
Shamokin Creek near Shamokin	01554500	54.2	Temp	1959-61
Sherman Creek at Shermans Dale	01568000	200	Temp ^c	1954-56
Steam Valley Run at Buttonwood	01549350	5.34	Temp ^a Turb, Sed	1973-77 1973-77
Stony Creek at Water Tank Trail near Dauphin	01568750	21.9	Temp ^c	1974-76
Susquehanna River at Danville	01540500*	11220	SC Temp Sed	1946-52, 1963-76, 1948-53, 1957-70, 1975-76 1974-76
Susquehanna River at Falls	01534090	9440	SC Temp	1945-51 1947-53
Susquehanna River at Harrisburg	01570500*	24100	SC ^a , pH ^a , Temp ^a , DO ^a Sed	1974-79, 1964-81 ^b
Susquehanna River at Towanda	01531500	7797	Sed	1951-54
Swatara Creek above Hwy bridge 895 at Pine Grove	01571919	72.6	SC Temp Sed	1983-84 1982-84 1982-84
Swatara Creek at Harper Tavern	01573000	337	SC Temp Sed	1977-79 1959-61, 1977-79 1959-60, 1977-79
Tioga River at Tioga Junction	01518700	446	SC ^a , pH ^a , Temp ^a , DO ^a	1977-88
Tioga River near Mansfield	01516350	153	SC ^a , pH ^a , Temp ^a DO ^a	1977-88 ^b 1977-78

^a Max, Min, Mean values.^b Most years.^c Max, Min values.

WATER RESOURCES DATA - PENNSYLVANIA, 1994
DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Type of Record	Period of record (water years)
SUSQUEHANNA RIVER BASIN				
West Branch Susquehanna River at Bower	01541000	315	Sed	1964-67
West Branch Susquehanna River at Lewisburg	01553500*	6847	SC, Temp	1944-53, ^b 1957-58, 1975-76
			Sed	1975-76
West Branch Susquehanna River at Lock Haven	01545800	3337	SC	1946-51, 1959, 1964-72
			pH Temp	1963-72 1946-51, 1958-72
West Branch Susquehanna River at Renovo	01545500	2975	SC ^a pH ^a Temp ^a DO ^a	1967-88 ^b 1975-78
West Branch Susquehanna River at Williamsport	01551500	5682	SC ^a pH ^a Temp ^a	1980-88 ^b
Wilson Creek above Sand Run near Antrim	01548408	12.6	Sed	1978-82

a Max, Min, Mean values.

b Most years.

INTRODUCTION

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

This report, Volume 2, specifically contains: (1) discharge records for 94 continuous-record streamflow-gaging stations, 15 partial-record stations, and 24 special study and miscellaneous streamflow sites; (2) elevation and contents records for 12 lakes and reservoirs; (3) water-quality records for 17 streamflow gaging stations and 125 partial-record and project stations; and (4) water-level records for 25 ground-water observation wells. Additional water data collected at various sites not involved in the systematic data-collection program may also be presented.

Publications similar to this report are published annually by the Geological Survey for all States. For the purpose of archiving, these official reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-94-2." 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. Beginning with the 1990 water year all water-data published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single Compact Disc - Read Only Memory (CD-ROM) disc. CD-ROM discs will be available for sale by the USGS Information Services, Federal Center, Box 25286, Denver, Colorado 80225 (phone (303) 202-4210).

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

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

Information for ordering specific reports may be obtained from the Pennsylvania District Office at the address given on the back of title page or by phoning the Scientific Publication and Information Section at (717) 730-6940.

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 Water Management, Caren E. Glotfelty, Deputy Secretary;
Bureau of Water Supply and Community Health, Glenn E. Maurer, Director;
Bureau of Water Quality Management, Daniel B. Drawbaugh, Director;
Bureau of Land and Water Conservation, Michael Krempasky, Director;
Office of Mineral Resources, Terry R. Fabian, Deputy Secretary;
Bureau of Mining and Reclamation, Ernest F. Giovannitti, Director.
Office of State Parks and Forestry, James R. Grace, Deputy Secretary;
Bureau of Topographic and Geologic Survey, Donald M. Hoskins, Director;
Office of Management and Technical Services, Peter J. Adams, Deputy Secretary;
Bureau of Laboratories, Floyd D. Kefford, Director.

Susquehanna River Basin Commission, Paul O. Swartz, Executive Director.

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

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

City of Harrisburg, Stephen R. Reed, Mayor.

City of Sunbury, David Persing, Mayor,

City of Williamsport, Phillip Preziosi, Mayor,

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

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

Corps of Engineers, U.S. Army, Baltimore District, in collecting records for 33 streamflow-gaging stations, 11 reservoir stations, and 4 crest-stage gages;

National Weather Service, NOAA, U.S. Department of Commerce.

The following organizations aided in collecting records: City of Lancaster, City of Lebanon, Hershey Chocolate U.S.A., Mechanicsburg Water Co., P.H. Glatfelter Co., Pennsylvania American Water Co., Pennsylvania Gas and Water Co., and York Water Co.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

The Susquehanna River flows generally southward from its headwaters in southern New York to its mouth at the Chesapeake Bay in Maryland. At the point where the river enters Maryland, it drains 27,215 mi² (square miles). Most of this drainage area, 20,962 mi², is in central Pennsylvania. Streams in the Susquehanna River Basin drain parts of the Appalachian Plateau, Valley and Ridge, New England, and Piedmont physiographic provinces. The underlying geology includes rocks of Precambrian to Triassic age.

Precipitation and Streamflow

During the 1994 water year (October 1, 1993 to September 30, 1994) annual precipitation for the Susquehanna River Basin within Pennsylvania was about 123 percent of normal. The basin received above normal precipitation during November, January, March, and August. The greatest precipitation surplus basinwide, with an average of 3.84 inches above normal, occurred in August. The greatest precipitation deficit basinwide, with an average of 0.58 inches below normal, occurred in May.

Figure 1 compares the 1994 monthly precipitation with the 1961-90 mean monthly precipitation recorded at Lancaster and Williamsport, Pa. The precipitation data used in Figure 1 are from National Oceanic and Atmospheric Administration (NOAA) and National Weather Service records (U.S. Department of Commerce, 1993-94).

Streamflow for the Susquehanna River Basin was generally above normal during the 1994 water year. Two U.S. Geological Survey (USGS) streamflow-gaging stations in the basin were selected as indicators of streamflow conditions basinwide. Figure 2 compares the 1994 monthly and annual mean discharges with the monthly and mean annual discharges for 1961-90 for the indicator stations. The 1994 annual mean discharge was 146 percent of the 30-year mean annual discharge at West Branch Susquehanna River at Williamsport, Pa (01551500), and 151 percent of the 30-year mean annual discharge at Conestoga River at Lancaster, Pa (01576500). The annual mean discharges for these two stations were greater than all the respective annual mean discharges for the period 1960-91.

Monthly mean streamflows at West Branch Susquehanna River at Williamsport and Conestoga River at Lancaster were above normal during the entire water year with the exception of October, January, and May at Williamsport and October, January, May, and June at Lancaster. Monthly mean streamflow during April was 225 percent above the 30-year April mean discharge at West Branch Susquehanna River at Williamsport and 172 percent above the 30-year April mean discharge at Conestoga River at Lancaster. These high streamflows are directly related to above-normal precipitation in early March, when up to two feet of snow fell on central Pennsylvania. In addition, several storms during March caused minor flooding and higher than normal streamflows. In contrast, precipitation during April was normal to slightly below normal throughout the basin, but due to the snowmelt, streamflows in April ranked at or near the greatest monthly mean discharges for the period of record at many locations throughout the basin. New record high April monthly mean discharges were recorded at twenty streamflow-gaging stations throughout the basin. At four of those twenty locations, the greatest monthly mean discharges in at least 95 years of record were recorded.

Surface-Water Quality

During water year 1994 a program of monitoring the quality of water in the Tioga River Basin continued in cooperation with the U.S. Army Corps of Engineers, Baltimore District. This program involved continuous monitoring of specific conductance, pH, and water temperature at two locations in the Tioga River Basin,--Tioga River at Mansfield, Pa. (01516350) and Tioga River at Tioga Junction, Pa. (01518700). Acid-mine drainage in the headwaters of the Tioga River increases the concentrations of sulfate, trace elements, and specific conductance, and decreases the alkalinity and pH of the streamwater. The Tioga River feeds into Tioga Lake which is connected to Hammond Lake by a channel cut through the drainage divide between the Tioga River Basin and the Crooked Creek Basin. Crooked Creek above Hammond Lake is a mildly alkaline stream. Water from Crooked Creek is mixed with water from Tioga River to improve the quality of the Tioga River below Tioga-Hammond Lake. The inflow to Tioga Lake is monitored at the Tioga River at Mansfield; the outflow is monitored at Tioga River at Tioga Junction. Figure 3 compares pH and specific conductance at Tioga River at Mansfield with pH and specific conductance at Tioga River at Tioga Junction for the period May 1-10, 1994. This figure illustrates the effects mixing water from Crooked Creek with water from Tioga River and improvements in water quality downstream of Tioga-Hammond Lake.

Reservoirs

Combined storage in 13 major reservoirs in the Susquehanna River Basin increased from 679,000 acre-feet (45 percent of total combined capacity) on September 30, 1993, to 691,000 acre-feet (46 percent of total combined capacity) on September 30, 1994, a net change of +12,000 acre-feet.

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SUSQUEHANNA RIVER BASIN

3

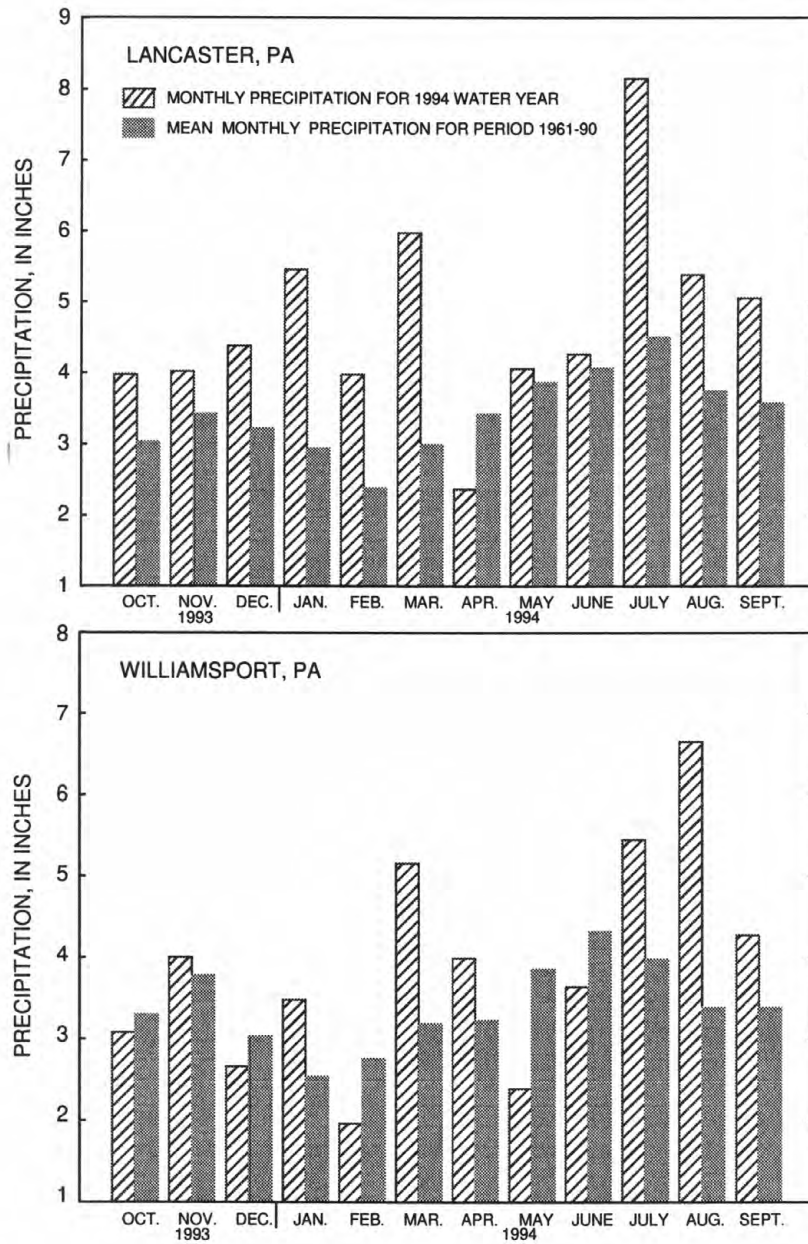


Figure 1. Comparison of monthly precipitation at two National Oceanic and Atmospheric Administration (NOAA) Climatological stations during the 1994 water year with mean monthly precipitation for the period 1961-90.

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SUSQUEHANNA RIVER BASIN

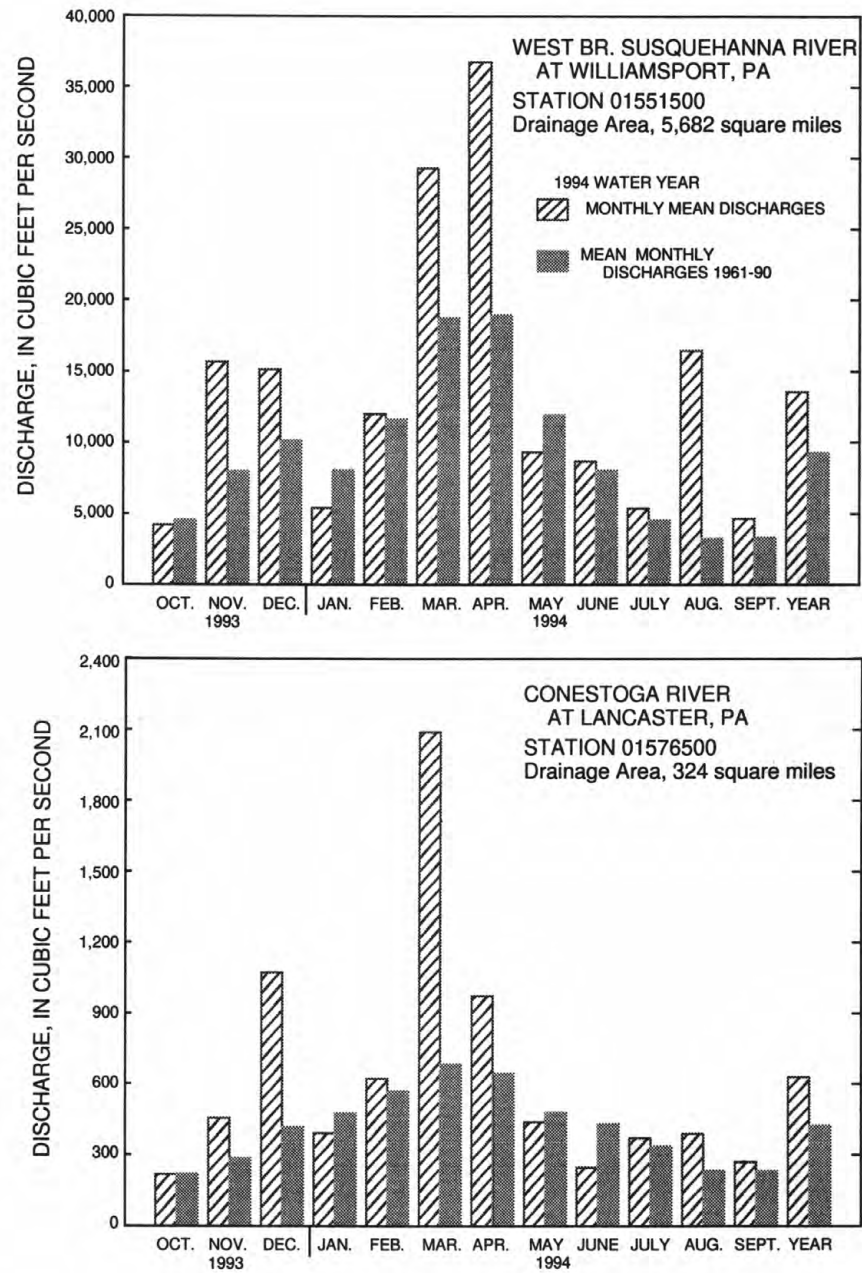


Figure 2. Comparison of discharge at two long-term streamflow-gaging stations during the 1994 water year with mean monthly discharge for the period 1961-90.

SUSQUEHANNA RIVER BASIN

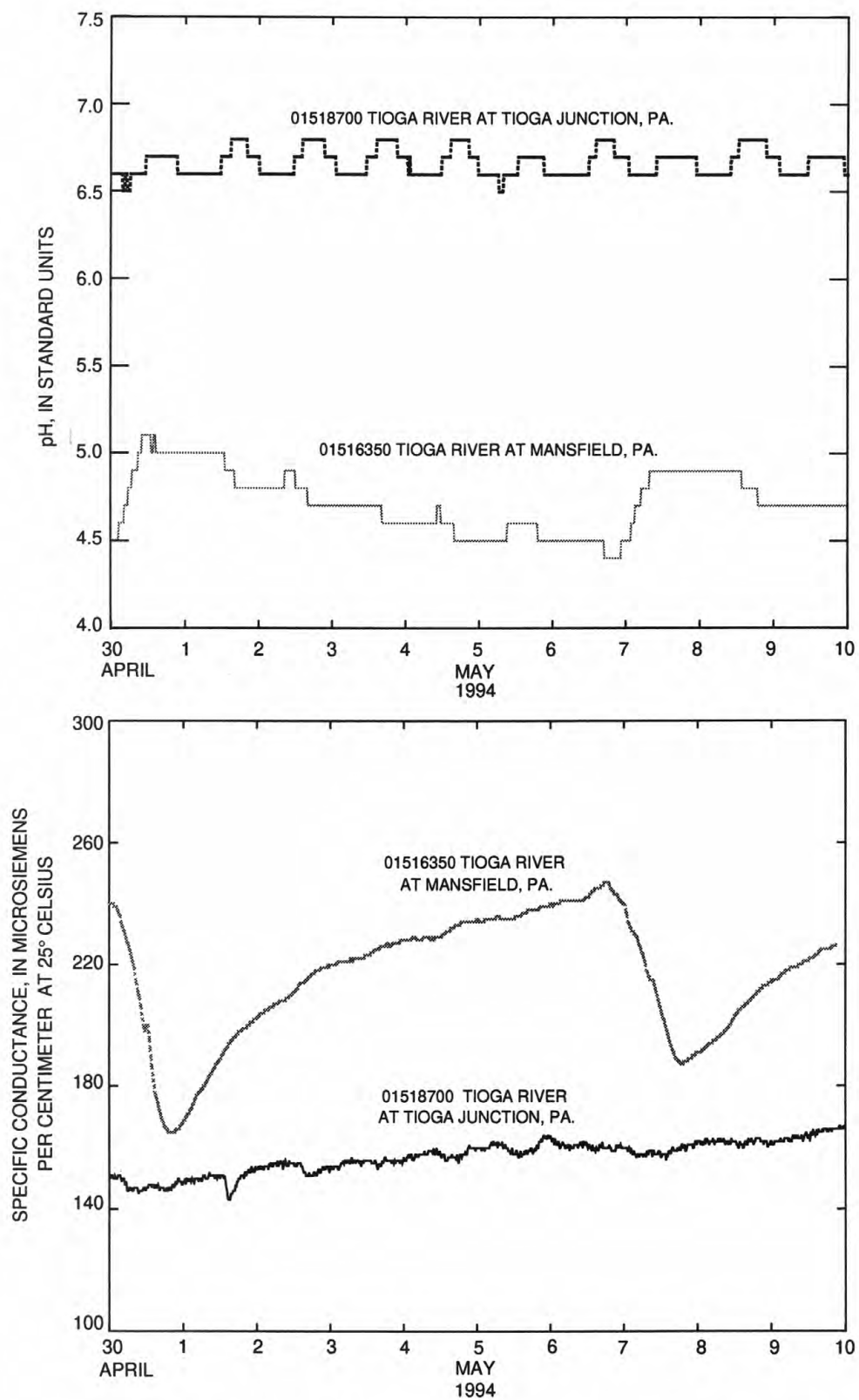


Figure 3. Comparison of pH and specific conductance at two water-quality monitoring locations in the Tioga River Basin.

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Ground WaterConditions

During the 1994 water year, water levels throughout the basin were above long-term average levels. The increase in ground-water levels results from above normal precipitation throughout most of the year. Table 1 below shows the least, greatest, and average daily maximum water depth below land surface for the period of record, the 1994 water year average daily maximum water depth below land surface, and the departure from the long-term average water depth below land surface.

Table 1.--Extremes and average daily maximum water depth below land surface for the period of record, average daily maximum water level for water year 1994, and departure from the long-term average for six selected network wells in the Susquehanna River Basin.

USGS Local Well Number	County	Years of record	Daily maximum water depth below land surface (in feet)				1994 WY departure from long-term average (in feet)
			For period of record			Average (1994 WY)	
			Minimum	Maximum	Average		
BR-92	Bradford	28	1.33	11.99	8.57	7.83	+0.74
DA-350	Dauphin	30	1.15	6.95	4.94	4.79	+0.15
FR-332	Franklin	19	12.30	36.68	28.44	25.03	+3.41
HU-301	Huntingdon	25	48.82	55.96	53.86	53.49	+0.37
LU-243	Luzerne	39	36.08	64.76	53.44	52.04	+1.40
UN-51	Union	27	25.26	42.24	38.28	37.70	+0.58

Figure 4 shows the relation between the 1994 water year seasonal mean ground-water levels and long-term seasonal mean ground-water levels. Ground-water levels closely reflect the seasonal precipitation variations. As previously mentioned, precipitation was above normal during November, January, March, and August throughout the entire basin. Precipitation was below normal throughout the entire basin during May. During fall and winter, ground-water levels were below normal at 2 of 25 observation wells in the basin. Of the remaining 23 wells, water levels in 9 were above to much-above normal during the fall. During winter, water levels in 23 wells were normal, above normal, or much-above normal. Water levels throughout the basin declined slightly during spring, with 17 of 25 wells at or below normal levels. Water levels during summer began to recover, and 23 of 24 observation wells (no data available for Luzerne County well) were at normal or above-normal levels. Of these 23 wells, water levels in 17 were above or much-above normal. New maximum and minimum water levels were recorded at the Juniata County well (JU-351) and a new maximum water level was also recorded at the Cumberland County well (CU-2).

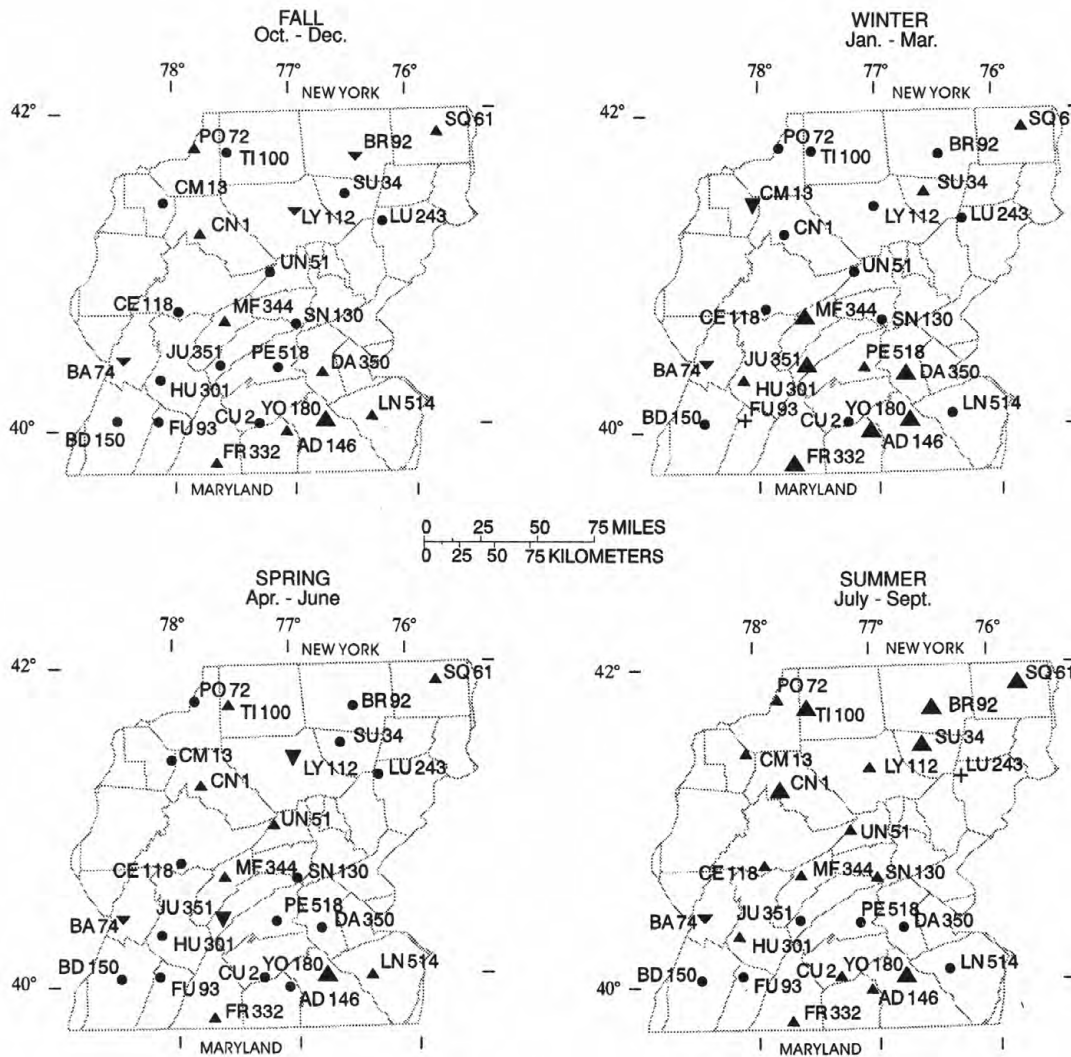
Ground-water Quality

The geologic environment in which ground water occurs controls the availability of the water and its natural quality. The Susquehanna River Basin is underlain by sedimentary, igneous, and metamorphic rocks that vary in water-yielding properties and chemical composition. Generally, adjacent aquifers have poor hydraulic continuity and thus, changes in ground-water quantity or quality generally are related only to factors that affect a particular aquifer.

Natural ground-water quality in Pennsylvania is extremely diverse due to the large number of rock formations and their lithologic and chemical differences. Four principal types of aquifers are present in the Susquehanna River Basin: (1) unconsolidated sand-and-gravel aquifers; (2) sandstone and shale aquifers; (3) carbonate-rock aquifers; and (4) crystalline-rock aquifers. Ground water in the principal aquifers is generally suitable for drinking with little or no treatment. Excess iron, sulfate, and dissolved-solids concentrations near mining and gas production activities in western Pennsylvania can contribute to water-quality degradation. Degradation of water quality by excess hardness and nitrate is generally limited to the carbonate aquifers in the central and southeastern part of the State. Ground-water contamination is a serious problem in some urban and agricultural areas, and some important coastal-plain aquifers in the extreme southeastern part of Pennsylvania have been severely contaminated by industrial waste. Major water-quality concerns are related to contamination from malfunctioning septic systems, hazardous waste disposal sites, leaking underground storage tanks, agricultural chemicals, mineral extraction, and oil and gas production.

References

U.S. Department of Commerce, 1993-94, Climatological data for Pennsylvania, Volumes 98-99: National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Service, variously paginated.



EXPLANATION

GROUND-WATER LEVELS

- YO 180 ▲ MUCH ABOVE NORMAL--More than one standard deviation above long-term water level
- LN 514 ▲ ABOVE NORMAL--One half to one standard deviation above long-term water level
- DA 350 ● NORMAL--Within one-half standard deviation of long-term water level
- BA 74 ▼ BELOW NORMAL--One-half to one standard deviation below long-term water level
- LY 112 ▼ MUCH BELOW NORMAL--More than one standard deviation below long-term water level
- + NO DATA

Figure 4. Relation between mean 1994 seasonal water levels and long-term mean water levels.

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SPECIAL NETWORKS AND PROGRAMS

The **Hydrologic Bench-Mark Network** is a network of 53 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. The station operated as part of this program in the Susquehanna River Basin in Pennsylvania is Young Womans Creek near Renovo (01545600). There are no stations in the Potomac River Basin in Pennsylvania participating in this program.

The **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 government agencies or other groups involved in national or regional water-quality planning and management. The 284 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. Stations operated as part of this program in the Susquehanna River Basin in Pennsylvania are; Susquehanna River at Danville (01540500), Susquehanna River at Lewisburg (01553500), Susquehanna River at Harrisburg (01570500), and Raystown Branch Juniata River at Saxton (01562000). There are no stations in the Potomac River Basin in Pennsylvania participating in this program.

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

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

Assessment activities have begun in about two-thirds of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest. There are a large number of streamflow, water-quality, and ground-water stations in the Susquehanna and Potomac River Basins operated as part of this program and published in this volume. NAWQA stations are identified in the header information at the top of the data page.

The **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. Stations operated as part of this program in the Susquehanna River Basin in Pennsylvania are Young Womans Creek near Renovo (01545600) and the Susquehanna River at Harrisburg (01570500). There are no stations in the Potomac River Basin in Pennsylvania participating in this program.

The **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. The station operated as part of this program in the Susquehanna River Basin in Pennsylvania is the Susquehanna River at Harrisburg (01570500). There are no stations in the Potomac River Basin in Pennsylvania participating in this program.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records in this report are for the 1994 water year that began October 1, 1993, and ended September 30, 1994. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The location of these stations and wells are shown in figures 6-8. 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 continuous-record stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. A station number can be from 8 to 15 digits in length and normally appears to the left of the station name. For example, an 8-digit number for a station such as 01570500, includes a 2-digit part number "01" plus a 6-digit downstream-order number "570500." The part number designates major river basins; for example, part "01" is the North Atlantic Slope Basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 5 below.

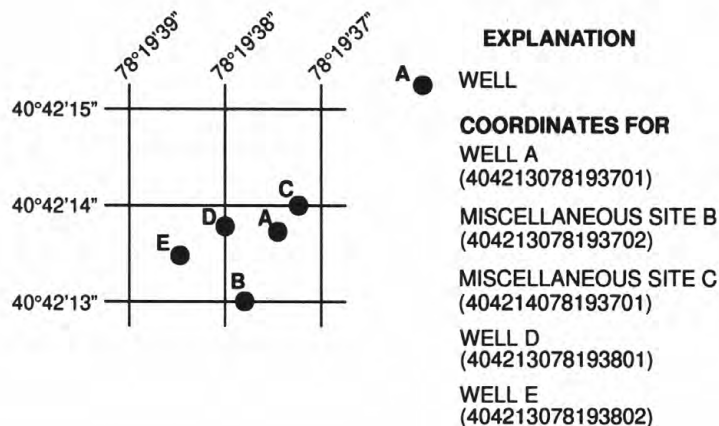


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude).

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

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial-record stations," or "Low-flow partial-record stations." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all continuous-record and partial-record stations for which data are given in this report are shown in figures 6-8.

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, with solid-state electronic data loggers, or with data collection platforms (DCP's) that electronically record and then transmit the data via satellite to ground receiving stations. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's), Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

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

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

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

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

Data Presentation

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

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

Station manuscript

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

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

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

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PERIOD OF RECORD.--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its streamflow can reasonably be considered equivalent to the streamflow at the present station.

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

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

REMARKS.--This paragraph is used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and accurate because published revisions of data are always accompanied by revisions of the data in computer storage.

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

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of 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.

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 temperature, discharge measurements, gage-height records, and rating tables is on file in the District's offices. Most gaging-station records are available in computer-usable form and many statistical analyses have been made.

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

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Location of stations for which records on the quality of surface water appear in this report are shown in figures 6-8.

Arrangement of Records

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

On-site Measurements and Sample Collection

During the collection of water-quality data, assurance that the data obtained represent the in-situ quality of the water is a major concern. Certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the in-situ water quality, carefully prescribed procedures need to be followed when collecting the samples, when treating the samples to prevent changes in quality pending analysis, and when shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are detailed in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards. Also, detailed information on collecting, treating, and shipping samples may be obtained from the U.S. Geological Survey District Office.

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

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

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

Water Temperature

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

Sediment

Suspended-sediment concentrations are determined from samples collected by hand or by pump samplers. Hand samples utilize the appropriate sampler (dependent on stream depth and velocity) and are collected using the depth-integrating method at single or multiple verticals in the cross section. Samples collected by pump samplers use an intake set to a fixed location in the cross section. The intake is located at a site that best represents the entire cross section on the basis of simultaneous samples collected at various stages by the pumping sampler and by hand. During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, every 15 minutes). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge, mean concentration, and the constant 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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 to analyze sediment samples and to compute sediment records are described in TWRI Book 5, Chapter C1. Methods used by the Geological Survey laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4 and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

The following remark codes may appear with the data tables in this report:

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

Records of Ground-Water Levels

Ground-water level data from an observation well network and from ground-water projects are published herein. Locations of observation wells in the basic network are shown in figures 6 and 8. Ground-water data are grouped by counties, arranged in alphabetical order, and are listed on page x. Those with an (l) following the well number have water-level data published in the report. Miscellaneous or short-term ground-water data collection projects are published following the basic network data.

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.

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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, the distance and direction from a geographic point of reference, and the owner's name.

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

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

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method, allowing the user to better evaluate the reported water-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) sea level; it is reported with a precision relative to the method of determination.

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

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

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels (of the daily maximum depth below land surface) for the period of published record, and the dates of their occurrence. These extremes are determined from recorded data and may have been higher or lower during periods of missing record.

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 and reflect only actual recorded data. Missing records are indicated by dashes in place of the water level. A hydrograph showing the last three years of water levels follows each water-level table.

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 x, have water-quality data published in the report. Miscellaneous or short-term ground-water data collection projects are published following the basic network data.

Data Collection and Computation

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

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey TWRI publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. 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. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

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Data Presentation

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

ACCESS TO WATSTORE DATA

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

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

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

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

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. Currently data for water years 1990-1993 is available only on a single CD-ROM as Open File report "OF 94-467", and the 1994 water year as "OF 95-418". CD-ROM discs are available for sale by the USGS Information Services, Federal Center, Box 25286, Denver, Colorado 80225 (phone (303) 202-4210). Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices (see address on the back of the title page).

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DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warmblooded 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 $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

Cubic feet per second per square mile [(ft³/s)/mi²]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.

Cubic foot per second (ft³/s)¹ is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute.

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

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

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

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

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

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

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

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

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

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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).

The Hydrologic Bench-Mark Network is a network of 53 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

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

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

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

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

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

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

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

The National 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 national or regional water-quality planning and management. The 284 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).

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

Organism is any living entity.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Runoff (see Annual Runoff)

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

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

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

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

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

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

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

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

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

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

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

7-day 10-year low flow (Q7,10) 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.

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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 emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

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

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

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

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

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

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

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

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

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

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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.

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

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

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS—Continued

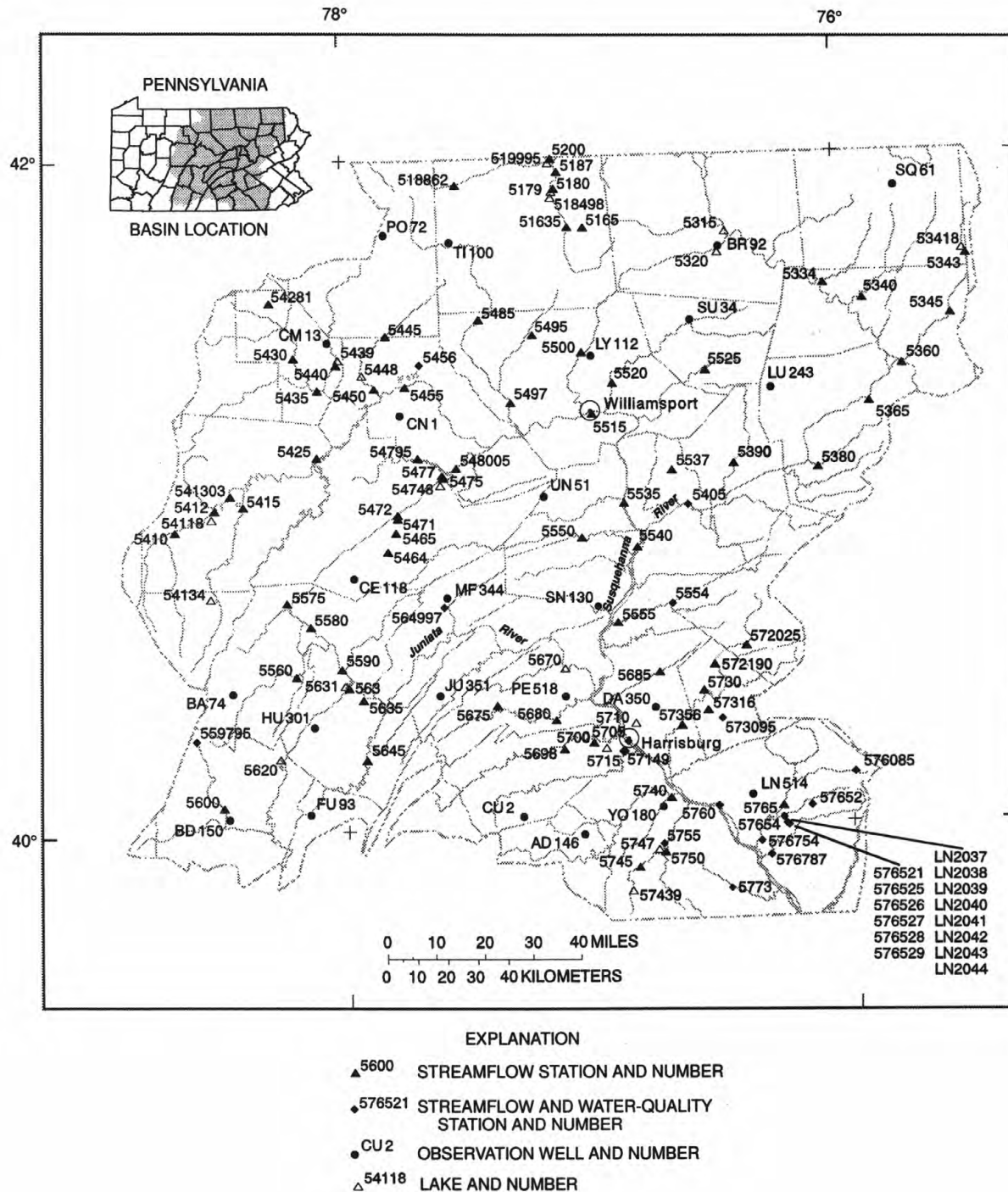
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS—TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS—TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS—TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS—TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS—TWRI Book 3, Chapter A16. 1985. 52 pages.
- 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. Rathbun, Nobuhiro 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. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS—TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS—TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a 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 R. L. Cooley and R. L. Naff: USGS—TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS—TWRI Book 3, Chapter B4. 1993. 8 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-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS—TWRI Book 3, Chapter B7. 1992. 90 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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS—Continued

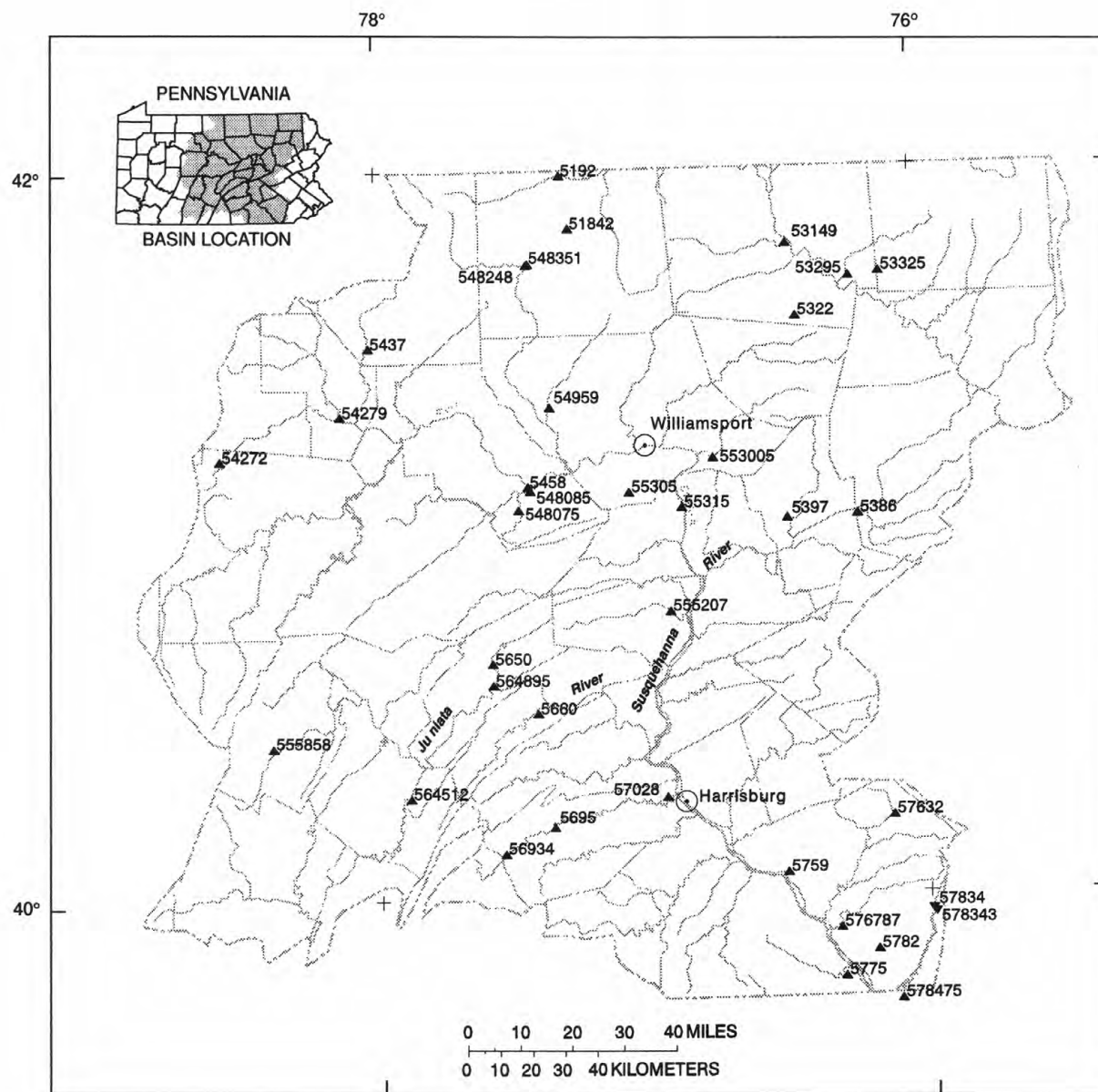
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS—TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS—TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman, editors: 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.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS—TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS—TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS—TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS—TWRI Book 6, Chapter A5. 1993. 243 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, 1994

SUSQUEHANNA RIVER BASIN



SUSQUEHANNA RIVER BASIN



EXPLANATION

▲ 54272 STREAMFLOW STATION AND NUMBER

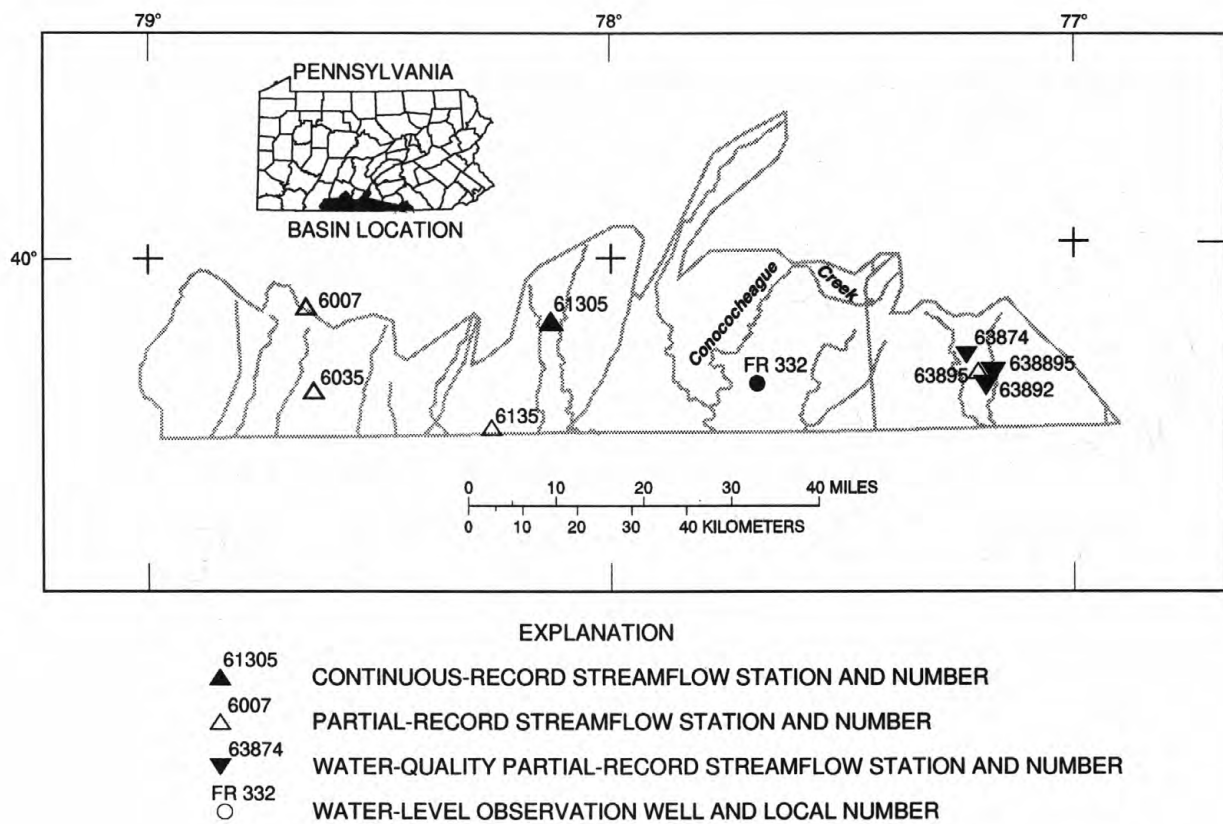
▼ 57834 WATER-QUALITY STATION AND NUMBER

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

EXAMPLE - Station number 01570280 is shown as 57028,
station number 01577500 is shown as 5775.

Figure 7. Location of partial-record data-collection stations.

WATER RESOURCES DATA - PENNSYLVANIA, 1994
POTOMAC RIVER BASIN



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

EXAMPLE - Station number 01613050 is shown as 61305,
 station number 01613500 is shown as 6135.

Figure 8. Location of continuous- and partial-record data collection stations, Potomac River Basin.

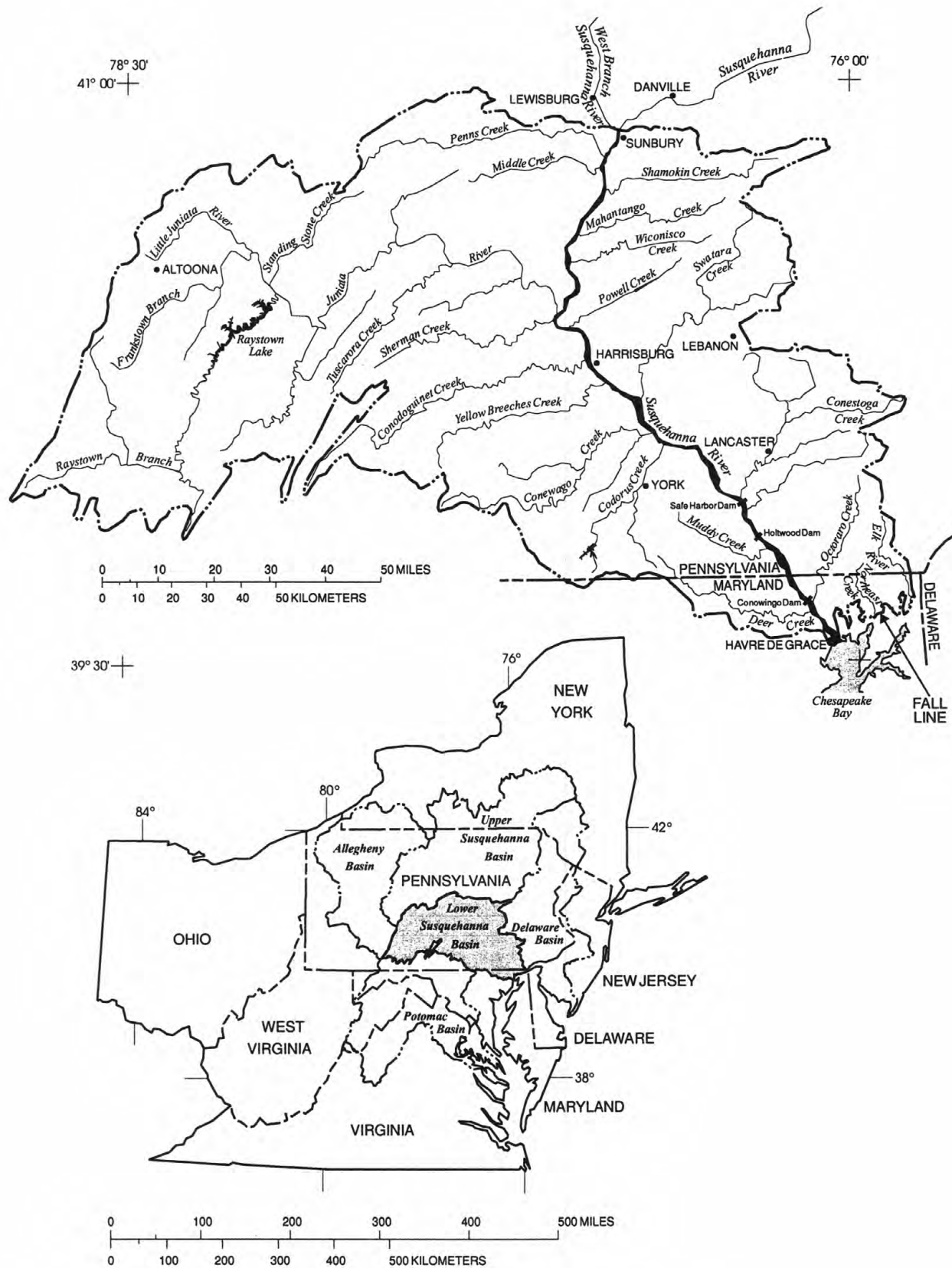


Figure 9. Study area for the National Water-Quality Assessment (NAWQA) in the Lower Susquehanna River Basin.

WATER RESOURCES DATA - PENNSYLVANIA, 1994

SPECIAL NOTES, REMARK CODES, AND SELECTED CONSTITUENT DEFINITIONS

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

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

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

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

where:

MBASCOR = corrected MBAS concentration, in mg/L;

M = reported MBAS concentration, in mg/L;

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

C = dissolved chloride concentration, in mg/L.

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

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

PRINTED OUTPUTREMARK

E,e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
ND	Material specifically analyzed for but not detected

EXPLANATION OF CODES USED TO DEFINE SAMPLE COLLECTION PROCEDURES (partial listing)(71999) SAMPLE PURPOSE CODES:

10--Routine
15--NAWQA
20--NASQAN
30--Benchmark

(84164) SAMPLER TYPE: (partial list)

3035--DH-76 Trace metal sampler with
teflon gasket and nozzle
3045--DH-81 with Teflon cap and
nozzle
8010--Other (other than a defined
sampler type)

(82398) SAMPLE METHOD CODES:

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

WATER RESOURCES DATA - PENNSYLVANIA, 1994

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

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

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

(00027) AGENCY COLLECTING SAMPLE CODES:

1028--U.S. Geological Survey
42011--Susquehanna River Basin Commission

(00028) AGENCY ANALYZING SAMPLE CODES:

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

CONTINUOUS WATER-DISCHARGE AND WATER-QUALITY STATION RECORDS

NORTH ATLANTIC SLOPE BASINS

SUSQUEHANNA RIVER BASIN

CHEMUNG RIVER BASIN

01516350 TIOGA RIVER NEAR MANSFIELD, PA

LOCATION.--Lat 41°47'34", long 77°04'44", Tioga County, Hydrologic Unit 02050104, on left bank on Township Route 754, 0.6 mi downstream from Slate Creek, and 1.0 mi south of Mansfield.

DRAINAGE AREA.--153 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,121.28 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1975 reached an approximate stage of 20.13 ft, from flood-marks, approximate discharge, 18,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	87	453	e70	231	e180	940	258	76	236	259	240
2	66	81	369	e67	e170	e160	1350	213	67	184	235	204
3	78	84	342	e63	e165	e150	2370	176	55	152	213	179
4	67	102	326	e58	e160	e170	2140	162	49	129	171	161
5	71	252	490	e69	176	e160	1530	154	45	112	189	146
6	65	413	364	e64	158	e150	1700	146	43	151	187	132
7	58	294	314	e59	145	164	1920	140	65	1390	140	121
8	53	224	286	e58	e110	255	1090	195	52	1390	e120	110
9	51	188	255	e57	e135	247	922	171	44	455	e110	100
10	51	165	341	e58	e150	332	1210	147	51	326	e105	93
11	49	152	455	e60	e140	329	1170	137	53	242	103	84
12	49	144	287	e62	e130	265	1140	135	348	198	112	79
13	48	139	254	e60	e120	265	1340	130	346	1110	117	74
14	45	163	238	e55	e115	333	1220	115	1270	644	1500	69
15	41	245	232	e54	e110	473	857	108	404	479	566	67
16	38	188	236	e57	e110	503	1040	111	297	276	311	65
17	41	398	200	e60	e105	339	709	109	278	212	964	62
18	66	879	184	e55	e105	288	522	106	203	180	12200	93
19	60	449	184	e51	e140	275	443	101	161	156	2070	76
20	98	352	180	e50	e500	252	368	96	134	132	986	63
21	101	276	183	e51	e1050	268	309	87	121	114	913	58
22	105	235	172	e54	756	654	271	78	110	436	742	54
23	89	205	148	e59	476	1320	240	72	94	433	486	73
24	80	184	e105	e65	397	2700	217	68	371	240	370	78
25	74	167	e100	e73	315	2360	195	72	1500	188	417	73
26	69	146	e86	e105	276	1180	178	85	424	187	418	73
27	65	145	e76	e150	e210	1240	184	89	302	147	272	1060
28	64	3670	e82	e450	e190	1250	164	73	1400	565	330	345
29	64	1140	e76	e800	---	1040	159	63	394	310	810	254
30	61	639	e74	403	---	904	169	57	295	520	325	191
31	73	---	e72	262	---	810	---	52	---	335	262	---
TOTAL	2014	11806	7164	3659	6845	19016	26067	3706	9052	11629	26003	4477
MEAN	65.0	394	231	118	244	613	869	120	302	375	839	149
MAX	105	3670	490	800	1050	2700	2370	258	1500	1390	12200	1060
MIN	38	81	72	50	105	150	159	52	43	112	103	54
CFSM	.42	2.57	1.51	.77	1.60	4.01	5.68	.78	1.97	2.45	5.48	.98
IN.	.49	2.87	1.74	.89	1.66	4.62	6.34	.90	2.20	2.83	6.32	1.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	126	197	220	183	233	434	548	250	182	88.0	94.2	52.1							
MAX	653	620	514	600	650	832	1968	630	550	375	839	149							
(WY)	1991	1978	1991	1979	1984	1978	1993	1978	1989	1994	1994	1994							
MIN	13.3	26.9	50.5	36.2	57.2	148	156	84.4	25.1	18.2	17.0	12.6							
(WY)	1983	1983	1989	1981	1987	1981	1988	1987	1991	1993	1991	1980							

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1976 - 1994
ANNUAL TOTAL	122987	131438	
ANNUAL MEAN	337	360	
HIGHEST ANNUAL MEAN			217
LOWEST ANNUAL MEAN			388
HIGHEST DAILY MEAN	7210	Apr 1	12200
LOWEST DAILY MEAN	11	Aug 9,10	38
ANNUAL SEVEN-DAY MINIMUM	12	Aug 4	44
INSTANTANEOUS PEAK FLOW			a33300
INSTANTANEOUS PEAK STAGE			18.57
ANNUAL RUNOFF (CFSM)	2.20		2.35
ANNUAL RUNOFF (INCHES)	29.90		31.96
10 PERCENT EXCEEDS	778		479
50 PERCENT EXCEEDS	74		96
90 PERCENT EXCEEDS	18		23

a From rating curve extended above 16,000 ft³/s.

e Estimated.

CHEMUNG RIVER BASIN

01516500 COREY CREEK NEAR MAINESBURG, PA

LOCATION.--Lat 41°47'27", long 77°00'54", Tioga County, Hydrologic Unit 02050104, on right bank 30 ft upstream from bridge on Township Route 818, 500 ft upstream from small left-bank tributary, 1.1 mi west of Mainesburg, 3.5 mi east of Mansfield, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--12.2 mi².

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.8	20	e3.5	e14	e10	73	11	4.8	15	12	e14
2	1.1	2.8	17	e3.2	e12	e9.0	84	7.3	2.6	11	9.8	e11
3	1.2	3.0	16	e3.0	e10	e8.4	132	6.2	2.2	8.0	8.5	e9.0
4	.98	4.0	16	e2.9	e9.4	e9.6	100	5.7	1.9	6.3	6.6	e8.0
5	1.3	15	26	e3.4	e9.8	e9.0	68	5.3	1.8	5.3	9.3	e7.0
6	1.1	12	16	e3.1	e9.0	e8.4	71	5.1	1.8	20	7.0	e6.0
7	.82	8.1	14	e2.9	e8.0	e9.0	96	4.8	2.4	115	5.0	e5.0
8	.71	6.2	13	e2.8	e7.0	e9.7	48	7.7	1.8	40	4.1	e4.5
9	.77	5.4	12	e3.0	e7.8	e15	38	5.7	1.6	16	3.4	4.0
10	.98	4.8	20	e2.9	e9.0	e20	53	5.6	1.4	11	3.1	4.3
11	.85	4.3	20	e2.8	e8.4	e21	51	5.1	2.9	8.1	2.9	3.6
12	.81	3.9	e17	e2.7	e7.8	e17	67	5.1	13	6.2	4.4	3.4
13	.83	3.6	e15	e2.7	e7.6	15	80	4.4	6.8	55	4.0	3.1
14	.81	4.9	e12	e2.6	e7.4	17	60	3.8	42	55	121	2.9
15	.80	6.4	11	e2.5	e7.1	32	40	3.6	10	36	29	2.8
16	.82	5.1	12	e2.6	e7.0	31	69	4.5	7.2	19	17	2.6
17	.99	30	e10	e2.8	e6.6	e20	37	4.0	5.8	13	106	2.7
18	1.1	41	8.6	e2.5	e6.6	e18	27	3.8	4.4	10	946	4.9
19	1.0	16	9.6	e2.4	e8.0	e15	23	3.7	3.5	8.3	82	3.1
20	1.5	12	9.3	e2.2	e25	e11	17	3.4	2.8	6.5	42	2.5
21	1.4	8.9	10	e2.3	e60	15	14	3.0	2.7	5.5	40	2.2
22	1.3	7.5	8.9	e2.5	e45	64	11	2.7	2.4	9.2	33	2.1
23	1.2	6.6	e8.8	e2.7	32	132	9.6	2.5	2.0	12	e23	4.4
24	1.1	6.1	e6.6	e3.0	25	355	8.6	2.3	33	6.7	e18	3.7
25	1.0	5.5	e6.0	e3.5	e20	218	7.7	3.2	61	6.4	e20	3.2
26	1.0	5.0	e5.0	e5.2	e15	91	7.0	3.4	21	5.8	e21	5.6
27	1.0	6.5	e4.3	e7.1	e12	113	8.7	3.3	18	4.3	e15	36
28	1.3	263	e4.5	e25	e11	105	6.3	2.5	136	35	e29	13
29	1.2	53	e4.0	e42	---	79	6.8	2.2	34	11	53	13
30	1.2	29	e3.8	e20	---	71	6.5	1.9	23	39	e20	9.0
31	2.1	---	e3.7	e16	---	65	---	1.9	---	16	e17	---
TOTAL	33.37	582.4	360.1	185.8	407.5	1613.1	1320.2	134.7	453.8	615.6	1712.1	196.6
MEAN	1.08	19.4	11.6	5.99	14.6	52.0	44.0	4.35	15.1	19.9	55.2	6.55
MAX	2.1	263	26	42	60	355	132	11	136	115	946	36
MIN	.71	2.8	3.7	2.2	6.6	8.4	6.3	1.9	1.4	4.3	2.9	2.1
CFSM	.09	1.59	.95	.49	1.19	4.27	3.61	.36	1.24	1.63	4.53	.54
IN.	.10	1.78	1.10	.57	1.24	4.92	4.03	.41	1.38	1.88	5.22	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1994, BY WATER YEAR (WY)

	5.95	10.4	14.3	11.0	16.9	29.9	29.6	14.3	10.1	3.32	3.26	2.70
MEAN	5.95	10.4	14.3	11.0	16.9	29.9	29.6	14.3	10.1	3.32	3.26	2.70
MAX	51.0	45.4	42.7	48.6	52.4	60.4	118	42.7	114	19.9	55.2	44.4
(WY)	1956	1978	1974	1979	1984	1964	1993	1989	1972	1994	1994	1975
MIN	.15	.48	.84	.75	1.71	4.88	8.19	4.08	.69	.10	.074	.000
(WY)	1964	1965	1965	1961	1963	1965	1955	1985	1991	1966	1964	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1954 - 1994

ANNUAL TOTAL	6810.43	7615.27	
ANNUAL MEAN	18.7	20.9	12.6
HIGHEST ANNUAL MEAN			24.9
LOWEST ANNUAL MEAN			4.82
HIGHEST DAILY MEAN	525	Apr 16	946
LOWEST DAILY MEAN	.15	Aug 9,30	.71
ANNUAL SEVEN-DAY MINIMUM	.21	Jul 23	.82
INSTANTANEOUS PEAK FLOW			a4970
INSTANTANEOUS PEAK STAGE			10.15
ANNUAL RUNOFF (CFSM)	1.53		1.71
ANNUAL RUNOFF (INCHES)	20.77		23.22
10 PERCENT EXCEEDS	41		49
50 PERCENT EXCEEDS	3.8		7.4
90 PERCENT EXCEEDS	.43		1.9

a From rating curve extended above 490 ft³/s on basis of slope-area measurement at gage height 7.88 ft and at peak flow.

b From floodmark.

e Estimated.

CHEMUNG RIVER BASIN

01518000 TIOGA RIVER AT TIOGA, PA

LOCATION.--Lat 41°54'30", Long 77°07'47", Tioga County, Hydrologic Unit 02050104, on left bank 130 ft upstream from highway bridge on Township Route 667 at Tioga, 0.8 mi upstream from Crooked Creek, and 0.9 mi downstream from Tioga Dam.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--June 1938 to current year. Prior to October 1938 monthly discharge only, published in WSP 1302.

REVISIONS.--WSP 871: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,021.07 ft above sea level. Prior to Sept. 9, 1953, at site 20 ft upstream at datum 2.11 ft higher. Sept. 9, 1953, to Aug. 10, 1954, at site 130 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Discharges include flow diverted from Crooked Creek into Tioga River since Oct. 1, 1977. Flow regulated since November 1979 by Tioga Dam (station 01517900). Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	135	1470	167	567	450	1950	338	112	614	379	511
2	128	157	900	167	537	457	2870	345	156	413	303	388
3	121	155	674	167	427	470	4750	345	184	309	336	341
4	105	133	699	168	421	469	4020	345	150	214	411	291
5	105	117	873	169	414	469	2770	342	92	164	437	240
6	105	184	827	169	412	481	3170	326	81	421	287	232
7	111	365	583	169	352	516	3310	319	81	1920	155	178
8	119	417	489	169	314	623	2240	319	81	e2600	155	148
9	121	389	489	169	284	762	1690	321	81	e820	155	151
10	132	285	517	160	257	869	1790	319	79	e610	155	164
11	141	206	610	142	257	950	1940	309	81	e400	155	177
12	133	188	621	134	257	852	2140	290	416	309	155	177
13	115	177	450	142	257	779	2320	276	820	883	178	168
14	74	171	447	159	257	881	2090	233	3450	1940	2860	162
15	66	286	466	148	257	1110	1830	214	2120	1310	2980	139
16	66	341	413	148	263	1550	1700	213	578	428	899	120
17	66	361	394	146	258	1550	1620	213	834	392	1020	119
18	66	1360	377	144	257	1140	1100	210	614	299	2800	119
19	85	717	349	137	257	801	926	215	398	243	5540	119
20	121	652	349	137	770	868	670	198	276	184	6140	119
21	141	535	350	137	2530	888	545	146	208	167	5860	116
22	141	441	340	137	2610	1960	521	138	208	177	5560	105
23	141	393	299	122	1680	3380	473	122	163	1230	5220	102
24	130	312	235	115	1200	4190	453	109	205	620	4320	105
25	106	269	182	115	867	2720	402	109	2280	464	1200	129
26	93	250	182	126	736	5170	342	119	1070	339	1770	181
27	91	297	156	132	579	5450	325	149	625	250	643	1310
28	91	3550	134	227	464	4870	325	164	3260	1050	687	720
29	91	3900	155	1650	---	3210	325	141	1320	722	1670	440
30	91	2680	167	1230	---	2170	327	112	648	971	1080	257
31	99	---	167	721	---	1950	---	104	---	683	635	---
TOTAL	3351	19423	14364	7823	17741	52005	48934	7103	20671	21146	54145	7528
MEAN	108	647	463	252	634	1678	1631	229	689	682	1747	251
MAX	156	3900	1470	1650	2610	5450	4750	345	3450	2600	6140	1310
MIN	66	117	134	115	257	450	325	104	79	164	155	102

e Estimated.

CHEMUNG RIVER BASIN

01518000 TIOGA RIVER AT TIOGA, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated. The data in the first set of statistics (1978-94) represent flow past the gage including streamflow diverted into Tioga River from the adjacent Crooked Creek Basin since October 1977, and are not equivalent to natural streamflow conditions prior to this date.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1994, BY WATER YEAR (WY) (SINCE REGULATION AND DIVERSION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	246	406	480	413	552	965	1182	524	416	179	202	104
MAX	1454	1684	1176	1303	1715	2161	4544	1433	1404	682	1747	320
(WY)	1991	1978	1978	1979	1981	1979	1993	1989	1989	1994	1994	1990
MIN	36.5	31.2	48.3	22.7	111	238	323	140	41.5	32.5	28.4	20.8
(WY)	1992	1981	1983	1981	1989	1981	1988	1985	1991	1991	1980	1980

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1978 - 1994

ANNUAL TOTAL	240400	274234	
ANNUAL MEAN	659	751	471
HIGHEST ANNUAL MEAN			862
LOWEST ANNUAL MEAN			256
HIGHEST DAILY MEAN	5830	Apr 19	8360
LOWEST DAILY MEAN	30	Aug 3-15	16
ANNUAL SEVEN-DAY MINIMUM	30	Aug 3	16
INSTANTANEOUS PEAK FLOW		6370	14300
INSTANTANEOUS PEAK STAGE		6.98	8.84
INSTANTANEOUS LOW FLOW			a.00
10 PERCENT EXCEEDS	1710	2100	1080
50 PERCENT EXCEEDS	166	325	179
90 PERCENT EXCEEDS	33	117	40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1977, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	145	291	350	271	346	790	753	516	254	93.4	77.0	89.9
MAX	1084	1061	978	787	814	1694	2124	1534	2397	471	380	1083
(WY)	1956	1971	1974	1952	1976	1964	1958	1946	1972	1972	1947	1975
MIN	9.26	12.8	22.0	37.9	59.2	169	132	87.6	44.3	16.5	12.2	6.68
(WY)	1964	1965	1965	1961	1963	1969	1946	1941	1962	1955	1966	1964

SUMMARY STATISTICS

WATER YEARS 1939 - 1977

ANNUAL MEAN	331	
HIGHEST ANNUAL MEAN	583	1972
LOWEST ANNUAL MEAN	138	1965
HIGHEST DAILY MEAN	26900	Jun 23 1972
LOWEST DAILY MEAN	5.0	Sep 11 1964
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 8 1964
INSTANTANEOUS PEAK FLOW	c59000	Jun 22 1972
INSTANTANEOUS PEAK STAGE	d19.70	Jun 22 1972
INSTANTANEOUS LOW FLOW	4.5	Aug 10,11 1955
ANNUAL RUNOFF (CFSM)	1.17	
ANNUAL RUNOFF (INCHES)	15.95	
10 PERCENT EXCEEDS	780	
50 PERCENT EXCEEDS	130	
90 PERCENT EXCEEDS	23	

a Result of shutoff at Tioga Dam.

b Also Aug. 29, 1980.

c From rating curve extended above 8,000 ft³/s on basis of slope-area and contracted-opening measurement at gage height 15.47 ft, and slope-area measurement of peak flow.

d From floodmark.

CHEMUNG RIVER BASIN

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA

LOCATION.--Lat 41°57'09", long 77°06'56", Tioga County, Hydrologic Unit 02050104, on left bank 0.3 mi upstream from bridge on Township Route 722 at Tioga Junction, 3.3 mi downstream from Crooked Creek, and 5.0 mi downstream from Tioga and Hammond Dams.

DRAINAGE AREA.--446 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 990.43 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since November 1979 by Tioga Dam (station 01517900) and Hammond Dam (station 01518498). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	145	1640	e190	655	e500	2410	412	167	664	395	546
2	123	169	1050	187	e600	e500	3320	450	178	430	311	416
3	123	169	755	187	e470	512	5560	394	204	327	328	352
4	119	151	790	e190	e470	e520	4800	383	174	232	410	302
5	117	142	1050	e190	456	510	3290	369	112	178	446	242
6	113	195	1030	e190	453	e520	3650	350	99	321	309	230
7	117	370	758	193	386	576	4000	337	99	1710	166	188
8	131	433	578	188	332	734	2700	354	96	3120	166	151
9	131	403	545	e190	e310	907	2030	342	95	923	168	155
10	137	301	584	e180	e280	1070	2120	340	95	674	168	164
11	148	211	718	e160	e270	1170	2280	327	100	434	169	176
12	142	193	698	147	268	1030	2580	302	422	311	168	174
13	126	179	517	156	268	944	2870	286	863	582	182	165
14	87	175	495	175	e270	1100	2520	249	4020	2040	2820	158
15	73	268	524	e160	e270	1410	2180	227	2470	1360	3210	142
16	71	346	461	e160	271	1920	2050	231	662	479	966	121
17	74	386	437	e160	265	1870	1950	227	861	403	953	122
18	75	1450	417	e150	267	1410	1370	227	670	307	4830	122
19	94	831	383	e150	283	1020	1130	232	416	253	5450	121
20	132	709	383	e150	951	1050	838	226	298	196	6030	120
21	152	580	388	e150	3080	1110	647	166	218	175	5790	117
22	152	467	378	e150	3010	2410	607	160	214	180	5510	106
23	152	414	328	e140	1990	4130	533	143	180	1090	5140	106
24	141	336	261	e130	1470	5660	500	127	205	708	4440	107
25	117	281	e210	e130	1070	3680	447	130	2080	500	1370	125
26	102	262	e200	e140	e850	5540	372	152	1140	342	1970	173
27	99	300	e190	e160	e680	6130	355	172	645	271	756	1170
28	99	4220	e170	e250	e520	5610	349	184	3090	961	754	755
29	98	4220	e180	1960	---	3830	357	162	1520	802	1700	469
30	99	2920	e190	1460	---	2580	357	129	673	912	1170	245
31	108	---	e190	868	---	2340	---	120	---	734	683	---
TOTAL	3609	21226	16498	8991	20465	62293	58172	7910	22066	21619	56928	7540
MEAN	116	708	532	290	731	2009	1939	255	736	697	1836	251
MAX	157	4220	1640	1960	3080	6130	5560	450	4020	3120	6030	1170
MIN	71	142	170	130	265	500	349	120	95	175	166	106
MEAN $\frac{1}{2}$	91	809	486	274	726	1977	1971	265	744	687	1834	252
CFSM $\frac{1}{2}$	.20	1.81	1.09	.61	1.63	4.43	4.42	.60	1.67	1.54	4.11	.57
IN. $\frac{1}{2}$	.23	2.02	1.26	.70	1.70	5.11	4.93	.69	1.86	1.78	4.74	.64

$\frac{1}{2}$ Adjusted for change in contents in Tioga and Hammond Lakes.

e Estimated.

CHEMUNG RIVER BASIN

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	244	373	508	351	673	958	1442	588	491	211	232	109
MAX	1515	809	1221	981	1837	2009	5667	1723	1619	697	1836	295
(WY)	1991	1980	1991	1993	1981	1994	1993	1989	1989	1994	1994	1990
MIN	41.4	49.0	76.6	29.5	127	259	352	164	51.4	38.4	29.6	26.3
(WY)	1992	1981	1981	1981	1989	1981	1988	1985	1980	1991	1980	1980

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1980 - 1994

ANNUAL TOTAL	295205			307317								
ANNUAL MEAN	809			842								
HIGHEST ANNUAL MEAN				804			843			513		
LOWEST ANNUAL MEAN										842		
HIGHEST DAILY MEAN	7210			Apr 27			6130			Mar 27		
LOWEST DAILY MEAN	38			Aug 9			71			Oct 16		
ANNUAL SEVEN-DAY MINIMUM	39			Aug 3			86			Oct 13		
INSTANTANEOUS PEAK FLOW							a11200			Aug 18		
INSTANTANEOUS PEAK STAGE							15.42			Aug 18		
ANNUAL RUNOFF (CFSM)	1.81			1.80			1.89			1.15		
ANNUAL RUNOFF (INCHES)	24.62			24.47			25.63			25.66		
10 PERCENT EXCEEDS	2190						2430			1190		
50 PERCENT EXCEEDS	180						346			192		
90 PERCENT EXCEEDS	43						124			53		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1979, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	581	746	635	963	453	1993	1010	663	210	123	177	160
MAX	838	1764	1324	1484	597	2355	1404	1365	318	181	288	278
(WY)	1978	1978	1978	1979	1977	1979	1978	1978	1978	1976	1976	1977
MIN	198	181	229	97.2	380	1478	807	311	153	78.3	65.2	80.3
(WY)	1979	1979	1977	1977	1978	1977	1979	1979	1977	1979	1979	1976

SUMMARY STATISTICS WATER YEARS 1976 - 1979

ANNUAL MEAN	643																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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‡ Adjusted for change in contents in Tioga and Hammond Lakes.

a From rating curve extended above 6,000 ft³/s.b From rating curve extended above 4,000 ft³/s.

c Gage height 16.70 ft.

d Backwater from ice.

CHEMUNG RIVER BASIN

01518862 COWANESQUE RIVER AT WESTFIELD, PA

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

DRAINAGE AREA.--90.6 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,337.58 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	28	218	e26	e100	e76	e360	236	135	89	13	93
2	15	29	172	e27	e80	e66	e470	133	48	71	92	72
3	14	35	156	e24	e64	e60	e740	116	38	60	50	58
4	13	54	169	e23	e58	e68	e680	108	33	50	26	49
5	14	157	219	e26	e54	e63	e580	100	28	48	35	42
6	13	162	143	e25	e50	e58	e620	92	28	183	26	38
7	10	88	135	e24	e46	e62	e700	83	29	193	20	33
8	9.4	64	113	e23	e44	e86	e460	111	23	130	17	29
9	8.3	51	95	e23	e52	e80	421	86	20	100	15	27
10	8.1	43	123	e22	e60	e90	492	83	18	78	13	27
11	7.8	36	126	e21	e54	e85	443	72	109	60	11	23
12	6.9	33	e76	e22	e50	e82	786	70	314	49	16	21
13	6.8	31	e74	e23	e48	e90	913	63	632	41	21	20
14	6.2	45	70	e24	e45	e110	692	54	e1100	35	1170	19
15	6.0	77	69	e22	e43	e150	471	51	e250	34	224	18
16	5.7	51	69	e24	e43	e160	532	64	e160	30	119	17
17	8.6	338	52	e25	e42	e140	382	56	e130	26	179	16
18	19	414	48	e23	e43	e110	290	48	e100	24	3970	17
19	13	202	54	e22	e57	e100	253	46	e83	22	1010	14
20	16	171	55	e21	e160	e95	205	42	e66	20	591	13
21	30	127	52	e20	e300	e100	168	37	e54	17	1030	12
22	31	105	48	e20	e220	e190	140	33	e46	16	616	11
23	22	84	39	e23	e180	e400	118	30	e39	17	419	17
24	18	72	e35	e27	e160	e800	100	27	99	22	304	19
25	15	62	e33	e32	e130	e700	86	36	201	26	332	16
26	13	50	e30	e43	e110	e450	75	43	73	23	294	28
27	13	160	e28	e58	e94	e480	89	38	72	20	207	31
28	14	2310	e30	e350	e86	e490	64	30	81	23	196	21
29	15	590	e29	e200	---	e420	78	26	77	19	280	25
30	14	313	e27	e140	---	e370	75	23	202	19	135	21
31	20	---	e26	e120	---	e330	---	21	---	15	107	---
TOTAL	423.8	5982	2613	1503	2473	6561	11483	2058	4288	1560	11538	847
MEAN	13.7	199	84.3	48.5	88.3	212	383	66.4	143	50.3	372	28.2
MAX	31	2310	219	350	300	800	913	236	1100	193	3970	93
MIN	5.7	28	26	20	42	58	64	21	18	15	11	11
CFSM	.15	2.20	.93	.54	.97	2.34	4.22	.73	1.58	.56	4.11	.31
IN.	.17	2.46	1.07	.62	1.02	2.69	4.71	.85	1.76	.64	4.74	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1994, BY WATER YEAR (WY)

	MEAN	49.5	86.5	119	82.0	126	184	254	107	71.7	42.8	62.4	26.4
MAX	323	211	278	169	281	269	618	328	361	153	372	111	
(WY)	1991	1993	1991	1993	1984	1991	1993	1989	1989	1984	1994	1992	
MIN	4.36	13.1	13.1	13.6	21.4	91.2	91.3	17.3	7.11	3.19	4.30	2.39	
(WY)	1992	1992	1989	1989	1987	1990	1988	1985	1991	1993	1991	1991	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1983 - 1994

ANNUAL TOTAL	44413.0	51329.8		
ANNUAL MEAN	122	141	101	
HIGHEST ANNUAL MEAN			154	1984
LOWEST ANNUAL MEAN			61.6	1985
HIGHEST DAILY MEAN	2790	Apr 1	3970	Aug 18 1994
LOWEST DAILY MEAN	1.2	Jul 26	5.7	Oct 16 1991
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 22	6.8	Oct 10 1991
INSTANTANEOUS PEAK FLOW			a10800	Aug 18 1994
INSTANTANEOUS PEAK STAGE			10.03	Aug 18 1994
ANNUAL RUNOFF (CFSM)	1.34		1.55	
ANNUAL RUNOFF (INCHES)	18.24		21.08	
10 PERCENT EXCEEDS	342		364	243
50 PERCENT EXCEEDS	29		54	42
90 PERCENT EXCEEDS	3.7		16	5.2

a From rating curve extended above 1000 ft³/s.
e Estimated.

CHEMUNG RIVER BASIN

01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA

LOCATION.--Lat 41°59'48", long 77°08'25", Tioga County, Hydrologic Unit 02050104, on left bank on SR 4022, 0.5 mi downstream from Cowanesque Dam, 0.8 mi upstream from highway bridge on U.S. Route 15 in Lawrenceville, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--298 mi².

PERIOD OF RECORD.--June 1951 to current year. Prior to October 1951 monthly discharge only, published in WSP 1722.

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

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

REMARKS.--Records good except those below 100 ft³/s, which are fair. Flow regulated since December 1979 by Cowanesque Dam (station 01519995). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	87	738	85	258	299	1800	643	358	383	38	160
2	40	85	438	85	247	336	2670	466	298	135	28	85
3	33	103	418	85	190	340	3080	296	49	110	117	83
4	31	125	569	85	199	316	2870	300	35	110	116	77
5	29	221	780	85	199	316	1720	300	34	110	96	92
6	19	549	529	85	199	292	1410	244	99	238	46	89
7	18	269	366	85	170	277	856	203	198	763	28	70
8	19	205	368	85	153	324	287	295	119	465	28	58
9	20	160	326	85	137	451	291	289	50	242	28	55
10	20	124	326	78	113	483	592	199	47	222	26	55
11	21	81	326	69	96	1030	1020	199	136	147	22	55
12	21	70	252	69	99	1640	1500	168	839	104	21	55
13	29	77	175	69	101	1600	2420	151	649	104	50	56
14	32	81	196	70	101	1580	2090	128	4670	87	2130	49
15	31	221	207	72	105	1750	871	113	3080	74	1160	46
16	30	224	211	72	113	2150	1010	165	823	67	245	48
17	30	244	191	70	113	2070	976	222	605	56	227	43
18	30	1350	151	51	113	1180	557	121	371	56	1890	40
19	30	603	172	40	130	591	377	49	236	56	4080	40
20	30	431	196	40	440	552	207	74	210	45	4360	40
21	60	341	185	44	2120	560	220	94	174	29	4190	39
22	77	224	207	49	2370	1620	306	97	115	21	3470	38
23	77	147	149	49	1940	2810	300	101	70	21	1550	38
24	76	169	98	49	875	3540	250	80	227	24	577	41
25	63	171	98	55	713	2190	250	102	1280	69	465	49
26	56	131	98	67	496	4070	219	520	244	77	780	72
27	56	137	77	74	411	4370	244	150	267	47	408	711
28	56	3210	45	121	296	4170	206	134	685	48	313	160
29	56	3350	54	687	---	3370	199	109	306	49	490	109
30	56	2060	71	928	---	1750	265	89	431	58	352	53
31	72	---	85	356	---	1320	---	77	---	52	215	---
TOTAL	1270	15250	8102	3944	12497	47347	29063	6178	16705	4069	27546	2606
MEAN	41.0	508	261	127	446	1527	969	199	557	131	889	86.9
MAX	77	3350	780	928	2370	4370	3080	643	4670	763	4360	711
MIN	18	70	45	40	96	277	199	49	34	21	21	38
MEAN‡	40.7	522	249	125	447	1303	1202	201	559	128	884	87.4
CFSM‡	.14	1.75	.84	.42	1.50	4.37	4.03	.67	1.88	.43	2.97	.29
IN.‡	.16	1.95	.97	.48	1.56	5.04	4.50	.77	2.10	.50	3.42	.32

‡ Adjusted for change in contents in Cowanesque Lake.

CHEMUNG RIVER BASIN

01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	159	229	330	202	406	635	788	351	274	108	131	76.0
MAX	1122	661	864	618	1027	1527	2773	1080	1222	462	889	315
(WY)	1991	1993	1991	1993	1981	1994	1993	1989	1989	1984	1994	1992
MIN	13.9	14.3	35.9	23.3	57.6	158	286	48.9	17.4	14.1	11.9	5.09
(WY)	1989	1992	1990	1981	1980	1981	1988	1985	1991	1991	1983	1980

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1980 - 1994			
ANNUAL TOTAL	152277.2				174577							
ANNUAL MEAN	417				478				306			
HIGHEST ANNUAL MEAN	414				478				498			
LOWEST ANNUAL MEAN									194			
HIGHEST DAILY MEAN	5620				4670				5620			
LOWEST DAILY MEAN	9.1				18				3.4			
ANNUAL SEVEN-DAY MINIMUM	9.5				20				3.9			
INSTANTANEOUS PEAK FLOW					5230				5780			
INSTANTANEOUS PEAK STAGE					11.83				12.08			
ANNUAL RUNOFF (CFSM)	1.40				1.61				1.03			
ANNUAL RUNOFF (INCHES)	19.01				21.79				13.96			
10 PERCENT EXCEEDS	1280				1560				771			
50 PERCENT EXCEEDS	80				151				100			
90 PERCENT EXCEEDS	15				40				15			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1979, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	121	203	297	288	345	808	707	359	220	61.0	39.1	87.9
MAX	809	826	860	886	1173	1909	1934	797	1366	223	125	1054
(WY)	1956	1978	1973	1952	1976	1964	1958	1960	1972	1977	1977	1975
MIN	3.33	7.95	12.2	13.9	45.6	230	167	55.5	13.8	7.00	3.11	2.52
(WY)	1965	1965	1961	1961	1963	1965	1955	1955	1955	1966	1954	1964

SUMMARY STATISTICS WATER YEARS 1952 - 1979

ANNUAL MEAN	294	
HIGHEST ANNUAL MEAN	514	1978
LOWEST ANNUAL MEAN	135	1965
HIGHEST DAILY MEAN	21500	Jun 23 1972
LOWEST DAILY MEAN	.00	Aug 22 1978
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 22 1964
INSTANTANEOUS PEAK FLOW	a43700	Sep 26 1975
INSTANTANEOUS PEAK STAGE	b18.13	Sep 26 1975
INSTANTANEOUS LOW FLOW	c0.8	Aug 31, Sep 1, 27, 1964
ANNUAL RUNOFF (CFSM)	.99	
ANNUAL RUNOFF (INCHES)	13.41	
10 PERCENT EXCEEDS	694	
50 PERCENT EXCEEDS	95	
90 PERCENT EXCEEDS	10	

‡ Adjusted for change in contents in Cowanesque Lake.

a From rating curve extended above 6,000 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmark; site and datum then in use.

c No flow Aug. 22, 1978, during dam construction.

CHEMUNG RIVER BASIN

RESERVOIRS IN CHEMUNG RIVER BASIN

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 50,090 acre-ft, Apr. 3, 1993, elevation, 1,123.21 ft; minimum, 2,210 acre-ft, Oct. 25, 1980, elevation, 1,060.05 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,700 acre-ft, Aug. 18, elevation, 1,106.76 ft; minimum, 6,900 acre-ft, Mar. 23, elevation, 1,074.96 ft.

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 50,650 acre-ft, Apr. 3, 1984, elevation, 1,123.55 ft; minimum, 2,430 acre-ft, Oct. 24, 1980, elevation, 1,074.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,680 acre-ft, Aug. 18, elevation, 1,105.85 ft; minimum, 5,800 acre-ft, Mar. 23, elevation, 1,081.21 ft.

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

REMARKS.--Reservoir is formed by rolled earth and rockfill dam with concrete chute spillway with uncontrolled weir at elevation 1,117.0 ft. Storage began in December 1979. Capacity at elevation 1,117.0 ft is 89,110 acre-ft. Recreation lake elevation is 1,080.0 ft since May 1990, capacity 32,600 acre-ft. Reservoir is used for flood control, recreation, and water supply. Figures given herein represent total contents. Flow is regulated by two service gates and low-flow by-pass system. Satellite and landline telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 84,560 acre-ft, Apr. 2, 1993, elevation, 1,114.78 ft; minimum, 65 acre-ft, June 23, 1980, elevation, 1,011.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,840 acre-ft, Aug. 18, elevation, 1,094.17 ft; minimum, 18,550 acre-ft, Mar. 18, elevation, 1,064.81 ft.

CHEMUNG RIVER BASIN

Reservoirs in Chemung River basin--Continued

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
01517900 Tioga Lake				01518498 Hammond Lake		
Sept. 30.....	1,081.10	9,550	--	1,084.95	8,070	--
Oct. 31.....	1,079.24	8,710	- 13.7	1,083.89	7,390	- 11.1
Nov. 30.....	1,084.94	11,470	+ 46.4	1,088.64	10,650	+ 54.8
Dec. 31.....	1,082.57	10,280	- 19.4	1,086.24	9,000	- 26.8
CAL YR 1993.....	--	--	- 2.6	--	--	- 2.1
Jan. 31.....	1,081.22	9,610	- 10.9	1,085.78	8,680	- 5.2
Feb. 28.....	1,081.01	9,500	- 2.0	1,085.58	8,540	- 2.5
Mar. 31.....	1,077.39	7,900	- 26.0	1,085.11	8,180	- 5.9
Apr. 30.....	1,080.96	9,480	+ 26.6	1,085.54	8,500	+ 5.4
May 31.....	1,081.31	9,650	+ 2.8	1,086.16	8,950	+ 7.3
June 30.....	1,081.80	9,890	+ 4.0	1,086.53	9,170	+ 3.7
July 31.....	1,081.05	9,520	- 6.0	1,086.10	8,910	- 4.2
Aug. 31.....	1,081.17	9,580	+ 1.0	1,085.84	8,730	- 2.9
Sept. 30.....	1,080.87	9,440	- 2.4	1,086.14	8,940	+ 3.5
WTR YR 1994.....	--	--	- 0.2	--	--	+ 1.2
01519995 Cowanesque Lake						
Sept. 30.....	1,080.25	32,850	--			
Oct. 31.....	1,080.23	32,830	- 0.3			
Nov. 30.....	1,081.04	33,650	+ 13.8			
Dec. 31.....	1,080.31	32,910	- 12.0			
CAL YR 1993.....	--	--	- 2.9			
Jan. 31.....	1,080.17	32,770	- 2.3			
Feb. 28.....	1,080.24	32,840	+ 1.3			
Mar. 31.....	1,065.23	19,070	-224			
Apr. 30.....	1,080.35	32,950	+233			
May 31.....	1,080.47	33,070	+ 2.0			
June 30.....	1,080.57	33,170	+ 1.7			
July 31.....	1,080.41	33,010	- 2.6			
Aug. 31.....	1,080.08	32,680	- 5.4			
Sept. 30.....	1,080.11	32,710	+ 0.5			
WTR YR 1994.....	--	--	- 0.2			

SUSQUEHANNA RIVER BASIN

01531500 SUSQUEHANNA RIVER AT TOWANDA, PA

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

DRAINAGE AREA.--7,797 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to current year. Gage-height records collected at same site since October 1892 are contained in reports of U.S. Weather Bureau.

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2470	3070	28700	e5000	e18000	12400	46800	10800	4850	16500	5200	7610
2	2200	4550	20100	e5200	e16000	11400	54500	15300	6330	15500	4280	6690
3	2010	4860	16700	e5000	e15000	9870	70300	14700	6060	12000	4080	5880
4	1790	4980	16000	e4300	e13000	8740	81500	12500	5130	9640	4070	5180
5	1780	5910	25300	3800	e12000	11500	70200	10800	4690	8830	4110	4700
6	1750	10800	32400	e4000	e12000	10500	64800	9600	4240	7370	4940	4230
7	1710	14900	27400	e4100	e11000	9880	71800	8990	4090	7630	4770	3890
8	1700	13000	21400	e4000	e10000	10400	71200	9270	4280	10400	3950	3590
9	1680	10400	17700	e3900	e9000	13700	59100	10600	3990	9990	3380	3300
10	1650	8390	15600	e3800	e8800	16500	54200	10500	3700	7910	2880	3120
11	1610	7180	21100	e3800	e8600	23600	56500	10000	3360	6520	2670	2990
12	1560	6250	22800	e4100	e8200	25000	53600	9140	4020	5530	2500	2920
13	1580	5890	18400	e4200	e8200	23900	64000	8580	6070	4780	2330	2830
14	1570	5780	14400	e4300	e7800	21500	71700	8260	28600	4390	5990	2720
15	1660	6420	13200	e4000	e7800	22400	61800	7820	52700	5680	19200	2640
16	1670	8140	12900	e3500	e7400	25800	58000	7330	24900	5300	13800	2600
17	1690	8540	12100	e3700	e7200	25400	63300	7550	15400	4610	8620	2530
18	1720	22500	10700	e3700	e7000	22000	54900	7760	10800	4950	55900	2460
19	1760	32800	9600	e3300	e7000	19000	46800	7810	7920	5450	62800	2470
20	1910	23600	9270	e3100	e8000	16800	38400	7200	6240	4000	44600	2430
21	2020	17100	9340	e2900	e25000	16000	30900	6700	5290	3590	31600	2330
22	2290	13800	10500	e3200	e40000	28300	25100	6110	4530	3330	30900	2230
23	2840	11600	10500	e3200	36900	54200	21400	5560	4140	3300	27800	2270
24	2980	9940	8910	e3600	27400	81100	18700	5190	3950	3710	20600	2340
25	2970	9020	7530	e4200	22300	106000	16700	4970	10600	5790	15400	2430
26	2840	8130	e6500	e4600	17900	80100	15500	5480	9570	6620	14600	3960
27	2610	7320	e5000	e4700	15100	65900	14200	6210	7290	4670	12300	15500
28	2390	20800	e5000	e7400	13000	67800	12600	6180	19700	5120	10300	14400
29	2280	60400	e4700	e12000	---	64300	11100	5760	26700	6100	11500	9370
30	2270	42700	e4600	e23000	---	56300	10300	5340	20000	6260	11600	7620
31	2410	---	e4600	e20000	---	47100	---	4890	---	5720	9080	---
TOTAL	63370	408770	442950	169600	399600	1007390	1389900	256900	319140	211190	455750	137230
MEAN	2044	13630	14290	5471	14270	32500	46330	8287	10640	6813	14700	4574
MAX	2980	60400	32400	23000	40000	106000	81500	15300	52700	16500	62800	15500
MIN	1560	3070	4600	2900	7000	8740	10300	4890	3360	3300	2330	2230
CFSM	.26	1.75	1.83	.70	1.83	4.17	5.94	1.06	1.36	.87	1.89	.59
IN.	.30	1.95	2.11	.81	1.91	4.81	6.63	1.23	1.52	1.01	2.17	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)

	MEAN	5416	9467	11020	10190	11720	23800	25580	13100	7133	4074	3080	3320
MAX	31270	28940	29680	25610	35700	60780	76640	34770	41150	23840	16210	23200	
(WY)	1978	1928	1973	1937	1976	1936	1993	1943	1972	1915	1915	1977	
MIN	507	495	1459	1273	1821	8417	4975	3297	1615	783	571	432	
(WY)	1965	1965	1931	1931	1920	1981	1946	1985	1939	1962	1964	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1914 - 1994

ANNUAL TOTAL	4934208	5261790	10640	
ANNUAL MEAN	13520	14420	16610	1978
HIGHEST ANNUAL MEAN			5104	1965
LOWEST ANNUAL MEAN			283000	Jun 23 1972
HIGHEST DAILY MEAN	149000	Apr 2	1560	Oct 12
LOWEST DAILY MEAN	894	Aug 30	1610	Oct 10
ANNUAL SEVEN-DAY MINIMUM	945	Aug 28	348	Sep 18 1964
INSTANTANEOUS PEAK FLOW		111000	Mar 25	a320000 Jun 24 1972
INSTANTANEOUS PEAK STAGE		18.60	Mar 25	b33.43 Jun 24 1972
INSTANTANEOUS LOW FLOW				334 Sep 23,24 1964
ANNUAL RUNOFF (CFSM)	1.73	1.85	1.37	
ANNUAL RUNOFF (INCHES)	23.54	25.10	18.55	
10 PERCENT EXCEEDS	42900	37500	26000	
50 PERCENT EXCEEDS	4060	7820	5450	
90 PERCENT EXCEEDS	1140	2520	1270	

a From rating curve extended above 180,000 ft³/s.

b From floodmark.

e Estimated.

SUSQUEHANNA RIVER BASIN**01531500 SUSQUEHANNA RIVER AT TOWANDA, PA--Continued****WATER-QUALITY RECORDS****PERIOD OF RECORD.**--Water years 1935, 1967-68, 1973, 1976, 1989 to September 1993 (discontinued).**PERIOD OF DAILY RECORD.**--

SUSPENDED-SEDIMENT DISCHARGE.--January 1951 to July 1954.

REMARKS.--Water-quality sampling continued by the Susquehanna River Basin Commission, but since September 1993 the data are not stored in the USGS data base or published in this report.

TOWANDA CREEK BASIN

01532000 TOWANDA CREEK NEAR MONROETON, PA

LOCATION.--Lat 41°42'25", long 76°29'06", Bradford County, Hydrologic Unit 02050106, on left bank on Township Route 406, 0.8 mi southwest of Monroeton, and 1.0 mi upstream from South Branch Towanda Creek.

DRAINAGE AREA.--215 mi²

PERIOD OF RECORD.--February 1914 to current year.

PERIOD OF RECORD.--February 1914 to current year.
REVISED RECORDS.--WSP 756: Drainage area. WSP 1051: 1943-44(M). WSP 1302: 1922(M), 1924, 1925-26(M), 1928, 1929(M), 1930-31. WSP 1432: 1921(M), 1932(M), 1933, 1934-35(M), 1936, 1938(M), 1940. WDR PA-78-2: 1972(M).
WDR PA-87-2: 1978-79.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	187	515	e96	461	e280	1270	385	44	295	254	235
2	135	177	423	e98	e330	e240	1630	341	43	220	247	200
3	137	184	390	e90	e300	e210	2410	271	38	176	220	173
4	119	236	357	e78	293	e300	2260	241	34	145	192	154
5	116	592	621	e84	289	295	1570	220	31	122	794	141
6	107	865	496	e84	257	251	1660	200	29	222	602	128
7	95	585	405	e80	228	241	2060	183	32	612	396	113
8	86	421	358	e78	e180	427	1260	255	32	573	287	101
9	80	335	316	e76	e190	487	1010	231	28	354	225	91
10	76	284	390	e76	e180	801	1230	192	27	289	203	87
11	68	251	595	e86	e170	776	1230	175	27	213	164	80
12	65	232	364	e88	e170	570	1150	169	372	170	163	74
13	65	218	317	e88	e160	517	1410	157	329	172	275	69
14	61	248	285	e84	e160	525	1410	136	999	359	1020	64
15	57	357	275	e74	e150	747	956	126	382	442	822	61
16	54	283	283	e78	e150	906	1090	134	232	408	476	58
17	53	276	245	e80	e140	598	833	127	184	290	584	56
18	73	817	217	e70	e140	500	616	119	137	228	14800	78
19	75	516	217	e66	e180	459	517	112	109	190	2090	73
20	136	434	227	e62	e700	403	438	106	88	152	987	59
21	163	351	256	e68	e1800	420	361	95	76	132	844	53
22	170	297	262	e68	1440	1290	310	83	70	247	694	49
23	145	258	212	e76	901	2120	271	75	59	309	475	101
24	131	233	e150	e90	721	3790	242	70	131	241	358	113
25	121	209	e130	e98	555	3480	218	71	916	244	299	103
26	112	185	e110	e130	457	1680	202	77	362	282	287	1160
27	105	177	e100	e190	e330	1600	224	83	436	207	235	2650
28	105	2420	e110	e520	e300	1750	205	68	484	472	223	927
29	97	1190	e100	e1100	---	1440	187	63	334	391	682	609
30	97	718	e100	833	---	1300	208	53	297	284	352	422
31	129	---	e98	542	---	1140	---	45	---	224	266	---
TOTAL	3195	13536	8924	5331	11332	29543	28438	4663	6362	8665	29516	8282
MEAN	103	451	288	172	405	953	948	150	212	280	952	276
MAX	170	2420	621	1100	1800	3790	2410	385	999	612	14800	2650
MIN	53	177	98	62	140	210	187	45	27	122	163	49
CFSM	.48	2.10	1.34	.80	1.88	4.43	4.41	.70	.99	1.30	4.43	1.28
IN.	.55	2.34	1.54	.92	1.96	5.11	4.92	.81	1.10	1.50	5.11	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)

MEAN	143	275	305	267	343	665	633	373	190	98.2	84.9	84.0
MAX	1092	1326	1081	1164	1169	2287	1838	1262	1922	1376	986	950
(WY)	1991	1927	1984	1915	1984	1936	1993	1946	1972	1915	1915	1975
MIN	6.46	7.84	16.8	10.1	40.4	135	110	54.5	16.0	7.72	3.71	1.76
(WY)	1965	1931	1932	1931	1931	1965	1946	1926	1991	1955	1966	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1914 - 1994

ANNUAL TOTAL	131133.1		157787				
ANNUAL MEAN	359		432			288	
HIGHEST ANNUAL MEAN						502	1978
LOWEST ANNUAL MEAN						111	1965
HIGHEST DAILY MEAN	7080	Mar 30	14800	Aug 18		28700	Jun 22 1972
LOWEST DAILY MEAN	e6.0	Jul 28	27	Jun 10, 11		.70	Sep 21 1932
ANNUAL SEVEN-DAY MINIMUM	a6.8	Jul 26	29	Jun 5		.87	Sep 16 1932
INSTANTANEOUS PEAK FLOW			25000	Aug 18		74000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			15.71	Aug 18		b16.90	Jun 22 1972
INSTANTANEOUS LOW FLOW						.70	Sep 15 1932
ANNUAL RUNOFF (CFSM)	1.67		2.01			1.34	
ANNUAL RUNOFF (INCHES)	22.69		27.30			18.17	
10 PERCENT EXCEEDS	832		992			665	
50 PERCENT EXCEEDS	100		225			115	
90 PERCENT EXCEEDS	15		70			14	

a Computed using estimated daily discharges.

b From floodmark, site and datum then in use (15.3 ft in gage well).

c Also Sept. 17, 21, 22, 1932.

e Estimated.

SUSQUEHANNA RIVER BASIN

01533400 SUSQUEHANNA RIVER AT MESHOPPEN, PA

LOCATION.--Lat 41°36'26", long 76°03'02", Wyoming County, Hydrologic Unit 02050106, on right bank 0.3 mi south of Meshoppen, 0.3 mi downstream from Meshoppen Creek, 2.3 mi upstream from bridge on State Highway 87, and 2.4 mi upstream from Mehoopany Creek.

DRAINAGE AREA.--8,720 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 599.76 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 7 flood-control reservoirs which have a combined capacity of 356,800 acre-ft. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3190	3840	36700	e5600	e19000	e13600	54300	12500	5070	19400	6550	9140
2	2750	4710	24800	e6000	e17000	e12500	61800	16200	5580	17500	5760	8160
3	2530	5750	20100	e5800	e15000	e11000	77400	17500	6830	14700	5460	7240
4	2310	5880	17900	e5200	e13000	e8700	95500	15100	5810	10800	5090	6540
5	2150	6440	25600	e4500	e12000	e9000	83900	12700	5140	9640	5990	5860
6	2100	10100	36700	e4700	e11000	e9400	74700	11000	4680	8760	6780	5300
7	2040	15700	32500	e4800	e10000	e9800	82100	10100	4260	9690	6640	4800
8	1970	15500	26300	e4600	e9400	e10800	83800	10100	4370	11200	5500	4410
9	1920	12300	21200	e4400	e8500	14400	68500	11400	4270	11900	4550	4080
10	1880	9750	18200	e4200	e7900	18200	61800	11700	4040	9300	4050	3790
11	1840	8430	22500	e4300	e7300	25500	63300	11100	3790	8140	3430	3530
12	1790	7460	26000	e4600	e7000	28000	60700	10400	4180	6810	3220	3390
13	1780	6780	22600	e5100	e6600	28000	68900	9560	6420	5950	3080	3310
14	1780	6690	17500	e5000	e6400	25600	80900	9150	16000	5740	5880	3170
15	1780	7300	14900	e4700	e6200	26300	72100	8830	59900	6750	21000	3050
16	1820	8460	14600	e4100	e6100	30200	63700	8420	35500	6630	19600	2990
17	1830	9290	13800	e4200	e6000	30400	69500	8300	19600	6100	11700	2930
18	1850	17200	12300	e4200	e6000	26900	62100	8450	13500	5420	48700	2870
19	1870	36300	10800	e3800	e6100	23400	53700	8600	9690	7780	82000	2810
20	2010	29500	10200	e3500	e10000	20200	44900	8260	7670	5670	53100	2780
21	2220	21000	10700	e3300	e26000	18900	36600	7720	6540	4580	39700	2670
22	2370	16500	12000	e3600	56400	26800	30100	7200	5530	4350	33900	2540
23	2750	13500	12300	e3600	42700	58100	25400	6560	4920	4410	33000	2540
24	3170	11200	10600	e4500	32300	88700	22100	6070	4480	5910	26000	2650
25	3210	10000	8910	e5000	26000	120000	19400	5720	9290	6900	19200	2670
26	3130	9120	e7600	e5900	21300	105000	17900	5810	11000	7880	17000	2830
27	2960	8390	e6000	e5600	17900	76700	16600	6660	8830	6710	15700	21000
28	2750	26400	e5800	e10000	15300	77500	14700	6960	18400	6050	11900	20800
29	2560	64700	e5400	e16000	---	76200	12900	6540	29700	7390	13500	13300
30	2490	52100	e5200	e22000	---	67400	11700	6040	25300	7630	14100	9440
31	2830	---	e5200	e21000	---	57500	---	5520	---	6840	11200	---
TOTAL	71630	460290	514910	193800	428400	1154700	1591000	290170	350290	256530	543280	170590
MEAN	2311	15340	16610	6252	15300	37250	53030	9360	11680	8275	17530	5686
MAX	3210	64700	36700	22000	56400	120000	95500	17500	59900	19400	82000	21000
MIN	1780	3840	5200	3300	6000	8700	11700	5520	3790	4350	3080	2540
CFSM	.26	1.76	1.90	.72	1.75	4.27	6.08	1.07	1.34	.95	2.01	.65
IN.	.31	1.96	2.20	.83	1.83	4.93	6.79	1.24	1.49	1.09	2.32	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1994, BY WATER YEAR (WY)

	MEAN	8364	11570	13780	10780	14260	25250	29940	13650	7449	3861	3810	4079
MAX	35100	25260	29260	29920	36100	48830	86470	31730	21470	8275	17530	24900	
(WY)	1978	1978	1978	1979	1981	1979	1993	1989	1989	1994	1994	1977	
MIN	1045	2858	4440	2168	2702	9955	9638	4027	2298	1100	1153	967	
(WY)	1983	1983	1990	1981	1980	1981	1981	1985	1991	1991	1991	1980	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1977 - 1994

ANNUAL TOTAL	5563810	6025590		
ANNUAL MEAN	15240	16510		
HIGHEST ANNUAL MEAN			12210	
LOWEST ANNUAL MEAN			18930	1978
HIGHEST DAILY MEAN	159000	Apr 2	7230	1985
LOWEST DAILY MEAN	940	Sep 1	185000	Mar 6 1979
ANNUAL SEVEN-DAY MINIMUM	1070	Aug 28	629	Sep 12 1991
INSTANTANEOUS PEAK FLOW			652	Sep 9 1991
INSTANTANEOUS PEAK STAGE			127000	Mar 25 1979
INSTANTANEOUS LOW FLOW			28.16	Mar 25 1979
ANNUAL RUNOFF (CFSM)	1.75	1.89	35.06	Mar 6 1979
ANNUAL RUNOFF (INCHES)	23.74	25.71	629	Sep 11 1991
10 PERCENT EXCEEDS	51500	43600	1.40	
50 PERCENT EXCEEDS	4520	8760	19.02	
90 PERCENT EXCEEDS	1310	2950	1500	

a Also Oct. 14, 15.

b Also Oct. 13-15.

e Estimated.

TUNKHANNOCK CREEK BASIN

01534000 TUNKHANNOCK CREEK NEAR TUNKHANNOCK, PA

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

DRAINAGE AREA.--383 mi².

PERIOD OF RECORD.--February 1914 to current year. Prior to October 1965, published as "at Dixon".

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

GAGE.--Water-stage recorder. Datum of gage is 610.50 ft above sea level (Pennsylvania Department of Transportation bench mark). Prior to Aug. 10, 1938, nonrecording gage at same site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	1370	1410	e350	e600	e520	2840	1510	177	255	143	582
2	e130	909	1090	e310	e520	e460	3400	1280	163	182	197	486
3	154	739	975	e280	e450	e450	e4500	984	147	138	147	406
4	157	725	942	e250	e400	e460	e3800	827	136	117	132	343
5	124	741	3420	e230	e390	e470	e3200	724	126	100	115	299
6	109	751	2360	e230	e360	e450	e3500	636	121	95	148	260
7	92	609	1630	e260	e280	e420	e3810	582	119	102	121	203
8	87	508	1250	e220	e270	e550	3420	850	115	98	96	174
9	84	439	1000	e200	e260	e850	2450	769	107	95	83	154
10	83	391	1000	e210	e255	2260	2530	633	100	101	89	147
11	82	360	1600	e210	e250	2820	2980	575	99	91	90	132
12	98	332	980	e220	e240	1850	2320	566	297	79	90	122
13	287	302	777	e230	e230	1550	4450	569	258	74	106	114
14	223	421	700	e220	e210	1420	5130	491	449	77	550	110
15	186	757	668	e190	e230	1630	2820	438	369	83	768	110
16	170	531	657	e160	e250	1810	3050	622	247	79	380	110
17	157	462	557	e160	e260	1320	2620	648	193	75	305	105
18	153	1480	486	e140	e300	1100	1930	540	165	68	5890	124
19	156	990	493	e120	e330	1010	1630	483	145	76	3130	121
20	257	855	512	e120	e500	857	1400	434	126	86	1480	103
21	298	689	1510	e110	e2500	834	1120	372	114	80	1320	101
22	340	580	1840	e100	e2900	2850	945	323	108	93	2050	92
23	273	505	1360	e96	e1600	3970	812	284	99	265	1450	146
24	227	459	1000	e110	e1250	4960	709	250	97	231	964	173
25	198	416	e800	e120	e1000	6030	632	243	98	320	838	138
26	171	362	e620	e120	e850	3740	593	289	100	240	1010	185
27	158	344	e500	e130	e700	3330	611	429	103	198	768	1920
28	164	6850	e450	e160	e600	3900	583	305	268	217	788	943
29	170	4010	e400	e500	---	e3100	506	247	195	232	1220	726
30	164	2140	e350	e1100	---	e2800	515	215	217	171	914	504
31	574	---	e330	e800	---	e2700	---	194	---	146	687	---
TOTAL	5673	30027	31667	7656	17985	60471	68806	17312	5058	4264	26069	9133
MEAN	183	1001	1022	247	642	1951	2294	558	169	138	841	304
MAX	574	6850	3420	1100	2900	6030	5130	1510	449	320	5890	1920
MIN	82	302	330	96	210	420	506	194	97	68	83	92
CFSM	.48	2.61	2.67	.64	1.68	5.09	5.99	1.46	.44	.36	2.20	.79
IN.	.55	2.92	3.08	.74	1.75	5.87	6.68	1.68	.49	.41	2.53	.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)

	MEAN	314	537	612	536	650	1179	1128	637	345	210	176	199
MAX	1772	1934	1621	1978	1682	2910	3202	1806	1939	1007	841	1130	
(WY)	1956	1973	1984	1979	1925	1936	1993	1989	1972	1947	1994	1975	
MIN	21.4	25.9	51.6	59.0	76.3	288	235	122	48.4	23.9	19.0	12.4	
(WY)	1965	1965	1923	1981	1980	1915	1946	1941	1962	1962	1930	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1914 - 1994

ANNUAL TOTAL	262557	284121	
ANNUAL MEAN	719	778	541
HIGHEST ANNUAL MEAN			897
LOWEST ANNUAL MEAN			220
HIGHEST DAILY MEAN	13000	6850	22700
LOWEST DAILY MEAN	24	68	6.9
ANNUAL SEVEN-DAY MINIMUM	31	76	7.9
INSTANTANEOUS PEAK FLOW		13300	a32200
INSTANTANEOUS PEAK STAGE		10.95	b15.77
INSTANTANEOUS LOW FLOW		65	6.2
ANNUAL RUNOFF (CFSM)	1.88	2.03	1.41
ANNUAL RUNOFF (INCHES)	25.50	27.60	19.21
10 PERCENT EXCEEDS	1720	2280	1240
50 PERCENT EXCEEDS	198	360	256
90 PERCENT EXCEEDS	42	101	50

a Gage height, 13.96 ft, from rating curve extended above 14,000 ft³/s on basis of contracted-opening measurement of peak flow.

b Discharge, 30,600 ft³/s.

c Estimated.

LACKAWANNA RIVER BASIN

01534180 STILLWATER LAKE NEAR FOREST CITY, PA

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

DRAINAGE AREA.--37.1 mi².

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

GAGE.--Water-stage recorder. Datum is given in feet above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill dam, rock faced, with ungated concrete spillway at elevation 1,621.00 ft (capacity, 12,000 acre-ft). Storage began December 1959. Reservoir is used for flood control and municipal water supply. Figures given herein represent total contents. Flood storage is regulated by power-operated slide gate; water supply storage is regulated by a weir formed by stop logs. Satellite and landline telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 10,700 acre-ft, Apr. 2, 1993, elevation, 1,617.84 ft; minimum, 173 acre-ft, June 21, 1993, elevation, 1,569.69 ft; minimum elevation, 1,568.85 ft, Sept.10, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,310 acre-ft, April 14, elevation, 1,597.41 ft; minimum, 389 acre-ft, October 11, elevation, 1,572.51 ft.

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,572.91	425	--
Oct. 31	1,573.56	487	+ 1.0
Nov. 30	1,583.97	1,820	+ 22.4
Dec. 31	1,573.44	476	- 21.9
CAL YR 1993	--	--	- 1.52
Jan. 31	1,574.17	548	+ 1.2
Feb. 28	1,574.07	537	- 0.2
Mar. 31	1,581.82	1,500	+ 15.7
Apr. 30	1,573.74	505	- 16.7
May 31	1,573.07	440	- 1.1
June 30	1,572.87	421	- 0.32
July 31	1,573.16	449	+ 0.46
Aug. 31	1,573.77	508	+ 0.96
Sept. 30	1,573.54	485	- 0.39
WTR YR 1994	--	--	+ 0.08

LACKAWANNA RIVER BASIN

01534300 LACKAWANNA RIVER NEAR FOREST CITY, PA

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

DRAINAGE AREA.--38.8 mi².

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since December 1959 by Stillwater Dam (station 01534180). Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	98	461	e35	e58	e56	284	119	25	25	25	56
2	20	105	272	e31	e50	e52	270	157	24	24	23	47
3	22	101	163	e30	e43	e49	127	141	21	20	20	40
4	24	91	132	e31	e40	e52	284	106	20	16	17	35
5	23	88	241	e28	49	e54	553	81	18	13	17	31
6	20	105	370	e26	e42	e52	464	70	17	12	20	29
7	17	133	337	e24	e38	e51	532	65	17	11	21	26
8	15	114	228	e23	e31	e63	830	99	17	11	18	24
9	13	83	155	e22	e26	87	821	117	16	9.8	14	22
10	12	65	124	e21	e23	114	599	99	14	9.2	14	21
11	10	57	164	e20	e21	168	490	88	13	7.7	14	19
12	13	53	145	e19	e23	184	787	80	38	6.3	13	18
13	26	47	122	e21	e23	164	460	82	58	5.6	16	17
14	31	52	99	e23	e21	146	502	68	78	6.6	54	16
15	29	86	90	e19	e18	e130	907	59	93	7.8	114	16
16	24	86	85	e20	e19	e110	479	70	72	8.1	115	16
17	21	74	79	e18	e20	e94	707	71	47	7.2	109	16
18	20	126	69	e16	e23	e88	788	65	36	7.1	182	18
19	20	147	65	e15	e26	e92	548	60	29	11	541	19
20	25	121	62	e13	e35	98	479	54	23	11	483	17
21	36	100	76	e12	73	87	274	49	19	9.1	324	15
22	50	81	105	e12	149	125	185	44	18	13	342	14
23	48	69	93	e11	178	194	129	38	16	31	342	17
24	40	61	67	e12	148	220	101	34	14	50	264	22
25	34	55	e60	e14	e120	204	87	32	14	93	168	22
26	30	50	e52	e15	e100	392	79	43	14	132	108	22
27	28	45	e47	e12	e82	388	77	54	13	88	87	49
28	27	51	e42	e35	e66	387	89	45	17	55	76	71
29	27	285	e38	67	---	384	76	38	19	46	86	64
30	28	505	e36	80	---	466	68	33	20	38	86	51
31	52	---	e34	e70	---	397	---	28	---	30	69	---
TOTAL	809	3134	4113	795	1545	5148	12076	2189	840	814.5	3782	850
MEAN	26.1	104	133	25.6	55.2	166	403	70.6	28.0	26.3	122	28.3
MAX	52	505	461	80	178	466	907	157	93	132	541	71
MIN	10	45	34	11	18	49	68	28	13	5.6	13	14
MEAN‡	27.1	126	111	26.8	55.0	182	386	69.5	27.7	26.8	123	27.9
CFSM‡	.70	3.25	2.86	.69	1.42	4.69	9.95	1.79	.71	.69	3.17	.72
IN.‡	.81	3.63	3.30	.80	1.48	5.41	11.10	2.06	.79	.80	3.66	.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1994, BY WATER YEAR (WY)

	MEAN	46.8	74.8	85.3	65.9	77.6	132	176	85.1	54.3	27.0	20.7	29.4
MAX	239	264	234	208	245	261	517	232	205	123	122	221	
(WY)	1978	1973	1974	1979	1981	1979	1993	1989	1989	1973	1994	1977	
MIN	2.45	2.48	25.3	9.64	13.2	40.5	58.8	31.5	11.1	4.67	2.92	1.17	
(WY)	1965	1965	1990	1981	1980	1993	1968	1982	1980	1991	1980	1980	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1959 - 1994

ANNUAL TOTAL	32376.8			36095.5								
ANNUAL MEAN	88.7	‡87.2		98.9	‡99.0					72.7	‡72.7	
HIGHEST ANNUAL MEAN										112		1973
LOWEST ANNUAL MEAN										36.3		1965
HIGHEST DAILY MEAN	1160	Apr 4		907	Apr 15					1160	Apr 4	1993
LOWEST DAILY MEAN	1.4	Aug 10		5.6	Jul 13					a.00	Jul 21	1978
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 5		7.0	Jul 12					.43	Sep 11	1980
INSTANTANEOUS PEAK FLOW				947	Apr 14					b,c1390	Jan 22	1959
INSTANTANEOUS PEAK STAGE				4.97	Apr 14					6.41	Jan 22	1959
INSTANTANEOUS LOW FLOW				5.1	Jul 13					a.00	Jul 21	1978
ANNUAL RUNOFF (CFSM)	2.29	‡2.25		2.55	‡2.55					1.87	‡1.87	
ANNUAL RUNOFF (INCHES)	31.04	‡30.51		34.61	‡34.64					25.45	‡25.44	
10 PERCENT EXCEEDS	237			271						172		
50 PERCENT EXCEEDS	30			49						39		
90 PERCENT EXCEEDS	4.4			14						7.2		

‡ Adjusted for change in contents in Stillwater Lake.

a Result of shutoff at Stillwater Dam.

b From rating curve extended above 930 ft³/s.

c Instantaneous peak since regulation, 1,020 ft³/s, Feb. 26, 1975, gage height, 4.85 ft.

e Estimated.

LACKAWANNA RIVER BASIN

01534500 LACKAWANNA RIVER AT ARCHBALD, PA

LOCATION.--Lat 41°30'16", long 75°32'33", Lackawanna County, Hydrologic Unit 02050107, on right bank along SR 1012 in Archbald, and 0.5 mi upstream from White Oak Run and Gilmartin Street bridge.

DRAINAGE AREA.--108 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to February 1940 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 889.33 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Regulation at low flow by mine pumps upstream from station. Flow regulated since December 1959 by Stillwater Dam (station 01534180) about 17 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	336	719	e110	e180	e170	814	445	105	86	59	154
2	75	297	508	e100	e150	e160	911	393	99	70	55	132
3	100	278	377	e94	e130	e150	1180	351	93	61	51	117
4	89	272	334	e100	e120	e160	1420	299	86	55	47	106
5	84	277	784	e94	e110	e150	1420	257	81	51	47	97
6	75	278	698	e90	e110	e140	1350	233	81	48	51	89
7	69	274	613	e86	e120	e150	1740	216	82	47	51	83
8	64	253	477	e80	e110	245	1500	329	77	45	46	77
9	61	209	373	e76	e90	253	1350	304	72	43	43	73
10	59	180	338	e72	e74	502	1450	270	66	42	41	70
11	58	160	388	e66	e68	519	1170	247	64	39	41	66
12	84	153	325	e60	e64	461	1390	279	94	38	45	63
13	105	137	277	e72	e62	401	1720	259	114	37	63	60
14	93	167	248	e70	e62	374	1540	222	145	38	157	59
15	91	210	233	e60	e64	e360	1560	205	149	40	190	57
16	84	193	223	e64	e72	e340	1370	287	129	39	165	56
17	78	188	201	e58	e74	e310	1180	264	100	37	181	56
18	77	302	183	e52	e80	e310	1220	244	84	36	833	62
19	80	297	178	e45	e100	e280	937	228	73	38	822	57
20	122	270	169	e40	e140	e270	819	210	65	39	653	53
21	173	233	290	e38	359	249	583	189	60	37	473	50
22	188	207	305	e37	484	501	445	171	57	77	575	48
23	170	183	260	e37	452	683	355	160	53	105	511	60
24	148	168	216	e37	387	961	307	140	55	86	400	61
25	130	152	e190	e38	319	1070	271	137	59	112	308	58
26	116	140	e160	e40	273	1010	251	151	53	155	267	79
27	109	133	e140	e56	227	938	252	206	50	137	216	174
28	107	1120	e130	e130	e200	1040	250	152	64	102	207	155
29	102	807	e120	315	---	940	234	135	68	86	257	163
30	107	811	e110	269	---	890	216	120	85	73	215	129
31	223	---	e100	e220	---	807	---	111	---	62	176	---
TOTAL	3203	8685	9667	2706	4681	14794	29205	7214	2463	1961	7246	2564
MEAN	103	289	312	87.3	167	477	973	233	82.1	63.3	234	85.5
MAX	223	1120	784	315	484	1070	1740	445	149	155	833	174
MIN	58	133	100	37	62	140	216	111	50	36	41	48
MEAN $\frac{1}{2}$	104	311	290	88.5	167	493	956	232	81.8	63.8	235	85.1
CFSM $\frac{1}{2}$	.96	2.88	2.69	.82	1.55	4.56	8.85	2.15	.76	.59	2.18	.79
IN $\frac{1}{2}$	1.11	3.21	3.10	.94	1.61	5.26	9.87	2.48	.85	.68	2.51	.88

$\frac{1}{2}$ Adjusted for change in contents in Stillwater Lake.

e Estimated.

LACKAWANNA RIVER BASIN

01534500 LACKAWANNA RIVER AT ARCHBALD, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	125	196	226	177	217	367	442	263	167	91.4	72.3	85.6
MAX	578	661	581	535	598	741	1111	610	605	278	234	377
(WY)	1978	1973	1974	1979	1981	1977	1993	1989	1972	1984	1994	1987
MIN	15.8	17.4	77.9	38.2	40.4	143	174	101	47.9	25.6	25.0	18.4
(WY)	1965	1965	1965	1981	1980	1981	1988	1982	1962	1965	1966	1964

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1960 - 1994

ANNUAL TOTAL	85906		94389									
ANNUAL MEAN	235	‡234	259	‡259					202	‡200		
HIGHEST ANNUAL MEAN									313			1973
LOWEST ANNUAL MEAN									101			1965
HIGHEST DAILY MEAN				1970	Apr 3		1740	Apr 7	3250		Mar 15	1986
LOWEST DAILY MEAN				22	Aug 10		36	Jul 18	13		Nov 1	1964
ANNUAL SEVEN-DAY MINIMUM				23	Aug 4		38	Jul 12	14		Oct 26	1964
INSTANTANEOUS PEAK FLOW							a2540	Apr 7	a5390		Mar 15	1986
INSTANTANEOUS PEAK STAGE							5.99	Apr 7	8.22		Mar 15	1986
ANNUAL RUNOFF (CFSM)		2.18	‡2.17				2.39	‡2.40	1.87		‡1.85	
ANNUAL RUNOFF (INCHES)		29.59	‡29.40				32.51	‡32.52	25.44		‡25.15	
10 PERCENT EXCEEDS		720					689		463			
50 PERCENT EXCEEDS		86					140		120			
90 PERCENT EXCEEDS		32					51		36			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1959, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	113	209	222	203	181	377	455	279	145	112	92.3	78.9
MAX	657	430	420	380	371	691	1113	553	284	373	443	187
(WY)	1956	1946	1951	1949	1951	1945	1940	1947	1946	1947	1955	1945
MIN	27.2	50.1	53.3	56.8	65.2	188	121	85.6	63.4	38.4	31.8	28.8
(WY)	1942	1942	1947	1948	1940	1941	1946	1941	1955	1955	1953	1953

SUMMARY STATISTICS WATER YEARS 1940 - 1959

ANNUAL MEAN	203											
HIGHEST ANNUAL MEAN	266					1956						
LOWEST ANNUAL MEAN	153					1957						
HIGHEST DAILY MEAN	4840			May 23	1942							
LOWEST DAILY MEAN	17			Oct 12	1941							
ANNUAL SEVEN-DAY MINIMUM	20			Oct 18	1953							
INSTANTANEOUS PEAK FLOW	a9510			May 22	1942							
INSTANTANEOUS PEAK STAGE	10.58			May 22	1942							
INSTANTANEOUS LOW FLOW	3.0			Oct 9,11	1943							
ANNUAL RUNOFF (CFSM)	1.88											
ANNUAL RUNOFF (INCHES)	25.54											
10 PERCENT EXCEEDS	439											
50 PERCENT EXCEEDS	123											
90 PERCENT EXCEEDS	42											

‡ Adjusted for change in contents in Stillwater Lake.

a From rating curve extended above 1,900 ft³/s on basis of slope-area measurement of peak flow.

LACKAWANNA RIVER BASIN

01536000 LACKAWANNA RIVER AT OLD FORGE, PA

LOCATION.--Lat 41°21'33", long 75°44'41", Lackawanna County, Hydrologic Unit 02050107, on right bank 100 ft downstream from bridge on SR 3017, 150 ft upstream from Delaware, Lackawanna, and Western Railroad bridge in Old Forge, and 0.5 mi upstream from St. Johns Creek.

DRAINAGE AREA.--332 mi².

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

REVISED RECORDS.--WSP 1432: 1939(M), 1940, 1945. WDR PA-90-2: 1985(M).

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	863	1390	e190	e600	488	2040	1360	216	238	51	263
2	214	642	1070	e220	e450	431	2310	1050	193	151	52	226
3	314	575	854	e230	e350	431	2900	878	178	117	87	198
4	227	548	746	e220	e290	492	3980	774	166	98	63	176
5	211	544	1840	e210	e260	435	3150	659	152	88	97	159
6	184	573	1580	e200	e250	373	3010	604	150	85	61	148
7	165	509	1320	e190	e280	371	4140	552	356	92	46	138
8	152	476	1080	e180	e250	798	3140	882	165	71	42	126
9	136	404	877	e160	e230	736	2600	770	146	66	37	167
10	129	352	844	e140	e200	1880	2820	643	132	85	36	172
11	118	311	942	e130	e190	1750	2940	562	124	70	31	133
12	270	289	737	e150	e180	1270	2900	601	238	58	37	115
13	293	285	605	e160	e170	1090	4060	581	190	53	94	107
14	215	286	554	e150	e160	1100	4290	481	267	51	247	101
15	203	349	527	e140	e160	1180	3200	431	224	58	215	86
16	187	348	523	e120	e170	1200	3410	798	196	54	165	94
17	172	308	463	e110	e150	977	2730	793	192	47	301	127
18	166	301	405	e100	e180	850	2450	660	187	56	2280	211
19	172	492	423	e98	e240	772	2000	596	148	47	1530	158
20	264	446	388	e95	516	663	1740	541	120	38	946	119
21	418	406	971	e90	1530	689	1370	464	105	29	691	98
22	375	348	1000	e87	1790	1760	1090	403	103	179	1160	97
23	314	312	730	e85	1380	2290	879	393	90	319	1080	171
24	274	288	564	e87	1140	3120	767	323	123	114	712	162
25	248	266	e460	e95	925	3860	785	322	134	94	655	142
26	223	246	e370	e100	772	2900	733	325	97	151	608	416
27	203	236	e310	e130	573	2770	601	399	117	209	445	1260
28	199	3270	e220	e530	518	3330	530	300	143	138	391	818
29	189	2150	e210	1370	---	2890	494	257	181	101	528	728
30	228	1700	e200	996	---	2360	460	232	347	78	398	524
31	520	---	e190	728	---	2070	---	215	---	59	300	---
TOTAL	7223	18103	22393	7491	13904	45326	67519	17849	5180	3094	13386	7440
MEAN	233	603	722	242	497	1462	2251	576	173	99.8	432	248
MAX	520	3270	1840	1370	1790	3860	4290	1360	356	319	2280	1260
MIN	118	236	190	85	150	371	460	215	90	29	31	86
MEAN [‡]	234	625	700	243	497	1478	2234	575	173	99.3	433	248
CFSM [‡]	.70	1.88	2.11	.73	1.50	4.45	6.73	1.73	.52	.30	1.30	.75
IN. [‡]	.81	2.10	2.43	.84	1.56	5.13	7.51	1.99	.58	.35	1.50	.84

[‡] Adjusted for change in contents in Stillwater Lake.

e Estimated.

LACKAWANNA RIVER BASIN

01536000 LACKAWANNA RIVER AT OLD FORGE, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	261	397	482	397	506	824	973	623	365	190	151	185
MAX	1276	1223	1312	1282	1198	1767	2712	1658	1488	566	432	978
(WY)	1978	1973	1974	1979	1981	1977	1993	1989	1972	1984	1994	1987
MIN	37.3	45.2	125	61.4	88.7	291	353	199	69.8	46.4	49.5	37.8
(WY)	1965	1965	1965	1981	1980	1981	1985	1962	1962	1965	1964	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1960 - 1994

ANNUAL TOTAL	208764						228908					
ANNUAL MEAN	572	‡570					627	‡627		445	‡437	
HIGHEST ANNUAL MEAN										712		1960
LOWEST ANNUAL MEAN										194		1965
HIGHEST DAILY MEAN	5730	Apr 11					4290	Apr 14		9580	Sep 27	1985
LOWEST DAILY MEAN	47	Aug 15					29	Jul 21		26	Jul 16	1962
ANNUAL SEVEN-DAY MINIMUM	55	Aug 4					41	Aug 6		29	Sep 16	1964
INSTANTANEOUS PEAK FLOW							a5970	Apr 13		a24000	Sep 27	1985
INSTANTANEOUS PEAK STAGE							7.53	Apr 13		b16.49	Sep 27	1985
INSTANTANEOUS LOW FLOW							25	Jul 21		20	Sep 21	1964
ANNUAL RUNOFF (CFSM)	1.72	‡1.72					1.89	‡1.89		1.34	‡1.32	
ANNUAL RUNOFF (INCHES)	23.39	‡23.33					25.65	‡25.65		18.22	‡17.87	
10 PERCENT EXCEEDS	1720						1740			1070		
50 PERCENT EXCEEDS	203						300			240		
90 PERCENT EXCEEDS	68						93			66		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1959, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	305	503	600	512	531	986	1195	814	454	360	303	229
MAX	1618	1199	1260	1047	1263	1652	2614	1750	866	1375	1448	778
(WY)	1956	1956	1939	1949	1939	1945	1958	1947	1946	1947	1955	1945
MIN	106	122	169	166	160	526	368	262	188	125	130	116
(WY)	1942	1942	1942	1944	1940	1941	1946	1941	1955	1955	1954	1943

SUMMARY STATISTICS

WATER YEARS 1939 - 1959

ANNUAL MEAN	566											
HIGHEST ANNUAL MEAN	781											1956
LOWEST ANNUAL MEAN	401											1944
HIGHEST DAILY MEAN	14000				Aug 19	1955						
LOWEST DAILY MEAN	73				Sep 26	1943						
ANNUAL SEVEN-DAY MINIMUM	87				Oct 8	1943						
INSTANTANEOUS PEAK FLOW	a31000				Aug 19	1955						
INSTANTANEOUS PEAK STAGE	b20.05				Aug 19	1955						
INSTANTANEOUS LOW FLOW	54				Sep 1,2	1957						
ANNUAL RUNOFF (CFSM)	1.70											
ANNUAL RUNOFF (INCHES)	23.16											
10 PERCENT EXCEEDS	1200											
50 PERCENT EXCEEDS	340											
90 PERCENT EXCEEDS	138											

‡ Adjusted for change in contents in Stillwater Lake.

a From rating curve extended above 3,800 ft³/s on basis of slope-area measurements at gage heights 15.30 ft, 16.49 ft, and at peak flow.

b From floodmark.

SUSQUEHANNA RIVER BASIN

01536500 SUSQUEHANNA RIVER AT WILKES-BARRE, PA

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

DRAINAGE AREA.--9,960 mi².

PERIOD OF RECORD.--April 1899 to current year. Gage-height records collected at same site since November 1890, contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 109: 1900-1905. WSP 351: Drainage area. WSP 781: 1902(M). WSP 1302: 1916. WSP 1432: 1901-5, 1907, 1909, 1913, 1937(M). WDR PA-86-2: 1960(M), 1964(M), 1975(M), 1979(M). WDR PA-89-2: 1964(P). WDR PA-90-2: 1988(M) 1989(P).

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 8 flood-control reservoirs, which have a combined capacity of 368,800 acre-ft. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4330	6250	45800	e6000	21400	17900	60600	16300	5900	21600	7300	11900
2	3900	6910	31100	e6700	20000	e16000	66600	18200	5530	18500	7050	10200
3	3750	7340	24100	e6900	17400	e14000	80700	20400	6610	16800	6250	9040
4	3450	7740	20700	e6600	15700	e12000	108000	18500	6900	13200	5930	8020
5	3090	7920	26100	e5900	13800	e10000	102000	16000	5860	11000	5730	7170
6	2790	9710	40000	5440	12900	e12000	87400	14100	5320	10200	7260	6500
7	2680	14900	38100	5190	11800	e13000	93700	12700	5170	10700	7330	5910
8	2550	17600	31500	e5000	11200	e14000	99100	13000	4550	11100	6700	5420
9	2450	15200	25200	e4800	10200	e17500	82300	13600	4680	13200	5570	5080
10	2340	12500	21800	e4800	9350	25000	71000	14100	4410	11900	4790	4800
11	2240	10500	23000	e5100	8460	32500	72700	13500	4160	9680	4370	4420
12	2440	9180	27400	e5500	8160	33400	70600	13000	4460	8150	3890	4170
13	2630	8160	25900	e5800	e7700	32400	75900	12100	5600	6970	3870	4050
14	2640	7710	21200	e5700	e7400	30400	97500	11300	8340	6210	4440	3940
15	2520	8310	17600	e5400	e7200	30300	88200	10700	44600	6260	14500	3770
16	2430	9070	16700	e4700	e7000	34000	74800	11000	45600	7550	22700	3660
17	2430	10200	16000	e5000	e6900	34800	76900	10800	23500	7090	15900	3700
18	2410	12500	14800	e5000	e6800	31500	72300	10500	16500	6140	32700	3920
19	2400	30300	13400	e4600	e7000	27400	61400	10500	12100	6660	95300	3700
20	2740	33400	12500	e4300	e7600	24000	51600	10400	9420	7730	64600	3520
21	3440	25000	13600	e3900	13200	21800	41800	9570	7700	5560	46800	3390
22	3690	19300	16800	e4400	49400	27400	34300	8870	6680	5160	38900	3220
23	3740	15900	15900	e4100	58500	56900	28600	8170	5740	6250	38200	3430
24	3970	13600	14400	e5000	43100	91500	24900	7490	5330	5870	31100	3550
25	4180	11900	12100	e5700	34400	134000	22000	6990	5240	7370	23600	3550
26	4100	10900	e9500	e7000	28700	139000	20100	6650	12400	8470	20000	3820
27	3950	9910	e7600	e6400	22600	94200	18800	7470	11100	8970	19000	16500
28	3790	25800	e6800	e10000	20200	88500	17400	8040	12100	7110	15600	29200
29	3540	63600	e6200	15800	---	89900	15500	7660	26700	7800	15100	19800
30	3380	67000	e5900	21700	---	79900	14100	7040	28300	8320	17100	13800
31	4030	---	e5800	22000	---	68600	---	6430	---	8130	14800	---
TOTAL	98020	508310	607500	214430	488070	1353800	1830800	355080	350500	289650	606380	213150
MEAN	3162	16940	19600	6917	17430	43670	61030	11450	11680	9344	19560	7105
MAX	4330	67000	45800	22000	58500	139000	108000	20400	45600	21600	95300	29200
MIN	2240	6250	5800	3900	6800	10000	14100	6430	4160	5160	3870	3220
CFSM	.32	1.70	1.97	.69	1.75	4.38	6.13	1.15	1.17	.94	1.96	.71
IN.	.37	1.90	2.27	.80	1.82	5.06	6.84	1.33	1.31	1.08	2.26	.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1994, BY WATER YEAR (WY)

	MEAN	6931	11120	13770	13460	14710	30480	31490	16360	9008	5363	4051	4321
MAX	39860	32130	36630	36070	43030	80560	100000	39590	54330	29010	19560	28680	
(WY)	1978	1928	1973	1913	1976	1936	1993	1943	1972	1902	1994	1975	
MIN	705	724	1357	1386	2710	10250	6918	3388	2428	1086	853	637	
(WY)	1965	1965	1909	1931	1920	1965	1946	1903	1921	1962	1964	1964	

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1899 - 1994
ANNUAL TOTAL	6490600	6915690	
ANNUAL MEAN	17780	18950	13430
HIGHEST ANNUAL MEAN			21990
LOWEST ANNUAL MEAN			6186
HIGHEST DAILY MEAN	184000	Apr 2	139000
LOWEST DAILY MEAN	1210	Sep 2	2240
ANNUAL SEVEN-DAY MINIMUM	1380	Aug 2	2460
INSTANTANEOUS PEAK FLOW			148000
INSTANTANEOUS PEAK STAGE			24.16
INSTANTANEOUS LOW FLOW			2190
ANNUAL RUNOFF (CFSM)	1.79	1.90	
ANNUAL RUNOFF (INCHES)	24.24	25.83	
10 PERCENT EXCEEDS	55200	46200	32300
50 PERCENT EXCEEDS	5800	10200	7060
90 PERCENT EXCEEDS	1570	3880	1660

a From slope-area measurement of peak flow near West Pittston and adjusted for flow from intervening area.

b From floodmark.

e Estimated.

WAPWALLOPEN CREEK BASIN

01538000 WAPWALLOPEN CREEK NEAR WAPWALLOPEN, PA

LOCATION.--Lat 41°03'33", long 76°05'38", Luzerne County, Hydrologic Unit 02050107, on left bank 100 ft upstream from Harts Bridge on SR 3012, 2.2 mi southeast of Wapwallopen, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--43.8 mi².

PERIOD OF RECORD.--October 1919 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 752.41 ft above sea level (Penn Central Railroad bench mark).

Prior to Mar. 15, 1930, nonrecording gage at same site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	167	171	e62	e64	e120	284	369	40	54	22	57
2	31	111	144	e54	e55	192	319	169	37	41	22	49
3	53	94	126	e48	e52	559	394	134	35	35	23	44
4	36	83	121	e42	e57	605	449	117	32	30	21	39
5	30	74	422	e36	e70	465	324	106	30	28	29	36
6	27	78	259	e33	e87	216	283	98	30	40	32	34
7	25	65	190	e31	e86	92	479	89	31	73	22	32
8	24	56	158	e29	e71	159	298	149	28	36	19	29
9	22	51	135	e28	e61	134	232	104	26	30	18	28
10	23	e48	145	e27	e53	292	249	86	25	27	17	27
11	21	e45	176	e30	e68	237	260	81	24	25	16	24
12	57	e43	121	e38	e80	184	271	96	70	23	17	24
13	72	e42	103	e54	e98	174	407	90	79	21	16	23
14	40	e41	97	e73	e96	209	388	72	104	23	47	22
15	34	e41	95	e60	e79	232	264	67	69	45	41	22
16	31	38	90	e40	e68	222	281	132	58	27	23	21
17	29	37	78	e32	e74	173	216	100	43	21	38	23
18	28	72	71	e37	e130	155	174	85	39	20	359	82
19	26	53	78	e30	e228	138	155	77	38	20	172	34
20	45	48	74	e24	376	125	135	72	30	18	95	26
21	42	41	208	e21	623	128	115	65	27	17	93	23
22	45	38	177	e28	459	343	103	58	37	24	323	23
23	35	37	128	e40	198	401	93	55	27	86	192	50
24	32	36	e94	e58	e160	493	85	55	26	54	119	41
25	31	34	e77	e62	e135	591	78	79	43	48	89	30
26	29	31	e64	e53	e110	445	72	75	34	41	75	47
27	28	31	e54	e47	e90	477	72	73	30	42	83	258
28	31	996	e45	e66	e86	553	64	56	106	46	100	97
29	28	396	e49	e94	---	435	68	48	61	37	126	100
30	32	232	e54	e110	---	342	83	44	77	29	79	70
31	119	---	e60	e80	---	288	---	41	---	24	62	---
TOTAL	1143	3159	3864	1467	3814	9179	6695	2942	1336	1085	2390	1415
MEAN	36.9	105	125	47.3	136	296	223	94.9	44.5	35.0	77.1	47.2
MAX	119	996	422	110	623	605	479	369	106	86	359	258
MIN	21	31	45	21	52	92	64	41	24	17	16	21
CFSM	.84	2.40	2.85	1.08	3.11	6.76	5.10	2.17	1.02	.80	1.76	1.08
IN.	.97	2.68	3.28	1.25	3.24	7.80	5.69	2.50	1.13	.92	2.03	1.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1994, BY WATER YEAR (WY)

	MEAN	38.1	60.3	74.3	68.2	83.5	119	117	88.0	49.7	35.4	25.4	27.3
MAX	202	203	192	284	283	327	362	243	248	172	149	160	
(WY)	1956	1927	1974	1979	1981	1936	1993	1947	1972	1947	1933	1987	
MIN	4.95	5.35	5.90	6.39	14.9	48.7	47.0	25.8	10.9	5.21	4.46	3.37	
(WY)	1964	1931	1931	1931	1940	1981	1955	1955	1962	1955	1953	1936	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1920 - 1994

ANNUAL TOTAL	32686.9	38489	65.4	1978
ANNUAL MEAN	89.6	105	30.9	1965
HIGHEST ANNUAL MEAN			2070	Jun 22 1972
LOWEST ANNUAL MEAN			1.5	Aug 31 1953
HIGHEST DAILY MEAN	1310	Apr 11	1.8	Aug 27 1953
LOWEST DAILY MEAN	6.3	Aug 4, 6	1.1	Aug 4 1955
ANNUAL SEVEN-DAY MINIMUM	6.7	Aug 1	1.49	
INSTANTANEOUS PEAK FLOW		a2150	11.04	Jun 22 1972
INSTANTANEOUS PEAK STAGE		7.44	1.1	Jun 22 1972
INSTANTANEOUS LOW FLOW		13	1.1	Aug 4 1955
ANNUAL RUNOFF (CFSM)	2.04	2.41		
ANNUAL RUNOFF (INCHES)	27.76	32.69	20.27	
10 PERCENT EXCEEDS	214	262	139	
50 PERCENT EXCEEDS	39	61	41	
90 PERCENT EXCEEDS	9.7	24	8.8	

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

e Estimated.

SUSQUEHANNA RIVER BASIN

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

LOCATION.--Lat 40°57'29", long 76°37'10", Montour County, Hydrologic Unit 02050107, on right bank 200 ft upstream from Mill Street bridge on State Highway 54 at Danville and 0.8 mi upstream from Mahoning Creek.

DRAINAGE AREA.--11,220 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1899 to current year. Prior to April 1905 monthly discharge only, published in WSP 1302.
REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1904, 1914-17, 1923. WSP 1432: 1900-03, 1905-06, 1908-10, 1912-13, 1933.

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 8 flood-control reservoirs which have a combined capacity of 368,800 acre-ft. Satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5020	6830	59100	7420	e24000	21200	72100	23500	7240	28300	8880	16100
2	5010	9080	42600	7940	e22000	e19000	72800	24800	6650	22600	8050	13300
3	4810	8910	31300	e8400	e20000	e17000	83600	24600	6320	20200	7730	11400
4	4620	9150	26300	e8000	e18000	e14000	106000	24400	7460	17600	6940	10100
5	4190	9320	29600	e7200	e16000	e13000	114000	21500	7360	13900	6630	8950
6	3770	9760	44400	e6500	e15000	e12000	99400	18800	6550	12500	6750	7960
7	3400	12600	47200	e6000	e14000	e13000	99900	16800	6200	12600	8000	7240
8	3260	18200	40400	e5800	e13000	e16000	109000	16700	5890	13000	7910	6580
9	3120	18700	33100	e5500	e12000	e9000	96400	17100	5200	13600	7070	6060
10	3010	15800	28100	e5400	e11000	26800	80600	17100	5230	14800	6000	5730
11	2850	13200	28800	e5800	e10000	37000	80300	17000	4990	12400	5260	5380
12	2780	11300	31200	e6200	e9400	40000	79600	16300	5870	10500	4840	4980
13	3320	9940	32000	e6800	e8600	38100	83700	15800	6980	8720	4360	4720
14	3460	9030	28100	e7000	e8200	38100	106000	14300	8340	7630	4550	4550
15	3270	8760	23200	e6400	e7800	37800	102000	13400	19000	7300	6290	4430
16	3090	9520	20600	e5800	e7600	39800	86500	13700	54500	7390	21800	4240
17	2940	10400	19600	e5300	e7800	41300	81500	14000	35300	8120	22300	4160
18	2930	12600	18400	e4800	e8000	39200	80500	13100	22700	7620	23700	5210
19	2900	20400	17100	e5500	e8200	34900	70200	12800	17100	6710	78500	5060
20	3080	37400	15800	e6000	e8800	30900	60500	12600	13100	7700	82100	4370
21	3770	31500	15900	e4500	e23000	27800	50300	12100	10100	7910	56900	4060
22	4750	24000	21500	e4500	48100	32900	41400	11100	8480	6530	47900	3910
23	4810	19700	21000	e5000	70800	54700	34800	10300	7330	8240	45800	4120
24	4660	16700	19500	e5500	50800	87200	30100	9530	6450	8650	40000	4290
25	4710	14500	17300	e6100	41400	118000	26700	9010	6260	8000	31500	4260
26	4870	12900	14600	e7200	33700	138000	24100	8620	8050	9290	25200	5240
27	4770	11800	14000	e8000	27800	118000	22400	8410	14000	10600	22600	11100
28	4610	26900	10400	e11000	24300	103000	21200	8990	13500	10300	21300	30600
29	4340	66900	8370	e20000	---	104000	19200	9170	20300	8430	18400	28300
30	4100	78200	7150	e30000	---	95600	18100	8590	32500	9270	19700	20600
31	4610	---	6790	e27000	---	83100	---	7860	---	9460	19100	---
TOTAL	120830	564000	773410	256560	569300	1500400	2052900	451980	378950	349870	676060	257000
MEAN	3898	18800	24950	8276	20330	48400	68430	14580	12630	11290	21810	8567
MAX	5020	78200	59100	30000	70800	138000	114000	24800	54500	28300	82100	30600
MIN	2780	6830	6790	4500	7600	9000	18100	7860	4990	6530	4360	3910
CFSM	.35	1.68	2.22	.74	1.81	4.31	6.10	1.30	1.13	1.01	1.94	.76
IN.	.40	1.87	2.56	.85	1.89	4.97	6.81	1.50	1.26	1.16	2.24	.85

e Estimated.

SUSQUEHANNA RIVER BASIN

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7780	12860	15810	15590	16790	32850	35420	19350	10640	6288	4703	5175
MAX	43890	38540	42700	43230	46420	91900	106900	44980	62370	28490	23110	30900
(WY)	1978	1927	1973	1913	1976	1936	1993	1943	1972	1915	1915	1975
MIN	868	852	1602	1853	2841	11740	7664	5643	2803	1308	1091	740
(WY)	1965	1965	1909	1931	1920	1965	1946	1941	1939	1965	1964	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1905 - 1994

ANNUAL TOTAL	7213130	7951260	15260	‡15390	1978
ANNUAL MEAN	19760	21780	24670		1965
HIGHEST ANNUAL MEAN			6948		1965
LOWEST ANNUAL MEAN			335000		Jun 25 1972
HIGHEST DAILY MEAN	186000	Apr 3	2780	Oct 12	Sep 24 1964
LOWEST DAILY MEAN	1510	Aug 3	3100	Oct 14	Sep 21 1964
ANNUAL SEVEN-DAY MINIMUM	1550	Jul 31	139000	Mar 26	Jun 25 1972
INSTANTANEOUS PEAK FLOW			20.15	Mar 26	Jun 24 1972
INSTANTANEOUS PEAK STAGE			2740	Oct 12	Sep 27 1964
INSTANTANEOUS LOW FLOW			1.94		1.36
ANNUAL RUNOFF (CFSM)	1.76		26.36		‡1.37
ANNUAL RUNOFF (INCHES)	23.92				18.48
10 PERCENT EXCEEDS	60700	54600	36200		
50 PERCENT EXCEEDS	6580	12500	8380		
90 PERCENT EXCEEDS	1970	4640	2110		

‡ Includes period of monthly mean discharges October 1899 to March 1905.

a From rating curve extended above 250,000 ft³/s.

b Backwater from West Branch Susquehanna River.

SUSQUEHANNA RIVER BASIN

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

WATER-QUALITY RECORDS

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

REMARKS.--Additional water-quality samples were collected by the Susquehanna River Basin Commission, but since September 1993 the data are not stored in the USGS data base or published in this report. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
DEC 17...	1440	1028	80020	40	19400	190	7.4	3.0	2.3	764	13.2	98
MAR 30...	1700	1028	80020	40	92500	143	7.3	3.5	5.5	765	12.8	96
JUN 28...	1335	1028	80020	40	32200	208	7.5	25.0	26	756	6.2	76
SEP 13...	1405	1028	80020	40	4710	290	8.0	21.0	1.5	761	9.6	108
DATE		COLI-FORM, FECAL, 0.7 μM-MF (COLS./100 ML) (31625)	STREP-TOCOC CI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
DEC 17...	K 23	K 3	66	34	19	4.5	7.4	19	0.4	1.1	30	4
MAR 30...	--	--	47	27	14	3.0	7.0	24	0.4	1.1	21	2
JUN 28...	120	100	76	34	22	5.2	12	25	0.6	2.6	52	ND
SEP 13...	K 5	K700	120	59	34	8.9	16	22	0.6	1.7	77	ND
DATE		ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
DEC 17...		32	32	39	26	13	<0.10	4.6	109	99	0.15	5710
MAR 30...		21	22	24	17	11	<0.10	4.5	83	74	0.11	20700
JUN 28...		43	44	50	26	20	<0.10	4.0	143	123	0.19	12400
SEP 13...		63	63	72	51	24	0.10	1.3	194	177	0.26	2470
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 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 (μG/L AS AL) (01106)	BARIUM, DIS-SOLVED (μG/L AS BA) (01005)	COBALT, DIS-SOLVED (μG/L AS CO) (01035)	IRON, DIS-SOLVED (μG/L AS FE) (01046)
DEC 17...		<0.010	0.840	0.070	<0.20	<0.010	0.040	0.010	30	25	<3	220
MAR 30...		<0.010	0.890	0.050	0.30	0.060	<0.010	<0.010	70	21	<3	97
JUN 28...		0.020	1.10	0.050	1.0	0.250	0.030	<0.010	270	31	<3	230
SEP 13...		0.010	0.500	<0.010	0.30	0.010	0.020	<0.010	70	27	<3	42

SUSQUEHANNA RIVER BASIN

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	LITHIUM DIS- SOLVED ($\mu\text{G/L}$ AS LI) (01130)	MANGA- NESE, DIS- SOLVED ($\mu\text{G/L}$ AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED ($\mu\text{G/L}$ AS MO) (01060)	NICKEL, DIS- SOLVED ($\mu\text{G/L}$ AS NI) (01065)	SELE- NIUM, DIS- SOLVED ($\mu\text{G/L}$ AS SE) (01145)	SILVER, DIS- SOLVED ($\mu\text{G/L}$ AS AG) (01075)	STRON- TIUM, DIS- SOLVED ($\mu\text{G/L}$ AS SR) (01080)	VANA- DIUM, DIS- SOLVED ($\mu\text{G/L}$ AS V) (01085)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 17...	<4	120	<10	4	<1	<1.0	71	<6	19	995	86
MAR 30...	<4	66	<10	<1	<1	<1.0	43	<6	51	12700	91
JUN 28...	<4	18	<10	2	<1	<1.0	81	<6	120	10400	99
SEP 13...	6	24	<10	3	<1	<1.0	150	<6	7	89	93

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAM- PLING METHOD, CODES (82398)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	SPE- CIFIC CON- DUCT- ANCE ($\mu\text{S}/\text{CM}$) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 30...	1520	1028	1028	--	1310	--	--	--	--	--	--
30...	1530	1028	1028	120	1250	--	7.1	3.0	13.4	64	84
30...	1555	1028	1028	120	1190	--	7.0	3.0	13.4	57	90
30...	1600	1028	1028	120	1060	--	7.6	3.0	13.7	51	90
30...	1615	1028	1028	120	995	--	7.6	3.0	13.3	50	92
30...	1625	1028	1028	120	865	--	7.6	3.0	13.8	51	91
30...	1640	1028	1028	120	805	--	7.5	3.0	13.6	54	96
30...	1645	1028	1028	120	685	--	7.0	3.0	13.8	44	91
30...	1701	1028	1028	70	660	--	--	3.5	12.8	--	--
30...	1735	1028	1028	120	610	--	7.2	3.0	14.1	51	93
30...	1745	1028	1028	120	485	--	7.5	3.0	14.0	51	93
30...	1755	1028	1028	120	420	--	7.5	3.0	14.0	49	94
30...	1800	1028	1028	120	290	--	7.5	3.0	13.8	51	89
30...	1810	1028	1028	120	230	--	7.5	3.0	13.6	50	93
30...	1820	1028	1028	120	100	--	7.8	3.5	13.5	49	87
30...	1835	1028	1028	120	40	--	7.7	3.5	13.3	51	86
30...	1840	1028	1028	--	0	--	--	--	--	--	--
30...	1900	1028	1028	40	--	143	7.3	--	--	53	92

WEST BRANCH SUSQUEHANNA RIVER BASIN

01541000 WEST BRANCH SUSQUEHANNA RIVER AT BOWER, PA

LOCATION.--Lat 40°53'49", long 78°40'38", Clearfield County, Hydrologic Unit 02050201, on right bank at downstream side of highway bridge on Township Route 418 at Bower, and 4.6 mi downstream from Chest Creek and Mahaffey.

DRAINAGE AREA.--315 mi².

PERIOD OF RECORD.--October 1913 to current year.

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	466	1130	e350	e900	e600	1960	1910	232	176	80	365
2	251	370	878	e400	e620	e540	2480	1240	221	144	74	289
3	305	359	836	e400	e580	e500	3140	919	197	178	114	244
4	251	461	946	e370	e520	e540	3090	770	183	152	102	216
5	202	649	2460	e350	e450	e540	2180	675	170	130	175	194
6	171	633	1760	e330	e400	e500	1950	621	163	123	222	173
7	150	488	1350	e360	e350	500	2400	631	701	168	130	161
8	137	391	1040	e350	e300	1160	1780	1850	323	130	82	147
9	130	330	840	e330	e300	1230	1360	1240	247	147	75	136
10	123	290	1110	e320	e350	2420	e1800	945	204	136	68	127
11	115	261	1940	e330	e350	1880	e2700	770	275	115	63	117
12	107	240	1250	e330	e380	1360	3180	805	437	101	63	108
13	106	236	977	e330	e380	1210	2870	771	377	96	62	102
14	102	625	825	e320	e350	1770	2670	596	580	95	180	100
15	99	1360	728	e280	e350	2210	1850	535	361	120	324	331
16	96	943	644	e300	e350	3110	1670	706	267	113	153	400
17	137	1100	542	e300	e330	2080	1350	609	233	95	193	252
18	242	2360	483	e280	e330	1600	1050	531	281	87	2240	791
19	181	1430	540	e280	e400	1260	896	479	207	88	803	425
20	261	1140	528	e280	e700	1020	766	434	179	83	449	285
21	291	846	492	e300	e2500	1480	659	389	178	77	1210	224
22	316	661	462	e320	e3500	5240	579	349	163	83	1340	192
23	240	551	418	e320	e2500	5360	521	316	137	117	962	184
24	202	483	378	e330	e2000	7120	474	288	171	115	548	195
25	181	427	e330	e350	e1500	8010	437	454	237	113	413	166
26	165	376	e290	e400	e1000	4270	406	510	172	107	409	200
27	153	774	e280	e500	e800	4050	379	469	165	94	311	745
28	146	6090	e260	e1200	e700	4750	350	353	222	108	346	393
29	137	3140	e250	e3000	---	3680	581	303	170	126	912	350
30	137	1690	e280	e1900	---	2730	986	271	191	99	643	314
31	314	---	e300	e1300	---	2170	---	245	---	86	416	---
TOTAL	5789	29170	24547	16510	23190	74890	46514	20984	7644	3602	13162	7926
MEAN	187	972	792	533	828	2416	1550	677	255	116	425	264
MAX	341	6090	2460	3000	3500	8010	3180	1910	701	178	2240	791
MIN	96	236	250	280	300	500	350	245	137	77	62	100
CFSM	.59	3.09	2.51	1.69	2.63	7.67	4.92	2.15	.81	.37	1.35	.84
IN.	.68	3.44	2.90	1.95	2.74	8.84	5.49	2.48	.90	.43	1.55	.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)

MEAN	253	429	625	708	815	1231	950	651	403	272	206	185
MAX	915	1579	1958	2136	1924	3369	2079	1480	2446	1522	850	1349
(WY)	1928	1922	1924	1937	1918	1936	1940	1919	1972	1977	1956	1926
MIN	22.5	27.2	51.0	32.9	120	271	202	116	82.0	49.7	25.7	24.1
(WY)	1931	1931	1931	1931	1934	1969	1925	1926	1949	1965	1930	1939
SUMMARY STATISTICS												
				FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1914 - 1994		
ANNUAL TOTAL				236909			273928					
ANNUAL MEAN				649			750			560		
HIGHEST ANNUAL MEAN										955		
LOWEST ANNUAL MEAN										294		
HIGHEST DAILY MEAN				6090			Nov 28			23200		
LOWEST DAILY MEAN				58			Aug 27, 28, 31			16		
ANNUAL SEVEN-DAY MINIMUM				61			Aug 25			17		
INSTANTANEOUS PEAK FLOW							bd9150			Mar 25		
INSTANTANEOUS PEAK STAGE							f14.03			Jan 29		
INSTANTANEOUS LOW FLOW										c19.74		
ANNUAL RUNOFF (CFSM)				2.06			2.38			1.78		
ANNUAL RUNOFF (INCHES)				27.98			32.35			24.14		
10 PERCENT EXCEEDS				1510			1920			1310		
50 PERCENT EXCEEDS				293			360			282		
90 PERCENT EXCEEDS				77			115			61		

a Also Aug. 31 to Sept. 2, 1939.

b From rating curve extended above 7,200 ft³/s on basis of slope-area measurement of peak flow.

c From floodmark in gage.

d Gage height 12.59 ft.

e Estimated.

f Ice jam.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01541200 WEST BRANCH SUSQUEHANNA RIVER AT CURWENSVILLE, PA

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

DRAINAGE AREA.--367 mi².

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

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

REMARKS.--Records fair except those below 100 ft³/s, which are poor. Flow regulated since November 1965 by Curwensville Dam (station 01541180). Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	332	456	3070	283	1810	851	5160	e1500	267	191	e80	416
2	332	508	2830	338	905	988	4970	e1800	230	176	e78	349
3	280	388	2570	397	611	928	4660	1090	230	162	e76	293
4	255	397	1650	367	626	710	3950	764	229	180	e90	224
5	255	584	2150	274	634	712	3770	623	228	169	139	196
6	185	679	2580	247	634	708	3510	596	227	161	207	204
7	129	674	2400	284	562	693	3330	647	668	e210	204	205
8	131	559	1720	302	520	1010	3170	1470	814	e400	e140	205
9	131	415	1030	306	385	1520	2620	1960	525	e300	e100	176
10	125	380	856	312	273	2270	2100	1250	371	e220	e64	162
11	122	374	1960	293	342	2520	2770	1010	344	e190	e62	153
12	122	312	1560	283	364	1800	2540	852	514	e150	e62	133
13	122	283	1090	314	379	1480	2970	837	515	e140	e60	134
14	122	498	880	332	386	1620	3660	783	824	e130	e110	131
15	122	1400	836	332	386	2080	3680	700	686	e140	197	156
16	122	1630	755	304	386	2540	3490	782	447	e150	266	295
17	118	1250	657	274	397	2850	2680	780	357	e140	292	429
18	113	2490	569	274	408	2190	1940	632	e350	e130	2260	795
19	116	2220	571	274	409	1640	1320	589	e340	e130	1410	652
20	253	1500	603	274	666	1390	1000	516	e280	e120	464	410
21	414	1210	577	274	1410	1480	827	483	e220	e110	984	322
22	376	1010	561	274	1740	3030	712	432	e210	e110	1750	272
23	324	879	495	274	2150	4030	616	380	e200	e160	1200	226
24	261	757	445	274	3030	3920	562	347	e240	e140	649	201
25	212	648	393	321	3340	3490	486	480	e320	e120	418	199
26	189	602	327	406	3230	4940	385	608	e300	e160	391	198
27	189	712	290	548	2120	4430	328	588	e290	e160	392	612
28	187	1020	274	745	829	4320	300	550	280	e150	395	688
29	180	1410	277	2000	---	5080	e340	455	258	e90	787	402
30	166	2920	283	2260	---	5150	e400	319	211	e86	1030	349
31	248	---	283	2230	---	5210	---	288	---	e82	650	---
TOTAL	6233	28165	34542	15670	28932	75580	68246	24111	10975	4957	15007	9187
MEAN	201	939	1114	505	1033	2438	2275	778	366	160	484	306
MAX	414	2920	3070	2260	3340	5210	5160	1960	824	400	2260	795
MIN	113	283	274	247	273	693	300	288	200	82	60	131
MEAN‡	203	1118	867	545	992	2851	1887	806	368	165	482	305
CFSM‡	.55	3.05	2.36	1.49	2.70	7.77	5.14	2.20	1.00	.45	1.31	.83
IN.‡	.63	3.40	2.72	1.72	2.81	8.96	5.73	2.54	1.12	.52	1.51	.93

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

WEST BRANCH SUSQUEHANNA RIVER BASIN

01541200 WEST BRANCH SUSQUEHANNA RIVER AT CURWENSVILLE, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	356	637	873	711	960	1346	1190	744	513	412	260	279
MAX	950	1516	1865	1640	1847	2532	2911	1593	2074	1650	765	1091
(WY)	1980	1986	1973	1974	1986	1979	1993	1966	1972	1977	1977	1975
MIN	77.4	166	214	209	305	154	437	182	123	54.7	63.8	57.8
(WY)	1986	1992	1990	1977	1980	1969	1976	1986	1991	1966	1966	1968
SUMMARY STATISTICS												
	FOR 1993 CALENDAR YEAR					FOR 1994 WATER YEAR			WATER YEARS 1966 - 1994			
ANNUAL TOTAL	277761					321605						
ANNUAL MEAN	761					‡756		881		‡881		
HIGHEST ANNUAL MEAN										688		‡682
LOWEST ANNUAL MEAN										905		1972
HIGHEST DAILY MEAN	5140					Apr 8		5210		Mar 31		8420
LOWEST DAILY MEAN	47					Aug 28		e60		Aug 13		19
ANNUAL SEVEN-DAY MINIMUM	55					Aug 28		ae83		Jul 29		36
INSTANTANEOUS PEAK FLOW								5390		Mar 30		8590
INSTANTANEOUS PEAK STAGE								8.23		Mar 30		11.40
ANNUAL RUNOFF (CFSM)	2.07					‡2.06		2.40		‡2.40		1.88
ANNUAL RUNOFF (INCHES)	28.15					‡27.95		32.60		‡32.59		25.49
10 PERCENT EXCEEDS	2180							2530				1650
50 PERCENT EXCEEDS	324							406				394
90 PERCENT EXCEEDS	90							137				107

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1965, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	158	329	501	685	889	1446	1323	783	310	321	265	137
MAX	363	610	1152	1210	1792	2661	1968	1521	656	1487	1068	322
(WY)	1956	1956	1957	1965	1956	1964	1957	1956	1956	1956	1956	1956
MIN	29.5	80.1	83.6	126	188	690	625	351	89.4	48.9	49.0	33.2
(WY)	1965	1958	1961	1956	1963	1957	1963	1965	1965	1965	1965	1964

SUMMARY STATISTICS

WATER YEARS 1956 - 1965

ANNUAL MEAN	594	
HIGHEST ANNUAL MEAN	938	1956
LOWEST ANNUAL MEAN	454	1965
HIGHEST DAILY MEAN	14000	Mar 10 1964
LOWEST DAILY MEAN	21	Nov 13, 15, 16 1964
ANNUAL SEVEN-DAY MINIMUM	22	Nov 10 1964
INSTANTANEOUS PEAK FLOW	15700	Mar 10 1964
INSTANTANEOUS PEAK STAGE	14.19	Mar 10 1964
ANNUAL RUNOFF (CFSM)	1.62	
ANNUAL RUNOFF (INCHES)	22.00	
10 PERCENT EXCEEDS	1450	
50 PERCENT EXCEEDS	270	
90 PERCENT EXCEEDS	56	

‡ Adjusted for change in contents in Curwensville Lake.

‡ Computed using estimated daily discharges.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01541303 WEST BRANCH SUSQUEHANNA RIVER AT HYDE, PA

LOCATION.--Lat 41°00'16", long 78°27'25", Clearfield County, Hydrologic Unit 02050201, on right bank 60 ft downstream from bridge at intersection of SR 1001 and State Highway 879 at Hyde.

DRAINAGE AREA.--474 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,093.90 ft above sea level.

REMARKS.--Records good except those below 300 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Flow regulated since November 1965 by Curwensville Dam (station 01541180) located about 5 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	381	518	3660	e380	e2100	e1100	5560	2030	342	258	104	595
2	368	572	3360	e450	e1200	e1300	5670	2330	293	242	101	468
3	338	463	3080	e520	e800	e1200	5850	1490	280	230	100	398
4	293	427	2260	e450	e820	e900	5270	1100	271	230	112	321
5	289	694	2870	e350	e840	901	4820	892	263	228	162	274
6	243	861	3290	e330	e840	857	4590	819	266	215	224	266
7	158	826	3010	e390	e700	820	4670	892	1030	299	241	259
8	155	658	2250	e410	e660	1250	4200	1870	1070	517	179	253
9	155	506	1450	e410	e500	1870	3570	2520	668	363	129	235
10	151	439	1300	e420	e360	2940	3220	1630	482	281	85	213
11	149	421	2480	e390	e450	3290	3790	1350	444	241	81	204
12	149	366	2090	e380	e500	2340	4750	1130	710	191	81	175
13	149	333	1520	e420	e500	1960	4810	1070	707	175	81	171
14	149	536	1230	e450	e500	2100	4880	988	1160	171	126	172
15	149	1520	1140	e450	e500	2780	4530	886	1030	179	286	208
16	145	1870	1040	e400	e520	3340	4280	961	642	200	306	297
17	156	1620	870	e370	e520	3550	3460	1020	478	181	402	451
18	200	3130	738	e370	e540	2830	2510	799	454	165	2990	973
19	187	2850	725	e370	e540	2120	1860	713	432	168	2180	803
20	309	1990	797	e370	e900	1750	1370	631	358	150	749	452
21	502	1570	735	e370	e1800	2010	1150	560	280	142	1550	366
22	451	1260	674	e370	e2400	4330	980	508	277	150	2720	293
23	388	1090	595	e370	2810	5290	806	442	263	206	1780	275
24	324	945	522	e370	3730	5720	716	393	328	177	1090	240
25	285	795	e480	e450	3820	5480	630	587	410	164	711	234
26	240	701	e430	e580	3730	5800	503	795	384	207	615	241
27	240	956	e390	e800	e2500	5670	423	761	374	207	598	627
28	234	3290	e370	e1000	e1100	5530	388	677	372	198	661	887
29	225	2270	e380	e2700	---	5900	446	573	356	121	1170	463
30	218	3660	e380	e2900	---	5730	514	413	300	113	1370	418
31	301	---	e380	e2800	---	5650	---	356	---	108	923	---
TOTAL	7681	37137	44496	20790	36180	96308	90216	31186	14724	6477	21907	11232
MEAN	248	1238	1435	671	1292	3107	3007	1006	491	209	707	374
MAX	502	3660	3660	2900	3820	5900	5850	2520	1160	517	2990	973
MIN	145	333	370	330	360	820	388	356	263	108	81	171
MEAN [‡]	250	1417	1188	711	1251	3520	2619	1034	493	214	705	373
CFSM [‡]	.53	2.99	2.51	1.50	2.64	7.43	5.53	2.18	1.04	.45	1.49	.79
IN. [‡]	.61	3.34	2.89	1.73	2.75	8.57	6.17	2.51	1.16	.52	1.72	.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1994, BY WATER YEAR (WY)

	MEAN	396	870	1063	899	1261	1711	1665	907	735	541	368	280
MAX	1264	2008	1944	1881	2302	3377	3648	1831	1663	1406	1084	637	
(WY)	1980	1987	1991	1993	1986	1979	1993	1989	1989	1990	1984	1979	
MIN	97.0	181	262	302	392	647	663	307	160	131	98.7	82.3	
(WY)	1983	1992	1990	1981	1980	1990	1988	1986	1991	1988	1988	1991	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1979 - 1994

ANNUAL TOTAL	371473		418334									
ANNUAL MEAN	1018	‡1013	1146	‡1146								
HIGHEST ANNUAL MEAN										889	‡889	1994
LOWEST ANNUAL MEAN										611		1992
HIGHEST DAILY MEAN	5390	Apr 7	5900	Mar 29						6850	Mar 8	1979
LOWEST DAILY MEAN	68	Aug 31	81	Aug 11-13						46	Sep 14	1982
ANNUAL SEVEN-DAY MINIMUM	71	Aug 27	108	Jul 29						53	Oct 6	1983
INSTANTANEOUS PEAK FLOW			6080	Mar 27 ^c						a7360	Feb 13	1984
INSTANTANEOUS PEAK STAGE			9.98	Mar 27 ^c						b11.45	Feb 18	1981
ANNUAL RUNOFF (CFSM)	2.15	‡2.14	2.42	‡2.42						1.87	‡1.88	
ANNUAL RUNOFF (INCHES)	29.15	‡29.02	32.83	‡32.85						25.47	‡25.47	
10 PERCENT EXCEEDS	2930		3290							2120		
50 PERCENT EXCEEDS	442		520							524		
90 PERCENT EXCEEDS	87		176							130		

‡ Adjusted for change in contents in Curwensville Lake.

a From rating curve extended above 6,000 ft³/s; gage height 10.82 ft.

b Backwater from ice.

c Also April 3.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01541500 CLEARFIELD CREEK AT DIMELING, PA

LOCATION.--Lat 40°58'18", long 78°24'22", Clearfield County, Hydrologic Unit 02050201, on right bank at downstream side of highway bridge on SR 2024 at Dimeling, 600 ft downstream from Little Clearfield Creek, and 4.0 mi southeast of Clearfield.

DRAINAGE AREA.--371 mi².

PERIOD OF RECORD.--October 1913 to current year.

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

WDR PA-87-2: 1986(M).

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	395	1610	e420	e1100	947	2800	1820	285	161	95	378
2	272	351	1260	e480	e740	804	3270	1450	270	147	89	327
3	243	319	1090	e480	e700	729	3990	1090	247	143	174	287
4	222	353	1040	e450	e620	759	4160	915	237	133	157	260
5	194	444	2020	e420	e540	754	3220	807	221	124	177	240
6	171	542	1900	e400	e480	669	3010	753	216	128	256	220
7	167	471	1430	e430	e420	e600	3420	763	1140	184	180	204
8	154	380	1180	e420	e360	940	2750	1940	525	157	126	190
9	138	333	972	e400	e360	1200	2100	1600	370	205	105	176
10	131	303	1080	e380	e420	e1400	2300	1210	306	148	96	168
11	122	280	2110	e400	e420	1420	3000	995	319	131	90	153
12	115	260	1400	e400	e450	1160	3690	923	528	111	86	142
13	114	249	1120	e400	e450	1080	3450	928	364	101	86	135
14	114	441	954	e380	e420	1330	3190	721	536	100	130	130
15	110	898	845	e340	e420	1790	2340	644	380	110	252	171
16	106	720	761	e360	e420	2740	1970	754	309	106	203	214
17	117	663	651	e360	e400	2120	1660	672	272	98	229	214
18	160	1520	575	e340	e400	1730	1320	596	332	99	3150	671
19	170	1160	582	e340	e480	1450	1120	536	256	101	1310	485
20	190	927	573	e330	e840	1210	936	486	225	95	644	290
21	221	771	529	e360	e4500	1360	805	438	209	87	924	235
22	242	628	499	e380	e3400	3790	718	395	194	91	1440	207
23	213	538	444	e380	2680	4520	639	363	179	130	1470	257
24	179	476	400	e390	2310	5950	578	335	176	135	748	276
25	160	425	387	e420	1870	7290	521	453	183	123	554	233
26	148	382	e330	e480	1520	5200	478	584	155	122	464	206
27	141	457	e320	e600	1150	4640	442	547	151	105	396	248
28	137	5450	e310	e2400	963	5430	408	415	158	146	380	220
29	132	4750	e300	e4500	---	4630	567	359	147	162	666	197
30	131	2310	e330	e2500	---	3690	1050	326	157	128	647	190
31	204	---	e360	e1500	---	3080	---	298	---	104	441	---
TOTAL	5240	27196	27362	21840	28833	74412	59902	24116	9047	3915	15765	7324
MEAN	169	907	883	705	1030	2400	1997	778	302	126	509	244
MAX	322	5450	2110	4500	4500	7290	4160	1940	1140	205	3150	671
MIN	106	249	300	330	360	600	408	298	147	87	86	130
MEAN $\frac{1}{2}$	166	938	853	719	1032	2431	1962	767	295	123	520	236
CFSM $\frac{1}{2}$	.45	2.53	2.30	1.94	2.78	6.55	5.29	2.07	.80	.33	1.40	.64
IN. $\frac{1}{2}$	.52	2.82	2.65	2.24	2.89	7.55	5.90	2.39	.89	.38	1.61	.71

$\frac{1}{2}$ Adjusted for change in contents in Glendale Lake.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN
01541500 CLEARFIELD CREEK AT DIMELING, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	266	449	627	614	838	1323	1110	735	455	298	209	222
MAX	1024	1132	1693	1490	1708	2578	2786	1800	2522	1189	635	1003
(WY)	1980	1986	1973	1978	1976	1979	1993	1978	1972	1977	1984	1975
MIN	41.1	73.3	68.4	139	154	318	378	248	90.3	46.1	55.3	43.4
(WY)	1964	1965	1961	1961	1963	1969	1968	1976	1965	1965	1965	1964

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1961 - 1994

ANNUAL TOTAL	271393		304952									
ANNUAL MEAN	744	‡746	835	‡834								
HIGHEST ANNUAL MEAN									594	‡595		
LOWEST ANNUAL MEAN									866			1978
HIGHEST DAILY MEAN	6600	Apr 17	7290	Mar 25					350			1969
LOWEST DAILY MEAN	51	Sep 1	86	Aug 12, 13					21100		Jun 23	1972
ANNUAL SEVEN-DAY MINIMUM	55	Aug 27	97	Jul 16					30		Aug 17	1988
INSTANTANEOUS PEAK FLOW			a7420	Mar 25					37		Aug 12	1988
INSTANTANEOUS PEAK STAGE			b12.43	Feb 21					c22400		Jun 23	1972
ANNUAL RUNOFF (CFSM)	2.00	‡2.01	2.25	‡2.25					17.56		Jun 23	1972
ANNUAL RUNOFF (INCHES)	27.21	‡27.27	30.58	‡30.55					1.60		‡1.60	
10 PERCENT EXCEEDS	1920		2190						21.76		‡21.78	
50 PERCENT EXCEEDS	300		415						1340			
90 PERCENT EXCEEDS	78		131						330			
									83			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1960, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	253	386	557	764	789	1284	1059	781	457	241	194	152
MAX	876	1355	1533	2152	1996	4153	2470	1656	1931	1233	901	1370
(WY)	1928	1922	1924	1937	1915	1936	1940	1960	1946	1956	1956	1926
MIN	16.9	26.0	55.1	34.3	103	390	245	121	102	68.7	24.9	22.3
(WY)	1931	1931	1931	1931	1934	1915	1925	1926	1949	1936	1930	1932

SUMMARY STATISTICS WATER YEARS 1914 - 1960

ANNUAL MEAN	576											
HIGHEST ANNUAL MEAN	921				1928							
LOWEST ANNUAL MEAN	309				1931							
HIGHEST DAILY MEAN	27100			Mar 18	1936							
LOWEST DAILY MEAN	7.1			Oct 1	1925							
ANNUAL SEVEN-DAY MINIMUM	13			Oct 4	1925							
INSTANTANEOUS PEAK FLOW	c30600			Mar 18	1936							
INSTANTANEOUS PEAK STAGE	d18.49			Mar 18	1936							
INSTANTANEOUS LOW FLOW	6.0			Oct 1, 9	1925							
ANNUAL RUNOFF (CFSM)	1.55											
ANNUAL RUNOFF (INCHES)	21.08											
10 PERCENT EXCEEDS	1380											
50 PERCENT EXCEEDS	278											
90 PERCENT EXCEEDS	54											

- ‡ Adjusted for change in contents in Glendale Lake.
a Gage height, 10.55 ft.
b Backwater from ice.
c From rating curve extended above 15,000 ft³/s.c
d From floodmark in gage.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01542500 WEST BRANCH SUSQUEHANNA RIVER AT KARTHAUS, PA

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

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

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

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated since December 1960 by Glendale Dam (station 01541340) about 70 mi upstream, and since November 1965 by Curwensville Dam (station 01541180) about 50 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	1310	e9100	1120	4780	e3400	12900	4480	1260	1180	504	2180
2	1150	1690	e8200	1240	e3000	e3300	14000	6490	1260	966	475	e1800
3	1140	1660	e7200	1340	e2400	e3300	16700	4770	1120	969	634	e1600
4	1060	1490	e6200	1340	e2200	3130	17700	4040	1060	906	593	1380
5	964	1730	e6400	1060	e2200	3020	15200	3500	1010	847	654	1220
6	847	2300	e7700	e1000	2130	2760	13800	3140	968	808	824	1100
7	795	2380	e7400	998	1960	2530	14700	3090	2530	1300	869	957
8	668	2140	e6200	1100	1760	2930	13100	4790	3390	3820	762	972
9	617	1950	4760	1070	e1400	4310	10600	6750	2280	2250	612	927
10	560	1670	4110	e1000	e1300	5460	9730	5340	1680	1670	520	903
11	522	1470	6370	999	e1300	7140	11500	4480	1430	1300	440	832
12	494	1370	6410	1050	1330	5670	14900	4030	3040	992	423	766
13	492	1200	5060	1050	1370	4810	16600	3690	2770	915	419	712
14	485	1320	4320	1060	1350	4850	15100	3320	3400	832	529	682
15	475	2680	3880	994	1270	6310	12200	3020	3550	925	878	662
16	469	4040	3610	850	1280	8300	10700	3040	2570	916	1010	747
17	493	3500	3130	e860	1300	8580	9250	3200	2030	827	1050	938
18	697	5520	2700	e860	1340	7680	7040	2780	1880	723	8560	1930
19	775	6700	2590	e860	1430	6040	6020	2480	1720	708	8690	2350
20	919	5180	2580	e860	1770	4960	4720	2290	1470	699	4160	1600
21	1240	4210	2540	e900	e3500	4840	4100	2040	1300	644	4000	1180
22	1490	3460	2310	e920	e8000	10400	3550	1910	1160	632	7250	1010
23	1460	3150	2140	e940	e8800	15000	3130	1740	1010	786	6320	963
24	1250	2810	1870	952	e8100	19500	2840	1570	1210	808	4550	1020
25	1050	2390	1770	968	e7000	23500	2640	1790	4070	710	3230	953
26	983	2100	1580	1110	e6000	20000	2360	2350	2360	666	2780	867
27	846	2020	e1100	1310	e5000	17900	2140	2500	1860	648	2290	865
28	815	15700	e1100	1820	e4000	18800	1910	2170	1680	762	2190	1500
29	775	e13500	e1100	4440	---	18100	1890	1890	1490	796	e3000	1380
30	758	e10400	e1100	6130	---	15700	2810	1680	1340	661	e3500	1090
31	896	---	1110	5410	---	14000	---	1450	---	566	2860	---
TOTAL	26675	111040	125640	45611	87270	276220	273830	99810	57898	31232	74576	35086
MEAN	860	3701	4053	1471	3117	8910	9128	3220	1930	1007	2406	1170
MAX	1490	15700	9100	6130	8800	23500	17700	6750	4070	3820	8690	2350
MIN	469	1200	1100	850	1270	2530	1890	1450	968	566	419	662
MEAN‡	859	3911	3776	1525	3078	9354	8705	3237	1926	1009	2415	1161
CFSM‡	.59	2.68	2.58	1.04	2.11	6.40	5.95	2.21	1.32	.69	1.65	.79
IN.‡	.68	2.99	2.97	1.20	2.20	7.38	6.64	2.55	1.47	.80	1.90	.88

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

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01542500 WEST BRANCH SUSQUEHANNA RIVER AT KARTHAUS, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1191	2008	2733	2372	3324	5378	4785	3089	2197	1352	949	929
MAX	4107	5126	6771	5478	6878	10900	11600	6951	10810	4448	3537	4101
(WY)	1980	1987	1973	1974	1981	1964	1993	1978	1972	1977	1984	1975
MIN	162	259	281	474	706	1217	1882	1093	549	237	245	154
(WY)	1964	1965	1961	1961	1963	1969	1976	1976	1991	1965	1965	1964

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1961 - 1994

ANNUAL TOTAL	1131771		1244888									
ANNUAL MEAN	3101	‡3098	3411	‡3410					2520	‡2522		
HIGHEST ANNUAL MEAN									3585			1972
LOWEST ANNUAL MEAN									1731			1969
HIGHEST DAILY MEAN			23900	Apr 1		23500	Mar 25		79200		Jun 23	1972
LOWEST DAILY MEAN			239	Sep 1		419	Aug 13		120		Nov 11	1964
ANNUAL SEVEN-DAY MINIMUM			263	Aug 27		490	Oct 11		134		Sep 13	1964
INSTANTANEOUS PEAK FLOW						23800	Mar 25		a84300		Jun 23	1972
INSTANTANEOUS PEAK STAGE						10.25	Mar 25		18.57		Jun 23	1972
INSTANTANEOUS LOW FLOW						419	Aug 12, 13, 14		100		Sep 26, 27	1964
ANNUAL RUNOFF (CFSM)		2.12	‡2.12			2.33	‡2.33		1.72		‡1.73	
ANNUAL RUNOFF (INCHES)		28.80	‡28.78			31.68	‡31.67		23.42		‡23.43	
10 PERCENT EXCEEDS			8790			8240			5790			
50 PERCENT EXCEEDS			1320			1800			1500			
90 PERCENT EXCEEDS			357			754			391			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1960, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	914	1593	2537	3364	3263	5145	5170	3754	2091	1063	816	559
MAX	2557	6463	5334	7957	6540	12120	11460	6528	6192	4565	4394	1891
(WY)	1951	1951	1951	1952	1951	1945	1940	1960	1946	1956	1956	1945
MIN	184	231	437	602	925	2418	1337	691	637	322	239	157
(WY)	1952	1954	1944	1956	1958	1947	1946	1941	1949	1952	1957	1943

SUMMARY STATISTICS WATER YEARS 1940 - 1960

ANNUAL MEAN	2499											
HIGHEST ANNUAL MEAN	3809				1951							
LOWEST ANNUAL MEAN	1656				1954							
HIGHEST DAILY MEAN	44600			Mar 31	1940							
LOWEST DAILY MEAN	111			Sep 30	1943							
ANNUAL SEVEN-DAY MINIMUM	116			Sep 24	1943							
INSTANTANEOUS PEAK FLOW	50900			Apr 01	1940							
INSTANTANEOUS PEAK STAGE	13.90			Apr 01	1940							
INSTANTANEOUS LOW FLOW	109			Sep 30	1943							
ANNUAL RUNOFF (CFSM)	1.71											
ANNUAL RUNOFF (INCHES)	23.22											
10 PERCENT EXCEEDS	5960											
50 PERCENT EXCEEDS	1400											
90 PERCENT EXCEEDS	263											

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

a From rating curve extended above 50,000 ft³/s.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01542810 WALDY RUN NEAR EMPORIUM, PA

LOCATION.--Lat 41°34'44", long 78°17'34", Cameron County, Hydrologic Unit 02050202, on left bank 15 ft downstream from highway bridge on Township Route 318 at North Creek Chapel, 0.1 mi upstream from mouth, and 5.5 mi north-west of Emporium.

DRAINAGE AREA.--5.24 mi².

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.6	19	e1.5	e6.2	e9.4	26	30	6.0	3.9	1.3	5.8
2	4.3	4.2	14	e1.6	e5.4	e8.2	52	33	3.7	4.2	1.2	4.3
3	3.5	5.1	13	e1.5	e4.8	e6.4	93	20	3.1	3.1	1.0	3.5
4	3.0	6.8	17	e1.3	e4.3	5.6	75	14	2.6	2.3	.95	2.8
5	3.0	15	51	e1.2	e4.1	4.9	55	10	2.2	2.0	1.3	2.4
6	2.4	22	40	e1.1	e3.9	4.0	69	7.9	2.3	4.7	.89	2.1
7	2.3	18	25	e1.3	e3.7	4.3	90	6.6	2.4	41	.77	1.9
8	2.1	13	18	e1.2	e3.3	9.5	52	7.1	1.6	105	.73	1.6
9	2.1	9.9	14	e1.1	e2.8	10	36	6.2	1.3	35	.70	1.4
10	1.9	8.2	17	e1.0	e2.0	18	50	5.9	1.1	16	.66	1.2
11	1.6	7.0	29	e1.1	e2.1	15	44	5.6	5.5	9.4	.65	1.0
12	1.6	6.1	26	e1.2	e2.2	11	39	5.8	15	6.3	.72	.96
13	1.5	5.3	18	e1.2	2.0	12	52	4.6	24	4.7	6.2	.92
14	1.3	13	14	e1.2	e1.9	17	60	3.9	131	5.0	183	.99
15	1.2	34	11	e1.0	e2.0	19	36	3.9	44	3.9	67	.93
16	1.1	28	8.8	e1.1	1.9	23	27	4.0	19	3.1	22	.90
17	4.2	41	7.0	e1.2	1.7	19	21	3.4	11	2.5	24	1.2
18	8.4	93	6.3	e1.3	2.5	14	18	2.9	7.2	7.3	201	1.5
19	9.6	45	6.4	e1.2	4.3	11	14	2.6	4.9	14	60	.86
20	10	26	5.6	e1.1	12	8.9	10	2.4	3.7	6.9	24	.79
21	26	16	5.7	e1.0	39	16	7.8	2.2	3.3	4.4	50	.73
22	33	11	5.1	e1.0	43	69	6.4	1.9	2.3	3.5	54	.73
23	20	9.1	4.4	e1.1	26	72	5.2	1.8	1.9	2.9	27	.88
24	13	7.9	e3.9	e1.1	18	98	4.7	1.7	13	2.3	14	.81
25	9.4	6.5	e4.1	e1.2	13	107	4.3	2.5	35	4.0	9.4	.78
26	7.3	5.5	e2.3	e1.2	e9.8	47	3.7	11	20	4.6	6.7	1.2
27	6.2	19	e1.0	e1.7	e9.2	40	3.4	15	12	4.0	5.8	2.0
28	5.2	183	e1.0	e13	e10	50	2.8	11	8.2	3.6	6.9	1.0
29	4.5	65	e1.1	e25	---	42	5.1	7.3	6.5	2.6	10	1.3
30	4.4	30	e1.1	e17	---	31	6.7	5.4	5.3	2.0	9.5	.93
31	4.8	---	e1.2	e10	---	25	---	4.1	---	1.6	7.6	---
TOTAL	203.9	758.2	391.0	97.7	241.1	827.2	969.1	243.7	399.1	315.8	798.97	47.41
MEAN	6.58	25.3	12.6	3.15	8.61	26.7	32.3	7.86	13.3	10.2	25.8	1.58
MAX	33	183	51	25	43	107	93	33	131	105	201	5.8
MIN	1.1	4.2	1.0	1.0	1.7	4.0	2.8	1.7	1.1	1.6	.65	.73
CFSM	1.26	4.82	2.41	.60	1.64	5.09	6.16	1.50	2.54	1.94	4.92	.30
IN.	1.45	5.38	2.78	.69	1.71	5.87	6.88	1.73	2.83	2.24	5.67	.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1994, BY WATER YEAR (WY)

	4.75	9.26	11.2	7.74	10.9	18.0	17.6	10.8	6.87	3.14	2.86	3.65
MEAN	4.75	9.26	11.2	7.74	10.9	18.0	17.6	10.8	6.87	3.14	2.86	3.65
MAX	22.1	29.3	27.8	17.9	30.7	33.0	48.3	25.0	30.9	10.2	25.8	15.7
(WY)	1982	1986	1973	1974	1976	1979	1970	1984	1972	1994	1994	1987
MIN	.10	.31	2.02	.83	.98	4.25	5.34	1.98	.75	.26	.19	.080
(WY)	1965	1965	1990	1981	1980	1981	1976	1985	1991	1966	1991	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1964 - 1994

ANNUAL TOTAL	3956.81	5293.18	
ANNUAL MEAN	10.8	14.5	8.89
HIGHEST ANNUAL MEAN			14.5
LOWEST ANNUAL MEAN			5.11
HIGHEST DAILY MEAN	183	Nov 28	201
LOWEST DAILY MEAN	.29	Aug 15	.65
ANNUAL SEVEN-DAY MINIMUM	.39	Aug 9	.73
INSTANTANEOUS PEAK FLOW			a277
INSTANTANEOUS PEAK STAGE			5.09
INSTANTANEOUS LOW FLOW			6.32
ANNUAL RUNOFF (CFSM)	2.07	2.77	1.70
ANNUAL RUNOFF (INCHES)	28.09	37.58	23.05
10 PERCENT EXCEEDS	26	40	21
50 PERCENT EXCEEDS	3.4	5.4	3.6
90 PERCENT EXCEEDS	.65	1.1	.45

a From rating curve extended above 80 ft³/s on basis of slope-area measurements at gage heights 5.09 ft, 5.86 ft, and at peak flow.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01543000 DRIFTWOOD BRANCH SINNEMAHOING CREEK AT STERLING RUN, PA

LOCATION.--Lat 41°24'48", long 78°11'50", Cameron County, Hydrologic Unit 02050202, on left bank at downstream side of highway bridge on SR 3002 at village of Sterling Run, and 300 ft upstream from Sterling Run.

DRAINAGE AREA.--272 mi².

PERIOD OF RECORD.--October 1913 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 894.84 ft above sea level. Oct. 1, 1913, to Sept. 30, 1931, nonrecording gage, Oct. 1, 1931, to Sept. 30, 1932, and Oct. 1, 1942, to Oct. 3, 1991, water-stage recorder at site 50 feet upstream on steel-truss bridge at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	398	344	1330	e160	e400	e370	1410	1170	288	307	102	601
2	330	287	990	e170	e300	e350	2130	1360	207	269	93	438
3	297	303	915	e150	e280	e340	3790	1030	169	312	102	344
4	243	344	977	e140	e260	e330	3770	800	147	230	85	284
5	266	463	2010	e130	e230	e310	2780	640	135	191	107	241
6	217	646	1990	e120	e220	284	2900	534	129	175	95	211
7	191	651	1530	e140	e210	254	4140	437	222	374	74	189
8	177	566	1120	e130	e190	404	2870	528	146	1140	65	165
9	171	482	889	e120	e180	426	2020	437	119	642	60	149
10	165	418	928	e130	e160	788	2230	395	103	463	57	142
11	140	369	1350	e140	e170	779	2180	358	263	311	53	124
12	130	332	1240	e140	e180	615	2250	362	1680	234	57	113
13	127	289	1020	e140	e170	594	2700	319	1030	190	229	106
14	115	493	840	e120	e160	834	2880	272	3160	191	4430	99
15	106	977	718	e110	e170	966	2110	250	2030	262	3060	103
16	100	917	599	e120	169	1290	1660	282	1240	173	1410	99
17	172	1280	478	e130	e170	997	1270	260	796	142	1220	94
18	372	3260	422	e130	e180	813	1010	222	570	150	8990	166
19	326	2140	429	e120	e230	662	846	203	408	279	3850	113
20	479	1430	403	e100	e400	538	681	188	305	186	1890	90
21	911	934	388	e110	e1300	669	549	171	278	147	2430	81
22	1290	693	365	e120	2080	2980	461	158	222	141	2550	75
23	976	556	323	e130	1490	3380	394	147	173	151	1620	77
24	715	478	249	e140	1130	4670	349	138	857	118	976	78
25	555	404	e230	e150	806	5680	315	182	3100	227	677	74
26	444	346	e180	e180	657	2980	283	308	1490	349	568	85
27	374	480	e130	e280	488	2540	293	318	894	246	586	310
28	327	8070	e130	e1000	e380	2680	239	266	680	215	1060	189
29	283	3960	e140	e1300	---	2430	295	230	484	173	1640	186
30	258	2070	e140	e1000	---	1940	352	197	385	139	1160	156
31	307	---	e150	e620	---	1510	---	170	---	119	806	---
TOTAL	10962	33982	22603	7670	12760	43403	49157	12332	21710	8246	40102	5182
MEAN	354	1133	729	247	456	1400	1639	398	724	266	1294	173
MAX	1290	8070	2010	1300	2080	5680	4140	1360	3160	1140	8990	601
MIN	100	287	130	100	160	254	239	138	103	118	53	74
CFSM	1.30	4.16	2.68	.91	1.68	5.15	6.02	1.46	2.66	.98	4.76	.64
IN.	1.50	4.65	3.09	1.05	1.75	5.94	6.72	1.69	2.97	1.13	5.48	.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)

	MEAN	190	401	491	502	545	1007	922	634	335	172	124	128
MAX	838	1917	1394	2027	2047	3366	2310	1758	1783	1308	1294	743	
(WY)	1918	1951	1928	1937	1918	1936	1940	1953	1972	1942	1994	1987	
MIN	10.0	21.2	24.5	33.2	76.0	250	199	104	38.8	16.9	9.20	5.16	
(WY)	1965	1965	1961	1961	1963	1981	1946	1941	1991	1966	1957	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1914 - 1994

ANNUAL TOTAL	215500	268109	454	1994
ANNUAL MEAN	590	735	735	1934
HIGHEST ANNUAL MEAN			235	1934
LOWEST ANNUAL MEAN			18600	Jun 23 1972
HIGHEST DAILY MEAN	8070	Nov 28	8990	Aug 18
LOWEST DAILY MEAN	16	Jul 26	53	Aug 11
ANNUAL SEVEN-DAY MINIMUM	29	Jul 13	66	Aug 6
INSTANTANEOUS PEAK FLOW			a12400	Aug 18
INSTANTANEOUS PEAK STAGE			7.55	Aug 18
INSTANTANEOUS LOW FLOW			b14.70	Jul 18 1942
ANNUAL RUNOFF (CFSM)	2.17	2.70	1.67	Sep 12 1930c
ANNUAL RUNOFF (INCHES)	29.47	36.67	22.66	
10 PERCENT EXCEEDS	1390	2020	1100	
50 PERCENT EXCEEDS	218	323	205	
90 PERCENT EXCEEDS	43	120	26	

a From rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

c Also Sept. 13, 14, 1930.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01543500 SINNEMAHONING CREEK AT SINNEMAHONING, PA

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

DRAINAGE AREA--685 mi².

PERIOD OF RECORD--July 1938 to current year. Prior to October 1938 monthly discharge only, published in WSP 1302.

GAGE--Water-stage recorder. Datum of gage is 769.36 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD--Maximum stage known, 21.94 ft, Mar. 18, 1936, from floodmark, discharge, 61,200 ft³/s, from rating curve extended above 31,000 ft³/s on basis of slope-area measurement at gage height 21.58 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	963	936	3210	e580	e1200	e1100	3590	2360	635	779	269	1180
2	775	795	2400	e560	e850	e1000	4990	2720	572	638	243	915
3	710	778	2160	e530	e800	e900	8830	2210	474	731	263	750
4	596	892	2050	e500	e780	e1000	9220	1840	429	592	238	638
5	586	1190	3840	e470	e760	e900	6800	1560	388	495	268	559
6	522	1620	3790	e450	e660	e740	6760	1350	368	451	281	496
7	450	1610	3140	e500	e620	710	8980	1150	769	795	222	457
8	415	1420	2420	e470	e600	1070	6540	1550	554	1630	192	411
9	387	1220	2000	e450	e540	1230	4730	1340	434	1100	173	375
10	378	1070	1920	e430	e470	2170	4800	1220	371	943	161	385
11	347	952	2840	e460	e500	2320	4820	1120	426	698	149	329
12	312	861	2460	e460	e520	1830	5750	1090	4580	558	145	294
13	306	766	2150	e460	e500	1700	7460	1000	2790	476	336	272
14	286	919	1870	e420	e470	2290	7470	860	6330	472	6380	260
15	264	1930	1650	e370	e420	2740	5340	796	4270	642	5560	260
16	250	1750	1430	e410	e410	3930	4170	1000	2710	533	2550	258
17	305	2260	1170	e410	e420	3030	3220	928	1870	455	2050	247
18	842	7710	1020	e390	e430	2440	2520	816	1560	386	17400	435
19	717	5360	1020	e380	e450	1970	2120	758	1170	499	8600	351
20	1190	3730	982	e390	e1000	1580	1750	703	892	407	4370	256
21	1750	2540	917	e410	e3500	1700	1440	642	808	343	5660	224
22	2620	1960	883	e430	e5000	6600	1230	596	696	350	6000	206
23	2060	1620	780	e440	4060	7990	1070	543	556	461	3860	200
24	1600	1410	e650	e460	3180	11200	962	504	869	361	2520	206
25	1280	1210	e640	e500	2360	13700	874	670	5430	470	1820	202
26	1050	1040	e580	e580	1930	7840	791	784	2740	683	1520	197
27	892	1240	e450	e780	e1300	6650	750	873	1780	518	1300	588
28	785	16500	e480	e1000	e1100	7100	669	706	1490	467	2020	458
29	693	9410	e500	e3500	---	6420	702	630	1140	409	2530	378
30	631	5010	e500	e2500	---	5150	941	571	930	345	1960	347
31	754	---	e520	e1700	---	4030	---	516	---	307	1450	---
TOTAL	24716	79709	50422	21390	34830	113030	119289	33406	48031	17994	80490	12134
MEAN	797	2657	1627	690	1244	3646	3976	1078	1601	580	2596	404
MAX	2620	16500	3840	3500	5000	13700	9220	2720	6330	1630	17400	1180
MIN	250	766	450	370	410	710	669	504	368	307	145	197
CFSM	1.16	3.88	2.37	1.01	1.82	5.32	5.80	1.57	2.34	.85	3.79	.59
IN.	1.34	4.33	2.74	1.16	1.89	6.14	6.48	1.81	2.61	.98	4.37	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1994, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
MEAN	470	957	1279	1223	1450	2501	2366	1607	863	445	322	330	
MAX	2186	4836	2883	4349	3732	5608	5500	3771	4066	2134	2596	1706	
(WY)	1991	1951	1973	1952	1976	1945	1940	1953	1972	1992	1994	1975	
MIN	31.5	52.0	64.1	91.8	257	771	556	313	121	37.9	28.7	29.6	
(WY)	1965	1965	1961	1961	1963	1981	1946	1941	1991	1966	1957	1939	

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1939 - 1994	
ANNUAL TOTAL	507145		635441		1149	
ANNUAL MEAN	1389		1741		1798	
HIGHEST ANNUAL MEAN					710	
LOWEST ANNUAL MEAN					1939	
HIGHEST DAILY MEAN	16500	Nov 28	17400	Aug 18	44000	Jun 23 1972
LOWEST DAILY MEAN	40	Jul 26	145	Aug 12	1.4	Sep 3 1939
ANNUAL SEVEN-DAY MINIMUM	60	Jul 13	189	Aug 6	4.2	Aug 29 1939
INSTANTANEOUS PEAK FLOW			b21400	Aug 18	a60800	Jun 23 1972
INSTANTANEOUS PEAK STAGE			c12.89	Jan 29	21.78	Jun 23 1972
INSTANTANEOUS LOW FLOW					1.2	Sep 4 1939
ANNUAL RUNOFF (CFSM)	2.03		2.54		1.68	
ANNUAL RUNOFF (INCHES)	27.54		34.51		22.79	
10 PERCENT EXCEEDS	3200		4760		2790	
50 PERCENT EXCEEDS	600		860		560	
90 PERCENT EXCEEDS	118		346		73	

a From rating curve extended above 31,000 ft³/s on basis of slope-area measurement at gage height 21.58 ft.

b Gage height 11.79 ft.

c Result of ice jam.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01544000 FIRST FORK SINNEMAHONING CREEK NEAR SINNEMAHONING, PA

LOCATION.--Lat 41°24'06", long 78°01'28", Cameron County, Hydrologic Unit 02050202, on right bank on Township Route 357, 350 ft downstream from Woodrock Run, 1,500 ft upstream from Roaring Run, 0.8 mi downstream from George B. Stevenson Dam (First Fork Sinnemahoning Creek Reservoir), and 7.5 mi northeast of Sinnemahoning.

DRAINAGE AREA.--245 mi².

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

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

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known, 80,000 ft³/s, July 18, 1942, by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	391	135	2700	203	489	399	1140	1100	190	371	80	499
2	311	304	3340	203	297	329	1560	1460	186	324	73	361
3	272	424	4400	181	218	245	3070	1130	139	295	164	240
4	211	347	1940	148	238	355	3660	870	132	250	137	246
5	220	293	1030	109	318	355	2730	682	125	200	119	221
6	169	339	1320	110	343	302	2810	566	114	205	119	208
7	131	356	1220	123	175	224	3360	442	147	335	75	183
8	149	1200	897	126	166	287	2820	449	121	454	60	161
9	147	764	740	107	e150	328	1970	369	106	497	67	125
10	140	511	700	98	e140	553	1910	310	99	417	57	110
11	133	971	922	97	131	641	2320	337	94	282	48	110
12	115	194	988	101	138	546	1990	303	805	232	52	110
13	108	309	932	108	157	508	2200	293	710	220	141	99
14	99	374	794	110	e160	597	2650	243	3030	208	2000	93
15	92	169	685	e96	e125	813	2080	229	2640	210	2390	93
16	85	5.1	534	e90	156	942	1610	269	1280	166	1220	87
17	102	713	343	93	143	860	1310	237	833	142	998	85
18	238	2630	367	100	128	729	1120	207	594	129	2510	126
19	213	3270	320	e100	164	594	923	201	480	174	3970	90
20	290	2970	293	110	337	490	643	181	350	138	4510	63
21	447	1530	293	112	1110	507	610	164	293	119	2510	60
22	1400	1050	296	110	1900	1240	505	159	245	119	2090	54
23	1200	500	255	103	1470	2320	429	153	193	119	1470	55
24	749	554	220	98	1040	3330	363	140	206	103	1040	62
25	565	491	196	69	725	1270	329	164	3250	120	673	54
26	444	439	187	65	632	3880	292	175	1970	160	605	54
27	363	324	132	64	405	4130	289	218	1140	133	436	68
28	317	944	79	121	348	2160	250	165	734	117	389	76
29	279	1540	99	1170	---	2000	243	131	638	126	903	101
30	209	2770	122	1090	---	1690	285	161	446	105	766	167
31	83	---	194	563	---	1310	---	162	---	80	606	---
TOTAL	9672	26420.1	26538	5978	11803	33934	45471	11670	21290	6550	30278	4061
MEAN	312	881	856	193	422	1095	1516	376	710	211	977	135
MAX	1400	3270	4400	1170	1900	4130	3660	1460	3250	497	4510	499
MIN	83	5.1	79	64	125	224	243	131	94	80	48	54
MEAN [‡]	318	1157	586	192	422	1093	1516	376	710	211	972	134
CFSM [‡]	1.30	4.72	2.39	.78	1.72	4.46	6.19	1.53	2.90	.86	3.97	.55
IN. [‡]	1.50	5.27	2.76	.90	1.79	5.14	6.91	1.76	3.24	.99	4.58	.61

[‡] Adjusted for change in contents in First Fork Sinnemahoning Creek Reservoir.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01544000 FIRST FORK SINNEMAHONING CREEK NEAR SINNEMAHONING, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	215	382	469	347	462	827	912	512	282	176	131	141
MAX	1033	1162	1051	965	1452	1820	2300	1037	1334	808	977	837
(WY)	1991	1986	1991	1979	1981	1964	1993	1984	1989	1992	1994	1975
MIN	9.76	17.6	21.3	16.6	77.9	171	320	103	40.5	14.5	14.2	5.31
(WY)	1964	1965	1961	1961	1963	1960	1976	1985	1991	1966	1962	1964

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1956 - 1994			
ANNUAL TOTAL	190974.1				233665.1							
ANNUAL MEAN	523				640				404			
HIGHEST ANNUAL MEAN	522				640				404			
LOWEST ANNUAL MEAN									260			
HIGHEST DAILY MEAN	5790				4510				7360			
LOWEST DAILY MEAN	5.1				5.1				.10			
ANNUAL SEVEN-DAY MINIMUM	18				57				3.6			
INSTANTANEOUS PEAK FLOW					5160				10200			
INSTANTANEOUS PEAK STAGE					4.14				6.60			
ANNUAL RUNOFF (CFSM)	2.14				2.61				1.65			
ANNUAL RUNOFF (INCHES)	29.00				35.48				22.40			
10 PERCENT EXCEEDS	1330				1950				965			
50 PERCENT EXCEEDS	172				293				194			
90 PERCENT EXCEEDS	41				98				28			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1955, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.2	101	374	394	467	1277	699	391	177	30.6	44.6	20.4
MAX	96.7	132	509	503	631	1672	936	626	260	38.9	74.4	23.4
(WY)	1955	1955	1955	1955	1954	1955	1954	1954	1954	1954	1955	1955
MIN	13.7	70.0	239	285	304	883	462	156	93.4	22.3	14.9	17.4
(WY)	1954	1954	1954	1954	1955	1954	1955	1955	1955	1955	1954	1954

SUMMARY STATISTICS WATER YEARS 1954 - 1955

ANNUAL MEAN	336	
HIGHEST ANNUAL MEAN	339	1955
LOWEST ANNUAL MEAN	332	1954
HIGHEST DAILY MEAN	5020	Mar 2 1954
LOWEST DAILY MEAN	5.6	Sep 22 1955
ANNUAL SEVEN-DAY MINIMUM	8.3	Sep 6 1954
INSTANTANEOUS PEAK FLOW	7000	Mar 1 1954
INSTANTANEOUS PEAK STAGE	5.64	Mar 1 1954
ANNUAL RUNOFF (CFSM)	1.37	
ANNUAL RUNOFF (INCHES)	18.63	
10 PERCENT EXCEEDS	980	
50 PERCENT EXCEEDS	103	
90 PERCENT EXCEEDS	14	

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

WEST BRANCH SUSQUEHANNA RIVER BASIN

01544500 KETTLE CREEK AT CROSS FORK, PA

LOCATION.--Lat 41°28'33", long 77°49'34", Clinton County, Hydrologic Unit 02050203, on right bank just upstream from abutment of former highway bridge on Township Route 318, 0.2 mi downstream from Potter-Clinton County line, and 0.7 mi southeast of Cross Fork.

DRAINAGE AREA.--136 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,027.12 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 14.0 ft, Mar. 18, 1936, from information by local residents, discharge, about 20,000 ft³/s, from rating curve extended above 9,200 ft³/s on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	156	749	e80	e190	e170	700	322	82	158	139	258
2	156	138	541	e86	e140	e160	933	414	66	134	125	214
3	135	145	447	e76	e120	e170	1770	412	60	119	110	180
4	111	148	408	e70	e110	e160	2130	370	56	101	97	154
5	110	211	489	e66	e100	e150	1580	322	54	114	107	133
6	85	363	567	e62	e96	e140	1610	279	60	142	86	118
7	76	416	557	e70	e90	133	1920	236	94	138	72	108
8	71	379	473	e66	e86	159	1500	236	60	127	64	96
9	67	329	406	e60	e80	160	1110	195	53	125	60	86
10	66	285	425	e64	e72	277	1160	171	49	125	56	77
11	58	251	518	e70	e80	284	1300	153	89	103	52	68
12	56	220	553	e70	e90	256	1170	152	343	92	53	62
13	55	189	502	e70	e84	260	1250	137	287	87	93	58
14	52	238	432	e60	e76	357	1350	125	1010	106	417	56
15	49	310	371	e56	e84	419	1150	123	813	103	556	55
16	47	337	304	e60	e88	465	943	139	560	86	439	51
17	86	655	244	e66	e84	422	704	121	421	77	498	53
18	133	1870	211	e66	e90	380	552	111	324	97	5110	73
19	129	1370	198	e60	e120	314	466	105	248	281	2380	48
20	206	860	174	e50	e250	274	389	99	193	184	1210	41
21	318	529	170	e52	e660	298	325	93	182	146	1220	38
22	419	397	154	e58	e900	604	276	88	148	149	1180	36
23	408	335	137	e60	623	944	238	84	120	146	872	56
24	356	291	e110	e66	517	1490	211	80	290	138	625	46
25	301	250	e100	e74	388	2160	188	99	890	381	482	38
26	255	214	e76	e90	322	1460	168	99	573	700	386	41
27	217	262	e60	e140	e220	1190	160	92	415	340	303	46
28	188	4290	e60	e250	e180	1130	137	76	308	287	260	43
29	161	2440	e68	e600	---	1080	145	70	235	220	360	46
30	148	1200	e72	e500	---	934	141	66	193	198	308	39
31	161	---	e70	e300	---	773	---	63	---	163	291	---
TOTAL	4867	19078	9646	3518	5940	17173	25676	5132	8276	5367	18011	2418
MEAN	157	636	311	113	212	554	856	166	276	173	581	80.6
MAX	419	4290	749	600	900	2160	2130	414	1010	700	5110	258
MIN	47	138	60	50	72	133	137	63	49	77	52	36
CFSM	1.15	4.68	2.29	.83	1.56	4.07	6.29	1.22	2.03	1.27	4.27	.59
IN.	1.33	5.22	2.64	.96	1.62	4.70	7.02	1.40	2.26	1.47	4.93	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1994, BY WATER YEAR (WY)

MEAN	109	208	245	212	253	492	518	322	169	88.4	61.5	62.3
MAX	700	868	552	663	800	1055	1303	721	797	436	581	699
(WY)	1991	1951	1973	1952	1981	1945	1993	1946	1972	1992	1994	1975
MIN	6.23	9.53	18.8	18.4	52.1	132	112	63.8	22.1	12.8	7.07	6.32
(WY)	1965	1965	1961	1961	1963	1981	1946	1941	1991	1962	1971	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1941 - 1994

ANNUAL TOTAL	117074	125102	228
ANNUAL MEAN	321	343	351
HIGHEST ANNUAL MEAN			125
LOWEST ANNUAL MEAN			1941
HIGHEST DAILY MEAN	4370	Apr 1	5110
LOWEST DAILY MEAN	11	Aug 10	36
ANNUAL SEVEN-DAY MINIMUM	13	Aug 4	42
INSTANTANEOUS PEAK FLOW			6530
INSTANTANEOUS PEAK STAGE			8.19
ANNUAL RUNOFF (CFSM)	2.36		2.52
ANNUAL RUNOFF (INCHES)	32.02		34.22
10 PERCENT EXCEEDS	813		879
50 PERCENT EXCEEDS	95		160
90 PERCENT EXCEEDS	18		60

a From rating curve extended above 9,200 ft³/s on basis of slope-area measurement of peak flow.

b From floodmark in gage.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN
01545000 KETTLE CREEK NEAR WESTPORT, PA

LOCATION.--Lat 41°19'10", long 77°52'27", Clinton County, Hydrologic Unit 02050203, on left bank on SR 4001, 0.4 mi upstream from Short Bond Run, 3.5 mi upstream from mouth and Westport, and 5.0 mi downstream from Alvin R. Bush Dam (Kettle Creek Lake).

DRAINAGE AREA.--233 mi².

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

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

REMARKS.--Records good except those below 100 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Flow regulated since February 1962 by Alvin R. Bush Dam (station 01544800). Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288	272	3730	e150	e420	e390	1180	599	140	298	217	371
2	180	232	3720	e200	e250	e320	1540	843	139	250	259	308
3	166	213	908	e160	e270	e260	2880	824	102	226	251	274
4	186	220	707	e150	e220	e330	3310	699	93	193	204	233
5	194	272	781	e130	e230	387	2890	581	95	155	202	204
6	156	585	984	e110	e270	e250	2660	500	97	222	167	187
7	134	756	991	e130	e190	266	3040	438	168	249	132	163
8	134	605	801	e140	e180	320	2570	425	130	242	134	143
9	126	522	692	e120	e160	322	1920	376	108	232	117	142
10	116	452	703	e88	e140	424	1890	326	95	233	106	134
11	107	372	877	e90	e130	515	2120	304	116	208	101	111
12	95	360	977	e100	e150	e430	1980	288	576	171	90	99
13	95	286	926	e110	e170	471	2110	266	506	145	141	98
14	93	316	721	e96	e150	595	2250	241	1410	178	1070	91
15	85	466	616	e86	e120	748	1960	224	1420	206	1400	91
16	78	505	549	e82	e130	924	1550	276	991	155	930	91
17	104	776	396	e76	e140	851	1190	255	720	133	808	86
18	192	2870	370	e76	e140	714	999	216	551	136	4290	118
19	205	2220	370	e76	e160	624	788	210	427	316	4670	105
20	327	1470	321	e76	404	492	693	203	354	318	3450	74
21	420	975	292	e76	942	522	584	192	320	229	1920	57
22	596	774	296	e76	1470	1060	458	182	273	226	2080	71
23	670	614	255	e76	1280	1760	436	168	213	234	1480	85
24	579	493	e200	e80	942	2670	372	154	203	206	1030	83
25	457	421	e180	e84	670	3360	352	182	1670	257	749	74
26	377	361	e180	e88	607	3050	340	195	1150	1030	579	68
27	348	419	e100	e76	e420	2120	296	193	799	567	471	69
28	300	1160	e120	e160	e360	2040	272	158	567	431	385	64
29	253	2280	e130	e780	---	1960	233	126	440	348	486	80
30	244	3770	e120	e740	---	1710	255	132	371	327	428	74
31	251	---	e130	e600	---	1370	---	128	---	261	394	---
TOTAL	7556	25037	22143	5082	10715	31255	43118	9904	14244	8382	28741	3848
MEAN	244	835	714	164	383	1008	1437	319	475	270	927	128
MAX	670	3770	3730	780	1470	3360	3310	843	1670	1030	4670	371
MIN	78	213	100	76	120	250	233	126	93	133	90	57
MEAN‡	250	1049	507	162	383	1007	1441	318	474	270	928	128
CFSM‡	1.07	4.50	2.18	.70	1.64	4.32	6.18	1.36	2.03	1.16	3.98	.55
IN.‡	1.23	5.02	2.51	.81	1.71	4.98	6.90	1.57	2.26	1.34	4.59	.61

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

WEST BRANCH SUSQUEHANNA RIVER BASIN

01545000 KETTLE CREEK NEAR WESTPORT, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	197	356	424	323	449	748	840	477	295	164	114	127
MAX	1096	1060	954	857	1330	1739	2453	850	1278	677	927	1058
(WY)	1991	1971	1973	1979	1981	1979	1993	1984	1972	1972	1994	1975
MIN	13.5	5.37	61.3	63.8	78.8	167	309	142	42.0	8.06	7.69	13.0
(WY)	1965	1965	1965	1981	1963	1968	1976	1985	1991	1962	1962	1991

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1962 - 1994

ANNUAL TOTAL	182519		210025									
ANNUAL MEAN	500	‡500	575	‡576						375	‡375	
HIGHEST ANNUAL MEAN										575		1994
LOWEST ANNUAL MEAN										240		1965
HIGHEST DAILY MEAN				5440	Apr 4		4670	Aug 19		7200	Apr 14	1970
LOWEST DAILY MEAN				21	Jul 26-28 ^a		57	Sep 21		4.4	Nov 3,6,12	1964
ANNUAL SEVEN-DAY MINIMUM				21	Aug 6		72	Sep 21		4.6	Nov 2	1964
INSTANTANEOUS PEAK FLOW							4790	Aug 18		7540	Apr 13	1970
INSTANTANEOUS PEAK STAGE							8.27	Aug 18		10.17	Apr 13	1970
INSTANTANEOUS LOW FLOW										3.0	Dec 6	1964
ANNUAL RUNOFF (CFSM)				2.15	‡2.15		2.47	‡2.47		1.61	‡1.61	
ANNUAL RUNOFF (INCHES)				29.14	‡29.14		33.53	‡33.53		21.88	‡21.86	
10 PERCENT EXCEEDS				1330			1470			882		
50 PERCENT EXCEEDS				151			274			183		
90 PERCENT EXCEEDS				32			95			31		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1961, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	192	247	373	297	387	837	1066	541	204	131	120	72.8
MAX	709	647	708	564	713	1373	1496	1103	631	318	276	177
(WY)	1956	1960	1957	1959	1961	1955	1958	1960	1960	1958	1956	1958
MIN	23.7	41.3	27.0	27.6	127	394	411	151	63.9	25.1	16.9	24.3
(WY)	1958	1961	1961	1961	1958	1960	1955	1955	1955	1955	1957	1957

SUMMARY STATISTICS WATER YEARS 1955 - 1961

ANNUAL MEAN	372											
HIGHEST ANNUAL MEAN	492				1956							
LOWEST ANNUAL MEAN	266				1955							
HIGHEST DAILY MEAN	5970				Mar 8	1956						
LOWEST DAILY MEAN	8.9				Sep 10	1957						
ANNUAL SEVEN-DAY MINIMUM	10				Sep 24	1959						
INSTANTANEOUS PEAK FLOW	b7970				Mar 8	1956						
INSTANTANEOUS PEAK STAGE	c13.31				Jan 22	1959						
INSTANTANEOUS LOW FLOW	8.9				Sep 9,10	1957						
ANNUAL RUNOFF (CFSM)	1.60											
ANNUAL RUNOFF (INCHES)	21.69											
10 PERCENT EXCEEDS	942											
50 PERCENT EXCEEDS	160											
90 PERCENT EXCEEDS	26											

‡ Adjusted for change in contents in Kettle Creek Lake.

^a Also Aug. 6-12, 31.^b Gage height 10.48 ft.^c Backwater from ice.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01545500 WEST BRANCH SUSQUEHANNA RIVER AT RENOVO, PA

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

DRAINAGE AREA.--2,975 mi².

PERIOD OF RECORD.--October 1907 to current year. Gage height records collected July 1895 to December 1903 and October 1905 to September 1974 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1908-10, 1912-13, 1914-15(M). WSP 2103: 1968 (monthly mean). WDR PA-88-2: 1987.

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3500	2720	21900	e2400	8570	6550	21700	7620	2420	3280	1160	5120
2	2760	3090	19100	e2700	6560	6300	24200	12400	2570	2730	1170	4120
3	2470	3390	16100	e2600	e4700	5940	35300	10700	2190	2600	1180	3340
4	2250	3390	13400	e2500	4420	5930	40600	8710	1980	2400	1330	2950
5	1990	3550	13100	e2300	4390	5720	33400	7560	1850	2040	1270	2600
6	1890	5280	15900	e2200	4390	5180	30500	6500	1770	1930	1350	2330
7	1600	5930	14700	e2100	3770	4560	34600	5940	2500	2330	1380	2070
8	1420	5660	12300	e2300	3370	4990	30600	7030	4850	5570	1230	1910
9	1310	5790	10100	e2200	e2900	6670	23200	9250	3530	5000	1080	1790
10	1240	3870	8670	e2100	e2600	8860	20700	8410	2680	3900	946	1690
11	1170	4580	11700	e2000	2550	11900	23700	7080	2400	3090	829	1590
12	1060	3420	13100	e2100	2810	10300	25900	6460	9580	2390	748	1420
13	1020	3050	11100	e2100	2950	8940	33800	5960	9230	2010	762	1330
14	988	3050	9360	e2100	2710	e9000	32600	5420	14500	1840	6390	1220
15	941	5080	8140	e1900	2440	e11000	26100	4880	15000	2090	12400	1200
16	901	6580	7430	e1700	2370	e13000	21000	5000	10200	2040	6970	1180
17	919	6690	6410	e1700	2440	15900	17500	5200	7490	1780	5160	1260
18	1610	18700	5450	e1700	2420	13600	13800	4720	6070	1540	34800	1960
19	2200	20100	5240	e1700	2680	11200	11300	4210	5110	1610	33000	3120
20	2630	15600	5010	e1800	3640	9190	9390	3880	4110	1800	20500	2560
21	3530	11600	4840	e1800	e8000	8590	7770	3580	3540	1440	15300	1760
22	6130	8560	4650	e1900	e17000	17600	6760	3270	3150	1410	19800	1470
23	6240	7070	4220	e2000	e19000	e30000	5930	3030	2580	1630	16000	1410
24	4910	6030	3740	e2000	16400	40900	5300	2780	2310	1710	11500	1400
25	3980	5440	3370	e2100	14100	50800	4810	2900	13500	1540	8250	1370
26	3340	4800	3250	e2300	12500	41100	4450	3600	10600	2610	6840	1240
27	2890	4380	2540	e2700	10300	35800	3980	4210	7040	2150	5540	1310
28	2540	38600	e2100	e4000	7980	35000	3640	3800	5720	2010	5650	1770
29	2320	36900	e2100	e9000	---	33300	3360	3220	4620	1880	6460	2260
30	2150	27600	e2100	e12000	---	28700	4270	2980	3910	1680	7330	1740
31	2180	---	e2200	10100	---	24400	---	2650	---	1380	6270	---
TOTAL	74079	280500	263320	92100	177960	520920	560160	172950	167000	71410	242595	60490
MEAN	2390	9350	8494	2971	6356	16800	18670	5579	5567	2304	7826	2016
MAX	6240	38600	21900	12000	19000	50800	40600	12400	15000	5570	34800	5120
MIN	901	2720	2100	1700	2370	4560	3360	2650	1770	1380	748	1180
CFSM	.80	3.14	2.86	1.00	2.14	5.65	6.28	1.88	1.87	.77	2.63	.68
IN.	.93	3.51	3.29	1.15	2.23	6.51	7.00	2.16	2.09	.89	3.03	.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1994, BY WATER YEAR (WY)

	MEAN	2182	3824	4973	5673	6200	11050	10030	7113	3990	2152	1431	1448
MAX	10330	16700	13570	19060	16640	34360	25010	16670	18840	8100	7826	9220	
(WY)	1912	1951	1928	1937	1915	1936	1940	1919	1972	1928	1994	1975	
MIN	139	174	307	196	1077	3141	2456	1436	843	368	166	166	
(WY)	1931	1931	1931	1931	1934	1969	1925	1941	1991	1965	1930	1908	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1908 - 1994

ANNUAL TOTAL	2309918	2683484		
ANNUAL MEAN	6329	7352		
HIGHEST ANNUAL MEAN			4998	1951
LOWEST ANNUAL MEAN			2579	1934
HIGHEST DAILY MEAN	48800	Apr 1	50800	Mar 18 1936
LOWEST DAILY MEAN	356	Jul 27	748	Dec 6 1908
ANNUAL SEVEN-DAY MINIMUM	416	Jul 22	996	Aug 7 1939
INSTANTANEOUS PEAK FLOW			55700	Mar 25 1936
INSTANTANEOUS PEAK STAGE			13.60	Mar 25 1936
INSTANTANEOUS LOW FLOW				80
ANNUAL RUNOFF (CFSM)			2.47	1.68
ANNUAL RUNOFF (INCHES)	28.88	33.55		22.83
10 PERCENT EXCEEDS	17600	18800	11800	
50 PERCENT EXCEEDS	2690	3910	2730	
90 PERCENT EXCEEDS	588	1430	475	

a From rating curve extended above 87,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmark in gage.

c Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

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

LOCATION.--Lat 41°23'22", long 77°41'28", Clinton County, Hydrologic Unit 02050203, on left bank on SR 4005, 0.3 mi downstream from Laurelly Fork, 1.5 mi upstream from Left Branch Young Womans Creek, 3.7 mi upstream from mouth, and 5.0 mi northeast of Renovo.
DRAINAGE AREA.--46.2 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 780.41 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	47	266	e28	e68	e54	270	126	27	35	118	64
2	52	40	201	e30	e50	e52	341	125	23	31	97	56
3	46	39	166	e32	e45	e80	550	122	22	29	83	50
4	38	40	153	e27	e42	e70	658	113	20	26	71	46
5	40	58	178	e25	e37	64	517	103	19	47	76	42
6	30	95	174	e24	e35	54	514	94	20	97	61	39
7	27	108	169	e26	e33	50	587	85	34	85	50	37
8	25	102	151	e25	e32	65	489	87	22	91	43	33
9	24	91	134	e23	e29	63	399	74	20	82	39	32
10	24	80	154	e23	e26	98	408	66	19	74	36	30
11	21	71	194	e26	e28	96	407	60	42	61	33	27
12	21	64	195	e26	e33	90	406	60	137	53	31	25
13	20	58	174	e26	e31	90	427	54	105	46	64	23
14	20	70	152	e24	e27	108	420	49	197	49	174	23
15	19	77	133	e21	e28	134	354	48	179	47	193	23
16	18	72	112	e22	e31	157	299	53	235	39	158	22
17	29	124	94	e25	e30	143	229	46	299	34	197	23
18	45	301	85	e24	e33	130	186	42	207	31	2480	34
19	38	280	79	e22	e40	112	160	40	150	60	1100	22
20	61	228	71	e19	e70	101	136	37	111	49	493	20
21	77	177	70	e19	e120	109	114	35	94	47	400	18
22	89	141	63	e20	191	173	100	33	78	84	340	17
23	87	115	56	e21	173	259	89	31	62	176	266	27
24	79	101	50	e21	154	400	81	30	66	189	203	21
25	70	86	48	e22	124	561	74	40	75	301	161	19
26	63	74	e39	e23	106	456	67	37	55	305	132	22
27	57	94	e30	e24	103	419	62	34	54	230	109	35
28	50	1190	e23	e90	112	415	55	29	52	269	98	26
29	44	726	e25	e200	---	394	61	27	42	226	107	22
30	42	394	e27	e180	---	347	57	25	39	193	79	20
31	48	---	e26	e110	---	291	---	24	---	150	70	---
TOTAL	1360	5143	3492	1228	1831	5635	8517	1829	2505	3236	7562	898
MEAN	43.9	171	113	39.6	65.4	182	284	59.0	83.5	104	244	29.9
MAX	89	1190	266	200	191	561	658	126	299	305	2480	64
MIN	18	39	23	19	26	50	55	24	19	26	31	17
CFSM	.95	3.71	2.44	.86	1.42	3.93	6.15	1.28	1.81	2.26	5.28	.65
IN.	1.10	4.14	2.81	.99	1.47	4.54	6.86	1.47	2.02	2.61	6.09	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1994, BY WATER YEAR (WY)

	MEAN	39.3	75.2	82.4	59.7	88.1	137	165	96.3	65.9	38.6	25.1	24.0
MAX	181	199	194	155	250	349	447	175	303	162	244	211	
(WY)	1991	1971	1973	1979	1984	1979	1993	1978	1972	1992	1994	1975	
MIN	4.05	10.9	9.59	8.25	19.6	44.7	60.9	31.9	9.09	4.64	3.21	3.36	
(WY)	1983	1992	1965	1981	1987	1969	1988	1985	1991	1966	1966	1980	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1965 - 1994

ANNUAL TOTAL	37559.5	43236	75.3	
ANNUAL MEAN	103	118	118	1994
HIGHEST ANNUAL MEAN			47.2	1966
LOWEST ANNUAL MEAN			3310	Jun 23 1972
HIGHEST DAILY MEAN	1250	Apr 1	17	Aug 22 1988
LOWEST DAILY MEAN	5.5	Aug 9	20	Aug 16 1988
ANNUAL SEVEN-DAY MINIMUM	6.4	Jul 22	a3890	Aug 18
INSTANTANEOUS PEAK FLOW			6.92	Aug 18
INSTANTANEOUS PEAK STAGE			a5370	Jun 23 1972
INSTANTANEOUS LOW FLOW			7.98	Jun 23 1972
ANNUAL RUNOFF (CFSM)	2.23		1.0	Aug 22, 23 1988
ANNUAL RUNOFF (INCHES)	30.24		2.56	
10 PERCENT EXCEEDS	302		34.81	
50 PERCENT EXCEEDS	39		172	
90 PERCENT EXCEEDS	9.7		62	
			23	6.9

a From rating curve extended above 1,000 ft³/s on basis of slope-area measurement of peak flow.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)
NOV 03...	1030	1028	80020	30.0	3035	20	37	38	6.8	4.5	0.30	761
FEB 15...	1045	1028	80020	30.0	8010	70	28	38	7.1	0.0	0.30	742
MAY 10...	0945	1028	80020	30.0	3035	20	69	35	6.6	8.0	0.30	742
JUN 29...	0935	1028	80020	30.0	8010	70	42	35	7.0	13.5	0.30	735

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 μM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
NOV 03...	12.8	99	K 2	K 2	14	--	4.1	0.99	0.90	12	0.1	0.60
FEB 15...	15.1	106	<1	K 6	13	8	3.6	0.94	0.80	11	0.1	0.60
MAY 10...	11.7	101	E 3	15	13	9	3.6	0.93	0.70	11	0.1	0.70
JUN 29...	9.8	98	--	--	14	8	3.9	0.96	0.80	11	0.1	0.70

DATE	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
NOV 03...	5	4	5.8	8.2	1.3	0.1	4.1	28	24	--	--
FEB 15...	6	5	5.8	8.3	1.1	<0.10	3.6	22	23	0.03	1.65
MAY 10...	5	4	5.6	8.2	0.9	<0.10	3.7	25	22	0.03	4.68
JUN 29...	7	5	7.5	7.7	1.0	0.10	4.2	<1	24	0.03	2.72

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	0.270	<0.010	0.270	<0.010	<0.20	<0.010	<0.010	<0.010	1	0.10	67
FEB 15...	0.340	<0.010	0.340	<0.010	<0.20	<0.010	<0.010	<0.010	2	0.15	86
MAY 10...	0.290	<0.010	0.290	0.010	<0.20	0.010	<0.010	<0.010	3	0.56	50
JUN 29...	0.250	<0.010	0.250	<0.010	<0.20	<0.010	<0.010	<0.010	3	0.34	78

WEST BRANCH SUSQUEHANNA RIVER BASIN

01545600 YOUNG WOMANS CREEK NEAR RENOVO, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (μ G/L AS AL) (01106)	BARIUM, DIS- SOLVED (μ G/L AS BA) (01005)	COBALT, DIS- SOLVED (μ G/L AS CO) (01035)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	LITHIUM DIS- SOLVED (μ G/L AS LI) (01130)
NOV 03...	1030	37	10	33	<3	11	6
FEB 15...	1045	28	<10	32	<3	7	<4
MAY 10...	0945	69	30	33	<3	7	<4
JUN 29...	0935	42	<10	35	<3	20	<4

DATE	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (μ G/L AS V) (01085)
NOV 03...	4	<10	<1	<1	<1.0	27	<6
FEB 15...	<1	<10	<1	<1	<1.0	23	<6
MAY 10...	3	<10	<1	<1	<1.0	23	<6
JUN 29...	3	<10	<1	<1	<1.0	25	<6

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (μ G/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (μ G/L) (75990)
NOV 03...	1030	37	0.6	0.03	<0.00	<0.01	<1.0
MAY 10...	0945	69	0.7	0.04	<0.01	<0.01	<1.0

WEST BRANCH SUSQUEHANNA RIVER BASIN
01546400 SPRING CREEK AT HOUSEVILLE, PA

LOCATION--Lat 40°50'01", long 77°49'40", Centre County, Hydrologic Unit 02050204, on right bank 15 ft upstream from bridge on Township Route 365, 0.7 mi north of Houseville, 1.3 mi downstream from Slab Cabin Run, and 3.3 mi northeast of State College.

DRAINAGE AREA--58.5 mi².

PERIOD OF RECORD--November 1984 to current year.

GAGE--Water-stage recorder. Datum of gage is 926.63 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	24	102	46	67	85	405	114	53	34	32	49
2	27	22	93	46	61	82	408	95	51	33	33	47
3	25	20	83	46	59	e82	455	90	51	33	36	46
4	24	19	83	47	56	81	428	87	51	32	31	44
5	26	21	117	46	54	78	363	85	48	32	45	43
6	e24	19	96	45	52	72	325	84	64	36	35	42
7	e23	18	89	45	51	73	423	97	76	37	32	41
8	e23	17	83	45	50	91	321	126	43	32	30	41
9	e22	16	80	43	50	93	267	96	40	33	29	42
10	e22	16	106	42	47	117	276	93	38	31	28	39
11	e21	16	103	43	47	114	239	89	40	30	28	38
12	e24	16	91	42	46	109	273	99	39	29	30	37
13	e20	23	86	42	46	110	292	87	38	28	30	37
14	e18	28	83	42	45	136	278	82	36	57	45	36
15	e16	29	81	e39	45	195	246	79	34	36	31	36
16	14	26	76	e37	46	242	243	79	35	32	29	35
17	17	34	70	39	46	191	202	75	37	30	154	60
18	15	30	67	e37	47	164	172	73	41	29	259	58
19	16	28	67	e32	49	141	155	71	40	30	113	e50
20	19	28	63	37	71	129	142	68	40	49	85	e47
21	18	26	69	e35	182	152	132	65	50	48	77	e45
22	16	27	63	36	225	290	123	64	39	70	99	e42
23	15	27	59	35	183	443	115	61	38	50	75	e47
24	15	26	56	37	151	647	109	62	37	45	64	e42
25	15	25	56	41	129	734	104	77	38	38	60	e40
26	15	25	53	44	115	634	99	73	37	36	58	e40
27	15	47	51	41	100	652	95	64	39	36	55	e42
28	15	469	50	74	91	645	91	60	37	44	55	39
29	16	185	49	101	---	586	116	57	36	37	70	38
30	22	123	48	85	---	527	102	55	48	39	55	37
31	27	---	47	75	---	455	---	53	---	36	51	---
TOTAL	608	1430	2320	1445	2211	8150	6999	2460	1294	1162	1854	1280
MEAN	19.6	47.7	74.8	46.6	79.0	263	233	79.4	43.1	37.5	59.8	42.7
MAX	27	469	117	101	225	734	455	126	76	70	259	60
MIN	14	16	47	32	45	72	91	53	34	28	28	35
CFSM	.34	.81	1.28	.80	1.35	4.49	3.99	1.36	.74	.64	1.02	.73
IN.	.39	.91	1.48	.92	1.41	5.18	4.45	1.56	.82	.74	1.18	.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1994, BY WATER YEAR (WY)

	32.6	47.5	64.4	58.1	68.3	114	137	80.9	57.9	43.7	35.8	30.4
MEAN	32.6	47.5	64.4	58.1	68.3	114	137	80.9	57.9	43.7	35.8	30.4
MAX	107	82.3	138	117	114	263	404	126	142	94.1	59.8	42.7
(WY)	1991	1991	1991	1991	1986	1994	1993	1989	1989	1989	1994	1994
MIN	18.2	26.4	29.1	34.6	32.2	54.0	52.5	57.0	35.1	26.9	23.2	22.8
(WY)	1993	1992	1989	1992	1992	1990	1988	1986	1991	1988	1991	1992

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1985 - 1994

ANNUAL TOTAL	33589	31213	
ANNUAL MEAN	92.0	85.5	64.8
HIGHEST ANNUAL MEAN			89.7
LOWEST ANNUAL MEAN			42.4
HIGHEST DAILY MEAN	771	734	771
LOWEST DAILY MEAN	14	14	14
ANNUAL SEVEN-DAY MINIMUM	15	15	15
INSTANTANEOUS PEAK FLOW		800	835
INSTANTANEOUS PEAK STAGE		7.02	7.14
ANNUAL RUNOFF (CFSM)	1.57	1.46	1.11
ANNUAL RUNOFF (INCHES)	21.36	19.85	15.06
10 PERCENT EXCEEDS	222	176	114
50 PERCENT EXCEEDS	47	47	46
90 PERCENT EXCEEDS	22	24	23

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN
01546500 SPRING CREEK NEAR AXEMANN, PA

LOCATION.--Lat 40°53'23", Long 77°47'40", Centre County, Hydrologic Unit 02050204, on right bank at upstream side of bridge on SR 3001, 1.6 mi west of Axemann, 1.8 mi southwest of Bellefonte, and 2.5 mi upstream from Logan Branch.

DRAINAGE AREA.--87.2 mi².

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

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

REMARKS.--Records fair. Occasional regulation at low flow by fish hatchery and Rockview Penitentiary. Several measurements of water temperature were made during the year.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	66	157	75	102	125	507	191	105	73	63	93
2	55	61	144	74	92	124	509	166	101	70	63	88
3	52	53	133	74	90	125	550	159	100	69	68	85
4	52	52	129	79	84	121	528	155	99	69	63	83
5	51	55	168	74	82	113	465	153	94	69	79	82
6	46	55	146	72	80	107	423	151	109	69	68	81
7	46	50	137	74	77	103	501	155	137	79	63	80
8	46	49	131	72	77	123	413	204	104	69	62	79
9	45	48	127	68	73	127	357	163	95	68	61	81
10	44	46	151	68	68	148	359	157	93	68	60	80
11	44	46	155	70	67	149	338	154	92	66	58	77
12	47	46	139	70	64	144	366	163	96	64	58	76
13	44	51	133	67	63	145	389	151	93	63	63	75
14	42	63	129	67	61	168	387	144	89	88	79	75
15	42	63	127	e62	60	222	349	140	87	75	67	74
16	42	53	123	e60	59	308	343	140	87	67	61	73
17	48	60	115	e62	66	267	305	135	84	65	123	83
18	47	68	110	e58	73	243	275	133	81	64	368	121
19	43	58	109	e46	75	217	256	131	81	64	170	81
20	54	56	102	e56	90	200	238	127	80	63	138	78
21	49	54	107	e56	204	212	222	123	93	92	128	75
22	45	53	102	60	275	337	209	119	82	92	149	72
23	43	55	96	59	246	476	198	119	79	113	129	91
24	42	53	91	62	208	726	190	118	78	83	117	77
25	42	51	89	63	179	1040	182	136	77	74	111	74
26	41	49	84	70	162	794	176	131	74	71	107	75
27	40	62	82	63	143	804	171	122	76	69	104	79
28	41	499	81	93	132	824	163	115	74	78	102	73
29	42	269	79	142	---	707	188	112	73	68	121	73
30	48	190	78	125	---	636	177	109	87	70	104	69
31	70	---	76	112	---	563	---	106	---	66	96	---
TOTAL	1447	2434	3630	2253	3052	10398	9734	4382	2700	2258	3103	2403
MEAN	46.7	81.1	117	72.7	109	335	324	141	90.0	72.8	100	80.1
MAX	70	499	168	142	275	1040	550	204	137	113	368	121
MIN	40	46	76	46	59	103	163	106	73	63	58	69
CFSM	.54	.93	1.34	.83	1.25	3.85	3.72	1.62	1.03	.84	1.15	.92
IN.	.62	1.04	1.55	.96	1.30	4.44	4.15	1.87	1.15	.96	1.32	1.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1994, BY WATER YEAR (WY)

	MEAN	57.4	66.4	81.5	88.0	108	150	158	122	98.7	70.9	60.2	55.1
MAX	184	206	228	219	257	335	475	257	369	216	137	163	
(WY)	1980	1978	1951	1978	1984	1994	1993	1978	1972	1972	1984	1979	
MIN	26.1	26.0	22.8	23.3	38.1	36.5	49.6	50.5	41.1	28.0	24.4	24.9	
(WY)	1964	1966	1966	1966	1963	1969	1969	1969	1965	1965	1966	1965	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1941 - 1994

ANNUAL TOTAL	47166	47794	
ANNUAL MEAN	129	131	
HIGHEST ANNUAL MEAN			92.8
LOWEST ANNUAL MEAN			161
HIGHEST DAILY MEAN	965	Apr 1	2910
LOWEST DAILY MEAN	40	Oct 27	20
ANNUAL SEVEN-DAY MINIMUM	42	Oct 23	21
INSTANTANEOUS PEAK FLOW		1180	Mar 25
INSTANTANEOUS PEAK STAGE		4.69	Mar 25
INSTANTANEOUS LOW FLOW			c7.47
ANNUAL RUNOFF (CFSM)	1.48	1.50	9.6
ANNUAL RUNOFF (INCHES)	20.12	20.39	14.46
10 PERCENT EXCEEDS	277	244	164
50 PERCENT EXCEEDS	77	83	71
90 PERCENT EXCEEDS	48	52	40

a Also Jan 28, 29, 31, 1966.

b From rating curve extended above 1,400 ft³/s on basis of contracted-opening measurement of peak flow.

c In gage; 8.75 ft from outside floodmark.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN
01547100 SPRING CREEK AT MILESBERG, PA

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

DRAINAGE AREA.--142 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 696.42 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional regulation at low flow by fish hatchery and Rockview Penitentiary. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	164	321	177	224	270	898	392	e240	190	169	210
2	148	153	295	176	211	265	904	350	e235	187	170	201
3	145	150	274	176	208	266	984	341	e230	185	173	197
4	144	147	265	183	200	261	950	334	230	184	168	194
5	145	148	328	175	198	253	837	329	225	184	190	191
6	140	149	302	172	193	240	772	326	247	185	179	189
7	140	145	288	174	189	235	896	332	285	194	168	185
8	141	140	274	173	190	265	754	419	240	186	165	182
9	138	139	263	166	189	274	671	357	229	185	165	183
10	136	139	294	164	181	305	669	348	225	182	160	183
11	136	138	310	166	179	312	636	338	228	179	160	178
12	139	137	286	168	176	306	741	348	232	176	161	178
13	137	141	276	165	176	311	803	327	226	173	166	175
14	134	151	268	165	174	344	770	315	219	202	190	174
15	135	152	262	157	172	422	694	308	214	194	182	173
16	134	142	252	e150	174	527	659	306	213	178	166	171
17	141	151	238	e155	173	470	590	297	213	175	260	187
18	139	160	229	e150	175	434	538	289	208	174	632	244
19	138	152	227	e135	180	396	506	284	205	173	352	184
20	148	150	219	e150	212	370	475	277	203	169	300	180
21	146	147	222	e140	406	391	449	271	215	203	280	176
22	140	146	216	155	507	588	428	270	203	203	308	177
23	138	147	208	153	467	830	408	270	199	236	274	198
24	135	144	201	157	414	1270	392	270	198	194	255	180
25	134	140	196	162	367	1890	379	287	196	183	244	175
26	134	139	190	171	338	1400	367	e270	193	180	234	177
27	132	157	187	163	304	1410	355	e260	196	179	226	182
28	132	884	185	205	282	1450	343	e260	195	194	224	173
29	132	518	183	280	---	1250	382	e250	190	180	246	171
30	139	377	182	256	---	1120	369	e250	208	179	223	167
31	166	---	179	236	---	993	---	e245	---	173	214	---
TOTAL	4336	5747	7620	5375	6859	19118	18619	9520	6540	5759	7004	5535
MEAN	140	192	246	173	245	617	621	307	218	186	226	184
MAX	166	884	328	280	507	1890	984	419	285	236	632	244
MIN	132	137	179	135	172	235	343	245	190	169	160	167
CFSM	.99	1.35	1.73	1.22	1.73	4.34	4.37	2.16	1.54	1.31	1.59	1.30
IN.	1.14	1.51	2.00	1.41	1.80	5.01	4.88	2.49	1.71	1.51	1.83	1.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1994, BY WATER YEAR (WY)

	1970	1972	1983	1981	1969	1969	1969	1969	1969	1969	1968	1969
MEAN	170	187	221	217	268	336	350	267	246	194	169	157
MAX	375	421	414	443	500	617	825	507	729	434	357	348
(WY)	1980	1978	1978	1978	1984	1994	1993	1978	1972	1972	1984	1979
MIN	102	117	131	122	127	104	149	147	123	118	110	108
(WY)	1970	1972	1983	1981	1969	1969	1969	1969	1969	1969	1968	1969

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1967 - 1994
ANNUAL TOTAL	102189	102032	
ANNUAL MEAN	280	280	232
HIGHEST ANNUAL MEAN			350
LOWEST ANNUAL MEAN			128
HIGHEST DAILY MEAN	1600	1890	6000
LOWEST DAILY MEAN	132	132	82
ANNUAL SEVEN-DAY MINIMUM	134	134	87
INSTANTANEOUS PEAK FLOW		a2120	a8170
INSTANTANEOUS PEAK STAGE		7.79	b13.20
INSTANTANEOUS LOW FLOW			60
ANNUAL RUNOFF (CFSM)	1.97	1.97	1.63
ANNUAL RUNOFF (INCHES)	26.77	26.73	22.20
10 PERCENT EXCEEDS	528	468	367
50 PERCENT EXCEEDS	190	198	189
90 PERCENT EXCEEDS	140	145	128

a From rating curve extended above 900 ft³/s on basis of computation of peak discharge at dam.

b From peak-stage indicator.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01547200 BALD EAGLE CREEK BELOW SPRING CREEK AT MILESBERG, PA

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

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--October 1955 to current year. Prior to October 1967, published as North Bald Eagle Creek below Spring Creek at Milesburg.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	433	744	246	461	518	1770	858	291	233	184	269
2	212	340	e680	249	379	460	2140	734	281	217	185	250
3	196	304	e620	249	373	427	2620	652	276	211	190	241
4	179	284	e600	252	339	508	2300	599	271	209	182	234
5	175	290	e800	247	340	497	1790	563	265	208	219	227
6	167	322	e740	237	319	458	1720	539	294	208	223	223
7	163	285	e680	242	304	436	2390	549	417	217	190	215
8	160	258	e640	241	282	582	1600	1340	315	210	182	208
9	154	242	563	229	276	631	1280	935	281	207	178	206
10	151	231	770	220	270	742	1340	759	267	205	172	209
11	148	218	999	220	262	730	1290	653	278	195	170	200
12	151	208	781	224	259	674	2350	636	370	190	174	198
13	150	208	657	224	256	685	2240	570	311	186	183	192
14	146	270	582	227	251	821	1780	516	297	226	218	190
15	147	382	537	211	243	1210	1380	485	273	243	235	190
16	144	305	492	199	257	1570	1200	482	280	202	192	188
17	157	355	431	209	268	1130	1000	454	272	191	537	210
18	240	565	397	206	288	945	863	430	280	188	2210	366
19	200	442	399	e180	353	796	786	413	269	189	751	232
20	260	395	383	e180	607	709	712	392	250	183	541	208
21	311	332	388	e170	1770	876	652	373	266	231	504	199
22	281	294	380	e190	2150	2240	609	359	247	240	782	196
23	237	271	342	e190	1470	3160	573	347	235	286	617	231
24	214	256	311	206	1110	4480	548	335	231	226	479	214
25	200	239	301	236	863	4900	525	404	228	208	410	199
26	189	224	272	270	731	2800	504	413	224	200	368	199
27	182	375	257	277	594	3310	484	377	227	194	328	211
28	175	7410	274	360	539	3210	462	336	237	227	313	199
29	172	1900	251	772	---	2560	590	318	223	209	372	195
30	182	1040	258	652	---	2210	665	309	257	200	311	186
31	344	---	249	534	---	1870	---	300	---	190	281	---
TOTAL	6031	18678	15778	8349	15614	46145	38163	16430	8213	6529	11881	6485
MEAN	195	623	509	269	558	1489	1272	530	274	211	383	216
MAX	344	7410	999	772	2150	4900	2620	1340	417	286	2210	366
MIN	144	208	249	170	243	427	462	300	223	183	170	186
CFSM	.73	2.35	1.92	1.02	2.10	5.62	4.80	2.00	1.03	.79	1.45	.82
IN.	.85	2.62	2.21	1.17	2.19	6.48	5.36	2.31	1.15	.92	1.67	.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1994, BY WATER YEAR (WY)

	MEAN	253	324	396	359	528	776	723	499	364	252	219	200
MAX	950	811	956	812	1227	1489	2001	1162	1689	804	643	708	
(WY)	1977	1978	1973	1978	1984	1994	1993	1978	1972	1972	1956	1979	
MIN	89.8	94.3	103	141	147	255	276	257	131	102	101	84.3	
(WY)	1964	1965	1966	1981	1963	1969	1968	1965	1965	1965	1965	1965	

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1956 - 1994	
ANNUAL TOTAL	198183		198296		407	
ANNUAL MEAN	543		543		638	
HIGHEST ANNUAL MEAN					1978	
LOWEST ANNUAL MEAN					1965	
HIGHEST DAILY MEAN	7410	Nov 28	7410	Nov 28	15000	Jun 23 1972
LOWEST DAILY MEAN	135	Sep 20, 23	144	Oct 16	79	Sep 11 1965
ANNUAL SEVEN-DAY MINIMUM	137	Sep 14	148	Oct 10	80	Sep 17 1965
INSTANTANEOUS PEAK FLOW			a11900	Nov 28	a21300	Jun 23 1972
INSTANTANEOUS PEAK STAGE			8.94	Nov 28	b11.67	Jun 23 1972
INSTANTANEOUS LOW FLOW					50	Aug 3 1966
ANNUAL RUNOFF (CFSM)	2.05		2.05		1.54	
ANNUAL RUNOFF (INCHES)	27.82		27.84		20.86	
10 PERCENT EXCEEDS	1040		1120		793	
50 PERCENT EXCEEDS	271		284		259	
90 PERCENT EXCEEDS	151		189		133	

a From rating curve extended above 9,000 ft³/s.

b From floodmark in gage.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01547500 BALD EAGLE CREEK AT BLANCHARD, PA

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

DRAINAGE AREA.--339 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 579.79 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since March 1971 by Foster Joseph Sayers Dam (station 01547480). Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	460	2200	269	528	551	2410	838	300	273	227	314
2	1240	528	2480	269	427	519	2100	817	300	274	213	297
3	1210	405	2530	269	402	468	857	838	285	250	248	270
4	1220	318	2120	299	416	653	478	722	264	220	221	248
5	1360	304	1570	290	397	639	1270	594	261	212	204	235
6	1380	304	2000	269	376	522	1450	535	287	212	202	235
7	832	304	2150	269	322	492	763	583	435	216	200	233
8	294	304	1510	267	300	575	1260	1240	443	254	200	205
9	189	283	754	264	300	667	2220	1080	323	273	200	189
10	169	266	708	249	300	752	2190	865	304	273	189	189
11	148	252	1000	235	300	816	2560	705	327	261	182	189
12	140	243	975	235	300	816	1430	603	469	225	182	189
13	165	210	808	235	300	789	1120	516	392	211	180	189
14	182	259	710	235	282	852	2080	497	337	225	224	189
15	172	557	561	233	264	1240	2640	443	314	273	266	189
16	165	925	504	211	264	1860	2850	425	291	241	219	197
17	165	949	504	196	276	1590	3480	458	291	195	532	256
18	165	957	435	205	303	1110	3790	510	291	185	395	454
19	204	676	384	209	349	931	3990	510	291	184	1940	295
20	254	433	394	196	611	783	4110	456	284	173	1750	254
21	350	366	425	196	1290	871	4210	401	282	168	935	243
22	358	336	456	205	1820	1600	4280	364	282	198	1100	243
23	312	323	399	223	1800	1510	4290	340	250	299	908	243
24	217	286	351	235	1740	549	2130	337	231	308	596	243
25	182	273	318	245	1540	6.8	538	353	229	282	433	243
26	182	267	300	277	1120	458	462	458	227	282	378	243
27	182	265	258	316	767	377	467	470	227	247	378	243
28	182	303	235	458	576	512	454	346	227	227	350	243
29	182	484	252	730	---	1030	537	295	227	227	328	241
30	210	1730	268	889	---	1580	689	295	258	227	328	208
31	304	---	269	637	---	2170	---	297	---	227	328	---
TOTAL	13545	13570	27828	9315	17670	27288.8	61105	17191	8929	7322	14036	7209
MEAN	437	452	898	300	631	880	2037	555	298	236	453	240
MAX	1380	1730	2530	889	1820	2170	4290	1240	469	308	1940	454
MIN	140	210	235	196	264	6.8	454	295	227	168	180	189
MEAN‡	204	704	591	304	625	1742	1529	550	305	232	454	233
CFSM‡	.60	2.08	1.74	.90	1.84	5.14	4.51	1.62	.90	.68	1.34	.69
IN.‡	.69	2.32	2.01	1.04	1.92	5.93	5.03	1.87	1.00	.78	1.54	.77

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

WEST BRANCH SUSQUEHANNA RIVER BASIN

01547500 BALD EAGLE CREEK AT BLANCHARD, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	433	574	587	494	609	736	725	592	471	353	280	312
MAX	1012	1291	995	948	1450	1664	2095	1328	1184	1580	867	809
(WY)	1980	1978	1973	1978	1984	1979	1993	1978	1972	1972	1984	1979
MIN	165	188	204	133	275	238	208	213	195	162	148	167
(WY)	1983	1988	1990	1981	1993	1990	1976	1976	1991	1991	1991	1980

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1971 - 1994

ANNUAL TOTAL	234292.2		225008.8									
ANNUAL MEAN	642	‡641	616	‡622					513	‡515		
HIGHEST ANNUAL MEAN									764			1978
LOWEST ANNUAL MEAN									333			1992
HIGHEST DAILY MEAN			3810	May 3		4290	Apr 23		4730		Jun 29	1972
LOWEST DAILY MEAN			5.3	Mar 29a		6.8	Mar 25		5.3		Mar 29	1993a
ANNUAL SEVEN-DAY MINIMUM			136	Mar 28		162	Oct 11		71		Apr 20	1971
INSTANTANEOUS PEAK FLOW						b4360	Apr 23		b4890		Jun 28	1972
INSTANTANEOUS PEAK STAGE						8.46	Apr 23		9.37		Jun 28	1972
INSTANTANEOUS LOW FLOW									c.00			
ANNUAL RUNOFF (CFSM)			1.89	‡1.89		1.82	‡1.83		1.51		‡1.52	
ANNUAL RUNOFF (INCHES)			25.71	‡25.63		24.69	‡24.90		20.56		‡20.63	
10 PERCENT EXCEEDS			1750			1510			1050			
50 PERCENT EXCEEDS			304			314			337			
90 PERCENT EXCEEDS			165			198			168			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1970, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	287	330	318	506	855	797	547	289	212	201	178
MAX	534	557	686	547	909	1376	1392	1053	561	478	623	437
(WY)	1956	1960	1957	1960	1956	1964	1957	1960	1968	1956	1956	1956
MIN	105	102	109	161	158	304	318	289	137	105	100	99.8
(WY)	1965	1965	1966	1966	1963	1969	1968	1955	1965	1965	1966	1965

SUMMARY STATISTICS

WATER YEARS 1954 - 1970

ANNUAL MEAN	395											
HIGHEST ANNUAL MEAN	555				1956							
LOWEST ANNUAL MEAN	247				1965							
HIGHEST DAILY MEAN	7010			Mar 10	1964							
LOWEST DAILY MEAN	90			Sep 11, 13	1966							
ANNUAL SEVEN-DAY MINIMUM	93			Sep 7	1966							
INSTANTANEOUS PEAK FLOW	b10100			Mar 10	1964							
INSTANTANEOUS PEAK STAGE	11.59			Mar 10	1964							
ANNUAL RUNOFF (CFSM)	1.16											
ANNUAL RUNOFF (INCHES)	15.82											
10 PERCENT EXCEEDS	834											
50 PERCENT EXCEEDS	235											
90 PERCENT EXCEEDS	124											

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

a Also Mar. 31 and Apr. 1.

b From rating curve extended above 4,100 ft³/s.

c No flow parts of June 16, Nov. 10, 1970, due to construction of dam; May 12, 18, 19, 1976; Mar. 6, 1979, result of shutoff at dam.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01547700 MARSH CREEK AT BLANCHARD, PA

LOCATION.--Lat 41°03'34", long 77°36'22", Centre County, Hydrologic Unit 02050204, on right bank 20 ft downstream from highway bridge on SR 1002, 0.5 mi southwest of Blanchard, 0.6 mi downstream from bridge on State Highway 150, and 0.6 mi upstream from mouth.

DRAINAGE AREA.--44.1 mi².

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

REVISED RECORDS.--WDR PA-72-1: 1971 (runoff in CFSM and inches).

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	67	198	e32	112	93	295	128	16	13	9.4	29
2	14	50	152	e32	e96	e90	379	128	14	10	8.9	23
3	14	46	132	e31	e92	e110	533	115	13	10	14	20
4	12	43	132	e29	e86	e120	482	101	12	9.1	9.1	18
5	11	46	234	e24	e80	107	340	87	12	9.2	19	17
6	10	53	217	e22	72	75	317	78	13	20	16	15
7	9.2	56	187	e21	63	62	468	75	19	28	11	14
8	8.6	52	153	e20	52	82	313	161	13	31	9.0	12
9	8.2	46	129	e18	e48	94	226	149	11	18	8.4	11
10	7.8	41	193	e16	e45	126	230	133	10	13	7.5	11
11	7.3	36	260	e15	e45	126	206	111	12	10	6.7	9.6
12	7.4	32	215	e16	e47	118	462	102	76	8.5	7.4	8.9
13	7.7	32	173	e16	e48	119	508	81	35	7.5	11	8.3
14	7.0	48	144	e17	46	146	368	67	34	10	16	7.5
15	6.8	85	126	e15	41	217	262	61	25	15	16	7.5
16	6.5	69	109	e14	47	284	206	66	35	9.1	9.6	7.4
17	9.8	76	90	e15	44	224	154	52	49	7.0	152	23
18	15	88	80	e15	46	182	124	46	40	6.6	646	61
19	11	80	78	e14	57	148	108	41	36	7.9	277	19
20	24	78	72	e12	102	129	93	37	30	5.6	176	14
21	29	65	75	e11	e310	172	80	34	29	6.7	146	11
22	30	54	70	e12	e380	471	70	31	28	47	173	10
23	28	49	62	e13	325	672	63	28	21	56	142	17
24	27	45	56	e14	246	893	58	26	19	27	112	12
25	25	40	55	e17	182	974	54	33	18	21	94	10
26	23	35	47	e20	148	575	50	31	16	16	80	11
27	22	64	e35	e30	123	590	46	27	14	13	60	12
28	20	1650	e37	e45	110	574	41	22	15	23	50	9.8
29	18	582	e35	179	---	483	58	19	13	15	50	9.9
30	20	304	e33	147	---	399	57	18	21	13	36	8.4
31	48	---	e30	122	---	313	---	17	---	11	32	---
TOTAL	503.3	4012	3609	1004	3093	8768	6651	2105	699	497.2	2405.0	447.3
MEAN	16.2	134	116	32.4	110	283	222	67.9	23.3	16.0	77.6	14.9
MAX	48	1650	260	179	380	974	533	161	76	56	646	61
MIN	6.5	32	30	11	41	62	41	17	10	5.6	6.7	7.4
CFSM	.37	3.03	2.64	.73	2.50	6.41	5.03	1.54	.53	.36	1.76	.34
IN.	.42	3.38	3.04	.85	2.61	7.40	5.61	1.78	.59	.42	2.03	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1994, BY WATER YEAR (WY)

	MEAN	27.5	51.4	67.6	51.2	87.1	137	118	72.9	49.0	23.4	18.0	16.4
MAX	154	151	252	134	267	283	337	171	344	170	77.6	91.2	
(WY)	1991	1978	1973	1979	1984	1994	1993	1978	1972	1972	1994	1975	
MIN	1.08	1.94	4.72	4.01	14.0	32.5	29.9	20.1	5.37	1.18	.61	.25	
(WY)	1965	1965	1966	1981	1963	1969	1968	1977	1991	1965	1966	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1956 - 1994

ANNUAL TOTAL	31442.4	33793.8	
ANNUAL MEAN	86.1	92.6	59.7
HIGHEST ANNUAL MEAN			102
LOWEST ANNUAL MEAN			28.6
HIGHEST DAILY MEAN	1650	1650	3800
LOWEST DAILY MEAN	1.5	5.6	.00
ANNUAL SEVEN-DAY MINIMUM	1.7	7.2	.07
INSTANTANEOUS PEAK FLOW		3100	a6900
INSTANTANEOUS PEAK STAGE		5.79	7.85
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	1.95	2.10	1.35
ANNUAL RUNOFF (INCHES)	26.52	28.51	18.41
10 PERCENT EXCEEDS	195	225	143
50 PERCENT EXCEEDS	27	40	26
90 PERCENT EXCEEDS	3.2	9.7	4.0

a From rating curve extended above 4,900 ft³/s.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01547950 BEECH CREEK AT MONUMENT, PA

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

DRAINAGE AREA.--152 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 741.60 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	161	1020	e150	373	354	1130	418	132	97	53	221
2	82	142	812	e150	e290	333	1390	413	125	85	123	193
3	78	147	695	e140	e280	e330	2110	413	118	87	219	172
4	71	158	642	e130	e290	317	2310	402	110	78	127	157
5	69	215	810	e110	e290	287	1880	377	104	72	137	146
6	62	261	755	e100	273	252	1770	359	103	79	133	135
7	57	267	708	e100	250	232	2150	344	160	151	102	127
8	54	255	631	e90	e210	279	1710	537	118	293	89	117
9	52	237	559	e80	e210	310	1360	478	104	210	80	109
10	51	217	662	e70	e190	349	1330	471	95	172	73	109
11	48	200	831	e70	e200	345	1280	441	105	144	66	97
12	47	184	764	e72	e210	330	1570	423	362	123	66	90
13	47	176	690	e74	e200	333	1760	377	271	107	65	84
14	45	216	617	e78	186	395	1510	335	353	107	96	80
15	43	344	557	e70	170	511	1210	309	337	112	108	79
16	41	297	491	e64	193	680	1040	327	434	94	73	76
17	63	316	419	e70	170	648	844	284	470	79	190	91
18	110	409	375	e70	172	600	701	257	374	74	2470	232
19	91	393	355	e64	198	524	611	239	316	71	1540	116
20	146	394	326	e58	285	462	534	223	255	63	1080	92
21	155	354	313	e54	e500	479	468	207	228	69	937	81
22	157	314	286	e60	e680	808	415	194	203	87	913	76
23	147	279	257	e66	e660	1180	371	182	170	105	755	106
24	140	255	230	e74	e620	1780	338	172	156	73	628	94
25	133	233	220	e100	e560	2380	310	218	146	68	539	80
26	124	211	201	e150	e500	1840	284	203	129	63	467	80
27	118	274	e160	e200	443	1740	261	189	122	55	388	86
28	113	3680	e170	e300	390	1800	238	164	125	115	339	80
29	105	2260	e140	608	---	1630	270	153	110	86	338	87
30	107	1410	e130	472	---	1430	289	145	113	68	273	76
31	146	---	e130	406	---	1220	---	138	---	59	242	---
TOTAL	2800	14259	14956	4300	8993	24158	31444	9392	5948	3146	12709	3369
MEAN	90.3	475	482	139	321	779	1048	303	198	101	410	112
MAX	157	3680	1020	608	680	2380	2310	537	470	293	2470	232
MIN	41	142	130	54	170	232	238	138	95	55	53	76
CFSM	.59	3.13	3.17	.91	2.11	5.13	6.90	1.99	1.30	.67	2.70	.74
IN.	.69	3.49	3.66	1.05	2.20	5.91	7.70	2.30	1.46	.77	3.11	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1994, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	150	262	309	235	336	494	524	333	273	175	104	105														
MAX	620	673	621	585	809	949	1353	709	895	621	410	509														
(WY)	1991	1971	1973	1979	1981	1979	1993	1978	1972	1972	1994	1975														
MIN	21.8	41.2	71.6	54.9	73.8	167	213	112	48.0	27.8	17.8	20.9														
(WY)	1992	1992	1990	1981	1980	1969	1988	1976	1991	1991	1991	1991														

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1969 - 1994

ANNUAL TOTAL	124220	135474	
ANNUAL MEAN	340	371	
HIGHEST ANNUAL MEAN			274
LOWEST ANNUAL MEAN			385
HIGHEST DAILY MEAN	3680	Nov 28	7490
LOWEST DAILY MEAN	20	Jul 24-26, 28	8.3
ANNUAL SEVEN-DAY MINIMUM	21	Jul 22	9.9
INSTANTANEOUS PEAK FLOW			a4780
INSTANTANEOUS PEAK STAGE			11.62
ANNUAL RUNOFF (CFSM)	2.24		15.22
ANNUAL RUNOFF (INCHES)	30.40		24.51
10 PERCENT EXCEEDS	811		592
50 PERCENT EXCEEDS	142		170
90 PERCENT EXCEEDS	27		44

a From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow.
e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01548005 BALD EAGLE CREEK NEAR BEECH CREEK STATION, PA

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

DRAINAGE AREA.--562 mi².

PERIOD OF RECORD.--July 1910 to current year. Prior to October 1967, published as North Bald Eagle Creek at Beech Creek Station, and prior to October 1984 as Bald Eagle Creek at Beech Creek Station.

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since March 1971 by Foster Joseph Sayers Dam (station 01547480). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	689	3630	475	887	1000	4220	1430	463	401	301	568
2	1420	730	3590	490	e680	954	4320	1400	462	390	304	516
3	1390	603	3520	470	e640	912	4260	1410	434	369	507	461
4	1390	512	3020	495	e660	1040	4110	1260	394	328	381	423
5	1500	529	2780	456	e650	1040	4190	1080	390	312	367	401
6	1510	594	3040	409	626	850	4230	991	411	327	371	388
7	970	607	3130	428	560	796	4150	972	603	369	335	371
8	364	603	2390	e400	515	924	4420	1990	601	563	315	347
9	238	556	1450	e380	e480	1080	4480	1800	458	506	312	319
10	213	513	1550	e350	e480	1250	4160	1530	420	464	294	309
11	190	482	2190	358	483	1330	4460	1290	435	425	273	305
12	181	458	2030	379	485	1300	4100	1140	e600	372	272	295
13	202	415	1690	384	485	1260	4110	986	e800	342	272	289
14	224	501	1470	392	465	1420	4550	914	733	348	327	e290
15	213	976	1230	e380	431	2030	4620	827	667	408	406	e290
16	200	1370	1080	e350	449	2910	4470	823	721	365	326	e300
17	210	1400	988	e320	451	2600	4870	801	812	300	675	e370
18	266	1540	873	e350	482	1970	5000	831	712	280	4180	e600
19	288	1220	797	e370	550	1660	5100	808	e640	281	4400	e450
20	392	926	786	e350	853	1390	5070	743	e600	266	3230	366
21	506	797	801	e340	2110	1550	5070	668	e540	260	2060	342
22	525	702	809	e350	3250	3140	5050	615	520	332	2270	334
23	471	655	712	e370	3110	3820	5030	577	456	463	1870	360
24	373	583	638	e390	2800	3920	2850	560	408	422	1340	362
25	320	538	595	e390	2420	4520	948	610	404	378	1090	347
26	313	506	e540	e410	1860	3590	825	699	390	368	1010	348
27	305	539	e500	e430	1360	3400	794	714	375	331	847	350
28	302	7420	e500	e500	1070	3520	757	567	375	347	746	346
29	290	4560	e480	1210	---	3800	862	493	372	345	712	349
30	312	3880	e500	1380	---	3920	1080	479	403	321	643	318
31	485	---	496	1040	---	4090	---	475	---	311	597	---
TOTAL	16993	35404	47805	14796	29292	66986	112156	29483	15599	11294	31033	11114
MEAN	548	1180	1542	477	1046	2161	3739	951	520	364	1001	370
MAX	1510	7420	3630	1380	3250	4520	5100	1990	812	563	4400	600
MIN	181	415	480	320	431	796	757	475	372	260	272	289
MEAN [‡]	315	1432	1235	481	1040	3023	3231	946	527	360	1002	363
CFSM [‡]	.56	2.55	2.20	.86	1.85	5.38	5.75	1.68	.94	.64	1.78	.65
IN. [‡]	.65	2.85	2.54	.99	1.93	6.20	6.42	1.94	1.05	.74	2.05	.73

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

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01548005 BALD EAGLE CREEK NEAR BEECH CREEK STATION, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	661	976	1080	869	1169	1567	1490	1059	904	597	421	470
MAX	1907	2374	2158	1896	2926	3396	3945	2540	3076	2633	1239	1443
(WY)	1980	1978	1973	1979	1984	1979	1993	1978	1972	1972	1984	1975
MIN	212	309	339	207	398	492	495	387	271	204	174	203
(WY)	1981	1992	1990	1981	1980	1990	1976	1976	1991	1991	1991	1980

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1971 - 1994

ANNUAL TOTAL	401366			421955								
ANNUAL MEAN	1100	‡1099		1156	‡1162					937	‡939	
HIGHEST ANNUAL MEAN										1396		1978
LOWEST ANNUAL MEAN										591		1992
HIGHEST DAILY MEAN	7420			Nov 28		7420		Nov 28		16600		Jun 23 1972
LOWEST DAILY MEAN	166			Sep 23-25		181		Oct 12		124		Aug 20 1971
ANNUAL SEVEN-DAY MINIMUM	167			Sep 19		203		Oct 11		134		Sep 1 1971
INSTANTANEOUS PEAK FLOW						9960		Nov 28		ab19400		Jun 23 1972
INSTANTANEOUS PEAK STAGE						14.30		Nov 28		14.30		Nov 28 1993
ANNUAL RUNOFF (CFSM)	1.96	‡1.96				2.06		‡2.07		1.67	‡1.67	
ANNUAL RUNOFF (INCHES)	26.57	‡26.53				27.93		‡28.09		22.65	‡22.69	
10 PERCENT EXCEEDS	3660					3590				2050		
50 PERCENT EXCEEDS	506					577				571		
90 PERCENT EXCEEDS	193					313				241		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1970, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	376	589	667	799	911	1664	1521	1187	644	354	283	283
MAX	1941	2026	1806	2131	2499	4958	3142	2585	3966	1268	997	1723
(WY)	1912	1951	1928	1949	1915	1936	1940	1919	1916	1928	1956	1911
MIN	113	107	121	108	218	500	458	291	220	132	126	117
(WY)	1931	1931	1931	1931	1931	1931	1925	1941	1965	1965	1966	1932

SUMMARY STATISTICS

WATER YEARS 1910 - 1970

ANNUAL MEAN	772											
HIGHEST ANNUAL MEAN	1236											1928
LOWEST ANNUAL MEAN	447											1965
HIGHEST DAILY MEAN	18600				Jun 17							1916
LOWEST DAILY MEAN	80			Jan 16, 24, 25								1931
ANNUAL SEVEN-DAY MINIMUM	89			Jan 21								1931
INSTANTANEOUS PEAK FLOW	a25600			Mar 18								1936
INSTANTANEOUS PEAK STAGE	b14.42			Mar 18								1936
INSTANTANEOUS LOW FLOW	29			Aug 22								1930
ANNUAL RUNOFF (CFSM)	1.37											
ANNUAL RUNOFF (INCHES)	18.66											
10 PERCENT EXCEEDS	1690											
50 PERCENT EXCEEDS	429											
90 PERCENT EXCEEDS	161											

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

a From rating curve extended above 12,000 ft³/s.

b Site and datum in use before October 1984.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01548500 PINE CREEK AT CEDAR RUN, PA

LOCATION.--Lat 41°31'18", long 77°26'52", Lycoming County, Hydrologic Unit 02050205, on left bank at upstream side of highway bridge on Township Route 762 at village of Cedar Run, 2,000 ft downstream from Cedar Run, and 1.2 mi upstream from Gamble Run.

DRAINAGE AREA.--604 mi².

PERIOD OF RECORD.--July 1918 to current year. Prior to October 1918 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 780.36 ft above sea level. Prior to Feb. 13, 1930, nonrecording gage at same site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541	460	3070	e310	e1100	e820	3540	1050	422	959	559	1600
2	461	409	2270	e300	e800	e740	4720	1070	396	786	462	1270
3	439	398	1890	e280	e780	e700	7250	1060	326	663	423	1050
4	375	453	1670	e260	e760	e780	7760	1040	309	556	369	879
5	361	798	2050	e300	e720	e700	6200	989	289	476	385	751
6	321	1410	1750	e270	e700	e660	6160	917	276	514	396	658
7	282	1340	1680	e250	e600	e680	7040	829	346	926	305	581
8	262	1200	1530	e250	e520	e800	5460	900	275	1470	265	506
9	243	1040	1370	e250	e600	e760	4250	795	242	949	239	450
10	238	894	1450	e260	e660	e900	4350	695	213	905	219	402
11	218	769	1980	e270	e620	e1200	4710	631	249	717	202	361
12	199	678	1600	e280	e580	e1000	4450	612	1600	598	209	332
13	192	594	1490	e270	e540	e1100	4910	576	1260	513	267	307
14	180	619	1380	e250	e520	e1500	5270	515	5590	633	2770	286
15	169	1040	1270	e240	e500	e1700	4430	478	4220	615	3440	275
16	158	892	1140	e250	e500	e2100	3940	521	2920	499	2310	263
17	172	1410	968	e260	e470	1680	3160	487	2420	418	1940	251
18	376	4240	852	e240	e470	1490	2460	439	1610	378	21300	297
19	351	3910	820	e230	e600	1350	2050	413	1200	464	10500	261
20	468	2930	781	e220	e2000	1180	1710	389	923	379	5440	222
21	593	2080	756	e230	e4000	1170	1430	358	777	331	4530	200
22	939	1600	720	e240	e3500	2050	1220	330	677	363	3840	187
23	875	1300	630	e270	e2500	3370	1060	310	535	637	2990	244
24	783	1110	e500	e300	e1900	6170	953	294	543	583	2250	280
25	676	951	e460	e330	e1600	8970	854	319	3140	667	2160	222
26	572	804	e390	e450	e1300	6150	773	428	2020	876	4170	216
27	495	769	e340	e600	e1100	5070	734	420	1440	686	2490	373
28	445	12500	e370	e1400	e900	4750	643	345	2110	1200	1990	332
29	398	8410	e340	e3000	---	4340	613	317	1410	1080	3350	276
30	364	4960	e330	e2000	---	3920	671	293	1200	884	2390	251
31	401	---	e320	e1500	---	3430	---	273	---	714	1910	---
TOTAL	12547	59968	36167	15560	30840	71230	102771	18093	38938	21439	84070	13583
MEAN	405	1999	1167	502	1101	2298	3426	584	1298	692	2712	453
MAX	939	12500	3070	3000	4000	8970	7760	1070	5590	1470	21300	1600
MIN	158	398	320	220	470	660	613	273	213	331	202	187
CFSM	.67	3.31	1.93	.83	1.82	3.80	5.67	.97	2.15	1.15	4.49	.75
IN.	.77	3.69	2.23	.96	1.90	4.39	6.33	1.11	2.40	1.32	5.18	.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1994, BY WATER YEAR (WY)

	MEAN	356	739	832	801	894	1881	2010	1258	631	290	232	207
MAX	2910	3077	2260	2741	3090	6362	5678	3580	3601	1160	2712	2458	
(WY)	1991	1951	1928	1937	1981	1936	1993	1919	1972	1928	1994	1975	
MIN	28.9	41.3	65.4	47.6	119	590	374	238	90.4	50.2	32.6	19.3	
(WY)	1965	1931	1961	1931	1920	1981	1946	1941	1991	1966	1939	1964	

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1919 - 1994
ANNUAL TOTAL	444989	505206	
ANNUAL MEAN	1219	1384	
HIGHEST ANNUAL MEAN			843
LOWEST ANNUAL MEAN			1400
HIGHEST DAILY MEAN	16000	21300	42600
LOWEST DAILY MEAN	43	158	8.0
ANNUAL SEVEN-DAY MINIMUM	47	184	11
INSTANTANEOUS PEAK FLOW		a30100	a66000
INSTANTANEOUS PEAK STAGE		11.31	b16.00
INSTANTANEOUS LOW FLOW			8.0
ANNUAL RUNOFF (CFSM)	2.02	2.29	1.40
ANNUAL RUNOFF (INCHES)	27.41	31.12	18.97
10 PERCENT EXCEEDS	3680	3660	2040
50 PERCENT EXCEEDS	370	700	396
90 PERCENT EXCEEDS	80	260	65

a From rating curve extended above 16,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmark.

c Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01549500 BLOCKHOUSE CREEK NEAR ENGLISH CENTER, PA

LOCATION.--Lat 41°28'25", long 77°13'52", Lycoming County, Hydrologic Unit 02050205, on right bank just downstream from bridge on State Highway 284, 0.7 mi upstream from Blacks Creek, 1.7 mi upstream from confluence with Texas Creek, and 5.0 mi northeast of English Center.

DRAINAGE AREA.--37.7 mi².

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

REVISED RECORDS.--WSP 951: 1941. WSP 1031: 1942-44(M). WSP 1502: 1942. WDR PA-75-2: 1973(P), 1974(P).

GAGE.--Water-stage recorder. Datum of gage is 1,041.85 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 9.0 ft, from floodmark, discharge, 5,780 ft³/s, from rating curve extended above 1,200 ft³/s on basis of contracted-opening measurement at gage height 8.81 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	38	158	e21	e68	e60	361	81	14	22	53	75
2	18	31	114	e19	e50	e55	520	62	13	17	47	63
3	21	32	98	e17	e46	e50	750	58	12	16	41	55
4	16	38	93	e16	e45	e58	701	54	11	14	37	48
5	17	82	164	e20	e43	e54	557	51	11	14	57	43
6	13	106	113	e17	e42	e52	561	47	11	29	46	38
7	11	85	104	e15	e38	e48	673	44	16	38	37	34
8	10	66	90	e15	e32	62	462	55	12	28	34	31
9	9.3	55	78	e16	e37	56	352	45	11	29	33	28
10	8.9	48	143	e16	e41	84	416	39	9.9	33	31	26
11	7.6	43	155	e18	e39	e72	404	36	13	25	27	23
12	7.3	39	109	e19	e36	e64	422	36	69	21	26	21
13	7.5	35	97	e19	e34	66	475	33	26	20	58	19
14	6.0	44	85	e17	e32	83	447	30	111	24	222	18
15	5.6	53	77	e14	e31	116	339	29	39	28	147	17
16	5.1	42	69	e12	e30	130	306	29	112	21	108	16
17	8.1	61	59	e13	e29	e94	193	27	101	17	299	17
18	18	142	54	e13	e29	88	136	25	46	17	2240	39
19	13	98	53	e12	e38	75	108	23	35	18	661	21
20	37	88	50	e11	e120	69	87	21	28	15	341	16
21	34	68	53	e10	e220	79	71	19	26	15	334	14
22	33	57	49	e13	e190	179	61	18	23	82	230	12
23	28	50	44	e14	e160	335	53	17	19	157	153	39
24	25	45	e40	e16	e130	596	48	16	39	95	111	26
25	23	40	e35	e17	e99	741	45	20	101	90	151	21
26	21	35	e32	e18	e70	521	41	19	39	68	133	26
27	19	38	e29	e20	e64	489	41	20	33	54	100	80
28	18	1190	e27	e35	e62	466	35	16	31	118	102	47
29	16	512	e26	e140	---	419	40	15	26	74	268	47
30	17	266	e23	e90	---	361	40	14	25	79	110	41
31	32	---	e21	e80	---	309	---	13	---	62	89	---
TOTAL	525.4	3527	2342	773	1855	5931	8745	1012	1062.9	1340	6326	1001
MEAN	16.9	118	75.5	24.9	66.2	191	291	32.6	35.4	43.2	204	33.4
MAX	37	1190	164	140	220	741	750	81	112	157	2240	80
MIN	5.1	31	21	10	29	48	35	13	9.9	14	26	12
CFSM	.45	3.12	2.00	.66	1.76	5.07	7.73	.87	.94	1.15	5.41	.89
IN.	.52	3.48	2.31	.76	1.83	5.85	8.63	1.00	1.05	1.32	6.24	.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1994, BY WATER YEAR (WY)

	MEAN	31.9	60.9	66.7	52.7	67.4	126	128	79.6	43.3	19.7	15.7	15.6
MAX	194	195	184	146	268	260	429	211	303	74.7	204	115	
(WY)	1991	1978	1974	1979	1981	1945	1993	1946	1972	1990	1994	1975	
MIN	1.36	3.61	6.72	6.18	12.8	16.5	24.8	15.7	5.42	1.98	1.21	.43	
(WY)	1965	1965	1965	1981	1941	1969	1946	1941	1991	1955	1966	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1941 - 1994

ANNUAL TOTAL	30000.9	34440.3	
ANNUAL MEAN	82.2	94.4	58.9
HIGHEST ANNUAL MEAN			104
LOWEST ANNUAL MEAN			26.3
HIGHEST DAILY MEAN	1190	Nov 28	3180
LOWEST DAILY MEAN	1.3	Jul 25, 26, Aug 10	.00
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 22	.19
INSTANTANEOUS PEAK FLOW			b4900
INSTANTANEOUS PEAK STAGE			8.41
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	2.18	2.50	1.56
ANNUAL RUNOFF (INCHES)	29.60	33.98	21.22
10 PERCENT EXCEEDS	222	221	134
50 PERCENT EXCEEDS	23	40	27
90 PERCENT EXCEEDS	2.8	14	3.9

a Also Aug. 31, Sept. 1, 2, 1962.

b From rating curve extended above 1,200 ft³/s on basis of contracted-opening measurement at gage height 8.81 ft.

c Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA

LOCATION.--Lat 41°16'25", long 77°19'28", Lycoming County, Hydrologic Unit 02050205, on left bank on State Highway 44, on abutment of abandoned bridge 0.9 mi downstream from Ramsey Run, 4.0 mi downstream from Little Pine Creek, 4.0 mi south of Waterville, and 9.2 mi upstream from mouth.

DRAINAGE AREA.--944 mi².

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

REVISED RECORDS.--WDR PA-72-1: 1964(P).

GAGE.--Water-stage recorder. Datum of gage is 570.62 ft above sea level. Prior to June 16, 1982, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flood flows subject to regulation by Little Pine Dam 8.5 mi upstream, capacity 24,900 acre-ft. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	667	724	6260	e490	e1800	e1500	5560	1380	438	1210	1140	2130
2	564	704	3760	e470	e1300	e1400	7240	1840	628	996	930	1710
3	513	659	2990	e440	e1300	e1200	11500	1720	481	847	818	1400
4	472	673	2550	e420	e1200	e1300	13300	1690	439	730	732	1200
5	414	868	3150	e470	e1200	e1200	10900	1650	415	657	704	1040
6	402	1850	3010	e440	e1200	e1100	10600	1460	395	981	762	918
7	352	1940	2810	e410	e1000	e1050	11900	1320	465	1250	631	831
8	314	1720	2530	e410	e860	e1100	9990	1370	467	1810	524	719
9	295	1480	2220	e410	e970	e1200	7960	1330	375	1410	471	659
10	e290	1290	2170	e420	e1050	e1300	7480	1140	330	1280	429	616
11	e270	1140	3340	e430	e1000	e2000	7950	1040	319	1040	396	553
12	e240	1020	2950	e440	e960	e1900	7310	991	1850	870	370	498
13	e230	916	2660	e440	e920	e1800	8180	948	1820	763	401	468
14	e220	864	2380	e410	e860	2150	8820	872	5980	791	2320	440
15	e210	1310	2120	e380	e840	2680	7410	815	5700	872	4990	419
16	241	1260	1870	e400	e850	3370	6280	824	3610	789	3230	410
17	241	1240	1610	e420	e780	2870	5170	812	3580	679	2470	398
18	326	5750	1400	e390	e740	2530	3940	735	2330	581	29800	495
19	481	5210	1310	e370	e920	2270	3260	689	1730	698	18600	475
20	564	4050	1230	e350	e2000	1970	2730	660	1340	716	10300	376
21	754	2950	1170	e370	e5000	1920	2280	614	1110	612	8090	325
22	1100	2250	1150	e400	e4700	2910	1950	567	1010	614	7320	309
23	1130	1830	1020	e430	e3800	5050	1700	529	815	1160	5070	364
24	1040	1560	e820	e470	e2900	9470	1520	495	738	1280	3350	470
25	933	1350	e750	e500	e2500	14600	1380	515	3210	1330	2580	404
26	824	1160	e700	e700	e2000	11100	1250	601	2700	2260	5080	362
27	750	1080	e600	e920	e1800	9120	1160	679	1830	1620	3240	477
28	687	17700	e620	e1500	e1600	8620	1050	572	2220	1980	2630	610
29	622	15000	e600	e3900	---	7810	969	508	1750	2320	3990	504
30	537	9070	e520	e3100	---	6880	1060	467	1460	1780	3140	455
31	567	---	e520	e2600	---	5830	---	439	---	1510	2480	---
TOTAL	16250	88618	60790	23300	46050	119200	171799	29272	49535	35436	126988	20035
MEAN	524	2954	1961	752	1645	3845	5727	944	1651	1143	4096	668
MAX	1130	17700	6260	3900	5000	14600	13300	1840	5980	2320	29800	2130
MIN	210	659	520	350	740	1050	969	439	319	581	370	309
CFSM	.56	3.13	2.08	.80	1.74	4.07	6.07	1.00	1.75	1.21	4.34	.71
IN.	.64	3.49	2.40	.92	1.81	4.70	6.77	1.15	1.95	1.40	5.00	.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1994, BY WATER YEAR (WY)

	MEAN	673	1245	1490	1171	1664	2950	3381	1879	1200	562	450	439
MAX	4597	4337	3860	3847	5148	6840	9683	3919	6070	2423	4096	4053	
(WY)	1991	1978	1974	1979	1981	1964	1993	1960	1972	1972	1994	1975	
MIN	46.7	66.3	107	93.7	410	850	1171	446	153	73.4	51.7	30.4	
(WY)	1964	1965	1961	1961	1987	1969	1988	1985	1991	1964	1966	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1958 - 1994

ANNUAL TOTAL	715267	787273		
ANNUAL MEAN	1960	2157		
HIGHEST ANNUAL MEAN			1422	
LOWEST ANNUAL MEAN			2379	1978
HIGHEST DAILY MEAN	24900	Apr 1	75000	Jun 23 1972
LOWEST DAILY MEAN	64	Jul 26-28, Aug 9	25	Sep 25 1964
ANNUAL SEVEN-DAY MINIMUM	68	Jul 24	26	Sep 21 1964
INSTANTANEOUS PEAK FLOW		b43100	Aug 18	Jun 23 1972
INSTANTANEOUS PEAK STAGE		13.02	Aug 18	Jun 23 1972
INSTANTANEOUS LOW FLOW			25	Sep 25 1964d
ANNUAL RUNOFF (CFSM)	2.08	2.28	1.51	
ANNUAL RUNOFF (INCHES)	28.19	31.02	20.47	
10 PERCENT EXCEEDS	6090	5350	3400	
50 PERCENT EXCEEDS	580	1100	670	
90 PERCENT EXCEEDS	112	410	112	

a Computed using estimated daily discharges.³

b From rating curve extended above 22,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmark.

d Also Sept. 26, 27, 1964.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01551500 WEST BRANCH SUSQUEHANNA RIVER AT WILLIAMSPORT, PA

LOCATION.--Lat 41°14'10", long 76°59'49", Lycoming County, Hydrologic Unit 02050206, on right bank 100 ft upstream from Market Street bridge at South Williamsport, and 350 ft upstream from Hagermans Run.

DRAINAGE AREA.--5,682 mi².

PERIOD OF RECORD.--March 1895 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1925-28. WSP 1502: 1895-1904, 1912-13, 1919.

GAGE.--Water-stage recorder. Datum of gage is 494.98 ft above sea level.

Mar. 1, 1895, to Sept. 30, 1928, nonrecording gage at bridge 100 ft downstream at same datum. Prior to July 1980, 100 ft downstream on left bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 6 flood-control reservoirs which have a combined capacity of 440,200 acre-ft. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1895, 32.4 ft, June 1, 1889, discharge, about 252,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7280	5110	40100	e4200	e17000	13000	41200	10100	4440	6850	4560	10400
2	6270	5620	32000	e4600	e12000	12600	43200	15900	4240	5830	3920	8840
3	5490	5740	27900	e4600	e10000	9010	58800	17900	4310	5020	3850	7450
4	5060	5760	24100	e4600	e8300	9450	77800	15300	3830	4650	3780	6380
5	4770	5920	22800	e4400	e8100	10600	68900	13500	3540	4280	4160	5690
6	4570	7750	25200	e4100	e8200	11100	59500	12100	3400	4400	4390	5090
7	4330	9850	25600	e4100	e7400	9350	65700	10900	3550	5010	3940	4620
8	3270	9770	22500	e4400	e6600	10000	64100	11400	4750	6120	3570	4200
9	2620	9210	18400	e4200	e6000	11000	49800	13700	6160	9360	3240	3860
10	2340	8420	16100	e4000	e5400	13000	42500	14100	4840	7770	2930	3660
11	2190	6850	19400	e3800	e5100	17500	44900	12300	4070	6580	2640	3430
12	2100	7060	22300	e4000	e5400	18400	45100	11100	6710	5400	2410	3210
13	1990	5870	20400	e4000	e5800	16000	56800	10300	15400	4470	2350	2960
14	1920	5600	17500	e4000	e5400	15500	60000	9450	14800	4660	3610	2800
15	1900	6550	15300	e3800	e4900	18800	52000	8650	24800	4760	17500	2650
16	1800	9300	13600	e3400	e4600	24400	42000	8240	18800	4680	15700	2600
17	1780	10400	12100	e3300	e4700	27100	36400	8370	14900	4180	11400	2650
18	1890	17200	10600	e3300	e4700	23700	29800	8200	11900	3670	68300	3980
19	2730	29200	9550	e3300	e5000	20500	25100	7540	9840	3410	87500	4250
20	3840	25000	9080	e3500	e7000	17000	22000	7000	8240	3500	49600	4660
21	4990	19600	8930	e3500	e12000	15400	18900	6480	7000	3540	31900	3900
22	6440	14700	8720	e3700	e28000	21300	16900	5980	6220	3510	31900	3130
23	8780	12200	8150	e3900	e34000	42200	15400	5550	5500	4860	29900	3120
24	8170	10300	7300	e3900	31800	61600	13800	5190	4680	5630	21900	3220
25	6790	9140	e6400	e4100	28900	88200	10600	5100	6750	5730	16600	3080
26	5800	8170	e5600	e4300	23500	82100	9190	5540	18400	6380	15900	3550
27	5110	7540	e4500	e4800	20600	65900	8610	6520	12300	7060	13700	8970
28	4550	47200	e3800	e5000	16100	63100	7910	6640	10100	6310	11400	6280
29	4130	89700	e3700	e10000	---	59900	7400	5770	8990	7120	12100	5940
30	3890	55300	e3700	e21000	---	54000	7920	5130	7830	6270	13400	5420
31	4280	---	e3900	e24000	---	46300	---	4810	---	5510	12000	---
TOTAL	131070	470030	469230	167800	336500	908010	1102230	288760	260290	166520	510050	139990
MEAN	4228	15670	15140	5413	12020	29290	36740	9315	8676	5372	16450	4666
MAX	8780	89700	40100	24000	34000	88200	77800	17900	24800	9360	87500	10400
MIN	1780	5110	3700	3300	4600	9010	7400	4810	3400	3410	2350	2600
CFSM	.74	2.76	2.66	.95	2.12	5.15	6.47	1.64	1.53	.95	2.90	.82
IN.	.86	3.08	3.07	1.10	2.20	5.94	7.22	1.89	1.70	1.09	3.34	.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1994, BY WATER YEAR (WY)

	MEAN	4135	6937	8778	9551	10520	20200	18570	12380	7224	4137	2908	2707
MAX	20850	28330	24140	30210	29100	62970	51090	32030	37400	20080	16450	20280	
(WY)	1991	1951	1928	1937	1981	1936	1993	1919	1972	1902	1994	1975	
MIN	416	408	642	423	1965	5559	4633	2766	1733	847	592	425	
(WY)	1931	1931	1931	1931	1931	1969	1946	1941	1991	1966	1910	1932	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1895 - 1994

ANNUAL TOTAL	4438269	4950480	9005
ANNUAL MEAN	12160	13560	14010
HIGHEST ANNUAL MEAN			1928
LOWEST ANNUAL MEAN			5357
HIGHEST DAILY MEAN	115000	Apr 2	240000
LOWEST DAILY MEAN	804	Jul 28	251
ANNUAL SEVEN-DAY MINIMUM	893	Jul 23	328
INSTANTANEOUS PEAK FLOW		113000	Aug 18
INSTANTANEOUS PEAK STAGE		19.66	Aug 18
INSTANTANEOUS LOW FLOW		1740	Oct 17
ANNUAL RUNOFF (CFSM)	2.14	2.39	1.58
ANNUAL RUNOFF (INCHES)	29.06	32.41	21.53
10 PERCENT EXCEEDS	35000	31900	21000
50 PERCENT EXCEEDS	5060	7060	5010
90 PERCENT EXCEEDS	1270	3500	1050

a From rating curve extended above 210,000 ft³/s on basis of slope-area measurement at gage height 33.57 ft.
e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA

LOCATION.--Lat 41°19'30", Long 76°54'46", Lycoming County, Hydrologic Unit 02050206, on right bank 30 ft downstream from bridge on State Highway 973 at Loyalsockville, 2.5 mi downstream from Wallis Run, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--443 mi².

PERIOD OF RECORD.--August 1925 to September 1974, October 1975 to current year. Prior to October 1925, monthly discharge only, published in WSP 1302. Prior to October 1969, published as "at Loyalsock".

REVISED RECORDS.--WSP 756: Drainage area. WSP 871: 1938(M). WSP 1051: 1926(M), 1933(M), 1936(M). WSP 1302: 1926-30. WSP 1502: 1932-33, 1935(M), 1937(M).

GAGE.--Water-stage recorder. Datum of gage is 585.63 ft above sea level. August 1925 to Sept. 16, 1926, nonrecording gage, and Sept. 17, 1926, to June 13, 1988, water-stage recorder at site 500 feet downstream on left bank at same datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 26, 1975, reached a stage of 14.50 ft, from floodmark, discharge, 84,600 ft³/s, from rating curve extended above 16,000 ft³/s on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	794	2000	e300	e900	e860	2850	1160	252	1160	850	598
2	223	683	1550	e330	e750	e720	3790	1230	239	821	740	521
3	221	603	1350	e310	e700	e620	6340	926	215	646	659	453
4	237	623	1230	e300	e660	e660	7350	802	197	516	561	398
5	218	878	2120	e290	e600	e600	4840	724	183	432	940	358
6	209	1730	2120	e280	e580	e600	5270	651	172	456	1060	320
7	192	1360	1640	e290	e560	e580	9030	593	178	1560	730	294
8	179	1010	1350	e300	e500	e680	4890	696	187	1150	555	273
9	166	813	1150	e290	e560	e940	3520	728	166	842	457	251
10	151	685	1400	e280	e480	e1300	3950	598	146	873	466	240
11	145	585	2520	e260	e420	e1500	4530	532	135	706	406	235
12	138	524	1750	e270	e440	e1300	3860	498	563	539	355	211
13	136	477	1370	e290	e470	1290	4490	484	659	446	347	202
14	144	528	1200	e300	e500	1240	4760	425	677	1420	1350	191
15	139	900	1070	e290	e470	1300	3300	384	669	1190	2240	183
16	131	731	985	e280	e490	1640	3040	394	560	939	1270	182
17	130	660	853	e280	e500	1310	2630	427	696	735	1230	184
18	184	1460	722	e280	e520	1160	1970	387	446	555	19700	314
19	219	1320	686	e270	e540	1090	1600	361	341	470	5190	360
20	369	1110	648	e280	e590	976	1340	342	284	383	2890	246
21	589	929	676	e280	e2500	954	1110	306	249	329	2160	204
22	661	782	711	e290	e3000	1520	950	278	230	1090	2340	184
23	536	697	574	e290	e2300	2490	828	260	209	2060	1730	239
24	417	583	e440	e310	e1700	4180	737	250	193	1680	1250	327
25	356	528	e410	e340	e1300	6530	661	248	698	2310	1010	274
26	315	460	e380	e360	e1100	4160	604	266	546	2350	910	933
27	291	445	e310	e350	e1000	3800	606	634	386	1770	797	4100
28	283	12700	e280	e1000	e960	4040	576	492	1480	1940	750	2160
29	268	5210	e260	e2300	---	3660	510	364	1020	1730	1130	1940
30	262	2850	e270	e1600	---	3260	574	303	1150	1260	950	1380
31	494	---	e280	e1200	---	2780	---	268	---	1050	693	---
TOTAL	8257	42658	32305	14090	25090	57740	90506	16011	13126	33408	55716	17755
MEAN	266	1422	1042	455	896	1863	3017	516	438	1078	1797	592
MAX	661	12700	2520	2300	3000	6530	9030	1230	1480	2350	19700	4100
MIN	130	445	260	260	420	580	510	248	135	329	347	182
CFSM	.60	3.21	2.35	1.03	2.02	4.20	6.81	1.17	.99	2.43	4.06	1.34
IN.	.69	3.58	2.71	1.18	2.11	4.85	7.60	1.34	1.10	2.81	4.68	1.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1994, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1926	466	2512	1991	20.2	1965
1927	861	2856	1951	28.4	1965
1928	887	3033	1974	80.5	1931
1929	729	2612	1979	34.1	1931
1930	811	2961	1981	108	1931
1931	1497	4490	1936	449	1969
1932	1610	4236	1993	363	1946
1933	978	2694	1946	220	1941
1934	524	4327	1972	92.4	1991
1935	288	1206	1928	41.6	1962
1936	280	1797	1994	31.5	1964
1937	268	1503	1933	13.8	1964

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1926 - 1994
ANNUAL TOTAL	341345	406662	766
ANNUAL MEAN	935	1114	1312
HIGHEST ANNUAL MEAN			1978
LOWEST ANNUAL MEAN			332
HIGHEST DAILY MEAN	16400	19700	45000
LOWEST DAILY MEAN	29	130	11
ANNUAL SEVEN-DAY MINIMUM	31	138	12
INSTANTANEOUS PEAK FLOW		a36800	a88700
INSTANTANEOUS PEAK STAGE		11.30	b14.74
INSTANTANEOUS LOW FLOW		124	11
ANNUAL RUNOFF (CFSM)	2.11	2.51	1.73
ANNUAL RUNOFF (INCHES)	28.66	34.15	23.48
10 PERCENT EXCEEDS	2360	2410	1710
50 PERCENT EXCEEDS	280	604	400
90 PERCENT EXCEEDS	53	227	68

a From rating curve extended above 16,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmark in gage.

c Also Nov. 24, 1964.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01552500 MUNCY CREEK NEAR SONESTOWN, PA

LOCATION.--Lat 41°21'25", long 76°32'06", Sullivan County, Hydrologic Unit 02050206, on right bank 150 ft downstream from Slip Run, 185 ft downstream from bridge on SR 2002, and 1.2 mi east of Sonestown.

DRAINAGE AREA.--23.8 mi².

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

REVISED RECORDS.--WSP 1502: 1941-42.

GAGE.--Water-stage recorder. Datum of gage is 1,025.01 ft above sea level. Prior to Mar. 31, 1941, nonrecording gage at same site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 9.3 ft, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	59	97	e17	e56	e42	144	82	20	66	48	29
2	18	46	80	e15	e48	e38	205	53	17	54	44	25
3	26	46	73	e14	e47	e35	382	48	15	45	41	23
4	20	51	74	e15	e46	e45	331	44	14	38	34	21
5	20	62	158	e14	e42	41	267	40	13	33	57	19
6	16	67	113	e13	e35	35	310	38	12	45	44	18
7	15	57	92	e13	e29	34	661	34	13	56	35	17
8	15	48	77	e12	e31	58	229	48	11	39	31	15
9	14	42	66	e13	e28	46	173	37	11	38	29	14
10	14	38	144	e14	e27	132	295	33	9.6	40	30	14
11	12	34	140	e15	e27	86	233	30	10	32	25	13
12	12	31	100	e15	e26	70	240	32	101	28	24	12
13	12	29	82	e13	e25	66	331	28	67	26	30	12
14	11	41	71	e12	e24	69	240	27	96	27	293	11
15	10	40	64	e13	e24	76	165	27	56	28	160	11
16	10	33	58	e13	e22	76	153	33	49	23	99	11
17	11	45	49	e12	e20	64	114	27	43	20	268	17
18	15	87	45	e11	e25	e59	88	25	35	19	636	41
19	13	64	44	e10	e35	54	75	24	32	18	199	18
20	31	58	40	e11	e70	49	62	22	25	16	121	15
21	34	48	51	e11	e100	55	53	20	23	23	124	13
22	40	42	44	e13	123	102	47	18	21	60	115	13
23	34	38	39	e14	97	145	42	18	18	56	85	21
24	32	35	e35	e15	83	257	38	17	19	72	68	17
25	29	33	e26	e17	68	312	35	18	33	138	57	15
26	26	29	e18	e19	57	195	31	29	21	138	50	273
27	25	57	e19	e20	e52	195	33	38	95	110	48	291
28	26	1310	e18	e120	e45	219	27	25	97	119	44	136
29	22	247	e18	e100	---	180	29	22	69	88	48	128
30	27	136	e17	e80	---	151	29	19	100	72	36	83
31	54	---	e16	e70	---	130	---	17	---	58	32	---
TOTAL	663	2953	1968	744	1312	3116	5062	973	1145.6	1625	2955	1346
MEAN	21.4	98.4	63.5	24.0	46.9	101	169	31.4	38.2	52.4	95.3	44.9
MAX	54	1310	158	120	123	312	661	82	101	138	636	291
MIN	10	29	16	10	20	34	27	17	9.6	16	24	11
CFSM	.90	4.14	2.67	1.01	1.97	4.22	7.09	1.32	1.60	2.20	4.01	1.89
IN.	1.04	4.62	3.08	1.16	2.05	4.87	7.91	1.52	1.79	2.54	4.62	2.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1994, BY WATER YEAR (WY)

	MEAN	32.3	57.9	62.1	47.4	53.5	87.1	91.4	61.9	31.1	19.0	17.6	22.4
MAX	127	140	161	167	236	168	220	156	240	93.0	95.3	167	
(WY)	1977	1973	1974	1976	1981	1964	1993	1946	1972	1972	1994	1975	
MIN	1.44	2.62	12.8	6.60	7.70	25.4	20.9	11.9	4.93	2.50	1.60	.73	
(WY)	1965	1965	1990	1981	1987	1981	1946	1941	1991	1993	1957	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1941 - 1994

ANNUAL TOTAL	19749.1		23862.6										
ANNUAL MEAN	54.1		65.4							48.6			
HIGHEST ANNUAL MEAN										77.3		1978	
LOWEST ANNUAL MEAN										22.1		1965	
HIGHEST DAILY MEAN	1310	Nov 28	1310	Nov 28						3910	Jun 22	1972	
LOWEST DAILY MEAN	1.5	Jul 25	9.6	Jun 10						.20	Sep 11	1964a	
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 22	11	Oct 11						.31	Sep 8	1964	
INSTANTANEOUS PEAK FLOW			3420	Nov 28						b8260	Jun 22	1972	
INSTANTANEOUS PEAK STAGE			6.56	Nov 28						8.94	Jun 22	1972	
INSTANTANEOUS LOW FLOW										.10	Sep 11	1964a	
ANNUAL RUNOFF (CFSM)	2.27		2.75							2.04			
ANNUAL RUNOFF (INCHES)	30.87		37.30							27.74			
10 PERCENT EXCEEDS	126		139							104			
50 PERCENT EXCEEDS	18		37							26			
90 PERCENT EXCEEDS	3.2		13							4.4			

a Also Sept. 12, 13, 1964.

b From rating curve extended above 3,400 ft³/s.

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA
(National stream-quality accounting network station)

LOCATION.--Lat 40°58'05", long 76°52'25", Northumberland County, Hydrologic Unit 02050206, at downstream side of left abutment of Market Street bridge on State Highway 45 at Lewisburg, 0.2 mi downstream from Buffalo Creek, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--6,847 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. September 1913 to August 1923 (gage heights only), are contained in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters.

GAGE.--Water-stage recorder. Datum of gage is 428.20 ft above sea level. Sept. 21, 1913, to Aug. 31, 1923, Dec. 7, 1939, to July 2, 1940, and Oct. 20, 1987, to Sept. 30, 1988, nonrecording gage at same site and datum. Since Oct. 1, 1942, water-stage recorder for Susquehanna River at Sunbury (station 01553990) used as an auxiliary gage.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 6 flood-control reservoirs, which have a combined capacity of 440,200 acre-ft. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 19, 1936, reached a stage of 32.1 ft, from floodmarks (back-water from Susquehanna River), discharge, 287,000 ft³/s from slope-area measurement at Watsontown, 8.0 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9020	7060	47000	e4200	e20000	e10000	49800	12000	6290	9580	7150	12800
2	7790	7390	36500	e4700	e15000	e10000	49900	16600	5790	8090	6210	11200
3	7190	7480	30900	e5600	e12000	e10000	62600	20200	5830	7050	5570	9600
4	6560	7450	26800	e5100	e11000	e11000	85200	18300	5440	6360	5600	8360
5	6240	7420	27500	e4800	e10000	e11000	83100	16100	4850	5900	5710	7510
6	5840	8530	29100	e4400	e11000	e9200	70600	14700	4580	6210	6740	6930
7	5660	11100	29300	e4100	e11000	e8800	76200	13200	4560	7330	6170	6450
8	4820	11600	26300	e4200	e8200	e9000	78600	13600	4910	7610	5340	5900
9	3570	10800	22100	e3700	e6000	e9800	62400	15100	7230	9950	4770	5280
10	2990	10500	19400	e3600	e5600	e14000	50900	16200	6680	10100	4230	4930
11	2730	8670	23200	e3400	e5400	e21000	52600	15000	5540	8730	3870	4580
12	2540	8440	25300	e3500	e5500	27800	53400	13500	6970	7510	3480	4270
13	2480	7720	24100	e4000	e5800	21600	63800	12600	15200	6470	3250	3950
14	2330	7160	20900	e5000	e7200	19100	73200	11600	15000	6260	3730	3700
15	2290	7470	18100	e4700	e5000	21700	64500	10700	23800	7000	14100	3490
16	2230	9650	16200	e3700	e5200	27000	51900	10200	22600	6770	19900	3360
17	2150	11400	14700	e3500	e5600	30700	44400	10200	17500	6240	14300	3350
18	2170	14100	13000	e3300	e5800	28000	36900	10200	14400	5370	50000	5090
19	2510	28700	11700	e3000	e6600	24400	30800	9730	11800	4940	98100	5790
20	4230	28000	11100	e2800	e7800	20700	26600	9070	10000	4590	63400	5860
21	5720	22500	11200	e2600	e12000	18600	22900	8490	8710	4860	39800	5520
22	7290	17600	11500	e2900	e25000	25100	20000	7940	7740	6480	34700	4410
23	9280	14200	10500	e3300	e39000	45100	18100	7440	7100	7550	34600	4150
24	9830	12300	9470	e3600	e36000	68000	16600	7110	6370	8260	26700	4210
25	8550	10700	8600	e4000	e30000	94800	13800	6960	6160	9670	20300	4170
26	7480	9820	e7000	e5000	e24000	104000	11600	7070	16700	10200	17700	4770
27	6730	8980	e4800	e6000	e13000	84000	10900	8090	15200	10700	17000	14200
28	6070	34600	e4400	e7300	e11000	77400	10100	8620	12400	9740	14100	11700
29	5420	97200	e4200	e12000	---	73100	9520	7870	11500	9970	13500	9790
30	4990	67700	e4000	e23000	---	66900	9830	7050	10300	9150	15400	8760
31	5350	---	e4100	e25000	---	57000	---	6580	---	8170	14400	---
TOTAL	162050	516240	552970	176000	359700	1058800	1310750	352020	301150	236810	579820	194080
MEAN	5227	17210	17840	5677	12850	34150	43690	11360	10040	7639	18700	6469
MAX	9830	97200	47000	25000	39000	104000	85200	20200	23800	10700	98100	14200
MIN	2150	7060	4000	2600	5000	8800	9520	6580	4560	4590	3250	3350
CFSM	.76	2.51	2.61	.83	1.88	4.99	6.38	1.66	1.47	1.12	2.73	.94
IN.	.88	2.80	3.00	.96	1.95	5.75	7.12	1.91	1.64	1.29	3.15	1.05

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5146	8991	11530	10930	12940	22280	23210	15200	9150	4926	3597	3492
MAX	24900	32000	28230	30740	33010	49200	62990	28750	46900	20120	18700	24080
(WY)	1991	1951	1973	1952	1981	1945	1993	1978	1972	1972	1994	1975
MIN	659	762	1727	1752	2914	6169	5822	3353	2048	1032	983	601
(WY)	1964	1965	1961	1981	1940	1969	1946	1941	1991	1965	1966	1964

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1940 - 1994			
ANNUAL TOTAL	5271640				5800390				10930			
ANNUAL MEAN	14440				15890				16710			
HIGHEST ANNUAL MEAN									1978			
LOWEST ANNUAL MEAN									1965			
HIGHEST DAILY MEAN	143000				Apr 2				285000			
LOWEST DAILY MEAN	1020				Jul 28				417			
ANNUAL SEVEN-DAY MINIMUM	1100				Jul 24				511			
INSTANTANEOUS PEAK FLOW					111000				Mar 26			
INSTANTANEOUS PEAK STAGE					18.28				Mar 26			
INSTANTANEOUS LOW FLOW					c2150				Oct 17,18			
ANNUAL RUNOFF (CFSM)	2.11				2.32				390			
ANNUAL RUNOFF (INCHES)	28.64				31.51				21.69			
10 PERCENT EXCEEDS	41900				36200				25000			
50 PERCENT EXCEEDS	6540				9280				6400			
90 PERCENT EXCEEDS	1610				4060				1480			

a About.

b From floodmarks (backwater from Susquehanna River).

c May have been lower during period of ice effect, Jan 20-22.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-53, 1956-58, 1960 to current year.

REMARKS.--Additional water-quality samples were collected by the Susquehanna River Basin Commission, but since September 1993 the data are not stored in the USGS data base or published in this report. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268, 309.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)
DEC 20...	1500	1028	80020	10	10300	178	6.8	4.0	1.6	758	12.8	98
APR 05...	1510	1028	80020	10	82200	107	6.7	7.5	3.4	755	11.8	99
JUN 23...	1420	1028	80020	10	6140	143	7.4	26.0	1.0	754	8.0	100
SEP 19...	1535	1028	80020	10	4830	211	8.0	21.5	1.2	760	10.2	116
DATE		COLI-FORM, FECAL, 0.7 µM-MF (COLS./100 ML) (31625)	STREP-TOCOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
DEC 20...	350	210	68	62	17	6.2	3.6	10	0.2	1.3	8	ND
APR 05...	--	--	41	37	9.9	3.9	1.8	9	0.1	0.80	5	ND
JUN 23...	K 9	K 10	64	50	16	5.8	3.9	11	0.2	1.2	17	ND
SEP 19...	K 35	N 0	96	71	24	8.6	5.7	11	0.3	1.3	13	8
DATE		ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CAC03) (00410)	ALKA-LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
DEC 20...	6	9	15	52	9.5	<0.10	5.2	110	102	0.15	3060	
APR 05...	4	7	26	31	3.5	<0.10	4.4	60	61	0.08	13300	
JUN 23...	14	16	18	47	5.9	<0.10	4.4	103	95	0.14	1710	
SEP 19...	25	26	28	66	9.0	<0.10	2.2	146	135	0.20	1900	
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 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 (µG/L AS AL) (01106)	BARIUM, DIS-SOLVED (µG/L AS BA) (01005)	COBALT, DIS-SOLVED (µG/L AS CO) (01035)	IRON, DIS-SOLVED (µG/L AS FE) (01046)
DEC 20...	<0.010	0.680	0.060	<0.20	<0.010	<0.010	<0.010	20	36	7	22	
APR 05...	<0.010	0.560	<0.010	0.20	0.040	0.010	<0.010	20	29	3	11	
JUN 23...	<0.010	0.530	0.020	<0.20	0.010	<0.010	<0.010	20	27	<3	17	
SEP 19...	<0.010	0.600	0.020	0.20	0.030	<0.010	<0.010	30	28	<3	19	

WEST BRANCH SUSQUEHANNA RIVER BASIN

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	LITHIUM DIS- SOLVED (μ G/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (μ G/L AS V) (01085)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 20...	4	530	<10	17	<1	<1.0	82	<6	19	528	78
APR 05...	<4	310	<10	11	<1	<1.0	41	6	29	6440	72
JUN 23...	<4	190	<10	6	<1	<1.0	84	<6	5	83	91
SEP 19...	5	30	<10	4	<1	<1.0	130	<6	7	91	89

WEST BRANCH SUSQUEHANNA RIVER BASIN

01553700 CHILLISQUAKE CREEK AT WASHINGTONVILLE, PA

LOCATION.--Lat 41°03'42", long 76°40'50", Montour County, Hydrologic Unit 02050206, on left bank 60 ft upstream from bridge on State Highway 54, and 0.7 mi north of U.S. Post Office in Washingtonville.

DRAINAGE AREA.--51.3 mi².

PERIOD OF RECORD.--May 1979 to current year.

REVISED RECORDS.--WDR PA-82-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 503.70 ft above sea level (Pennsylvania Power and Light Co. bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow includes diversion from West Branch Susquehanna River. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	124	76	34	95	66	356	139	21	28	35	26
2	22	64	64	34	68	e57	330	79	20	22	42	23
3	32	48	60	30	66	e80	316	59	18	19	28	21
4	23	42	65	29	55	97	283	48	17	18	24	21
5	22	39	439	30	55	93	179	41	17	17	106	20
6	20	38	197	27	50	91	149	35	18	25	72	20
7	19	33	114	27	47	83	464	32	19	25	37	17
8	19	29	83	28	42	159	195	99	17	20	27	19
9	20	26	66	29	41	154	145	53	17	20	24	19
10	19	25	242	23	38	357	170	43	18	20	21	18
11	20	23	e250	24	36	322	173	39	18	18	20	17
12	23	24	e120	26	37	229	373	42	152	18	21	17
13	22	24	81	27	38	188	745	33	125	18	20	17
14	21	31	70	29	37	227	421	30	55	20	48	17
15	21	31	63	e27	33	298	216	29	35	26	49	17
16	23	27	57	e27	35	288	198	33	28	22	27	18
17	23	45	46	29	35	193	114	28	25	18	78	22
18	25	100	42	e26	36	156	85	25	23	18	523	88
19	26	59	57	e26	39	127	74	23	22	17	165	34
20	42	49	61	27	54	123	62	22	19	17	84	27
21	64	38	188	26	230	190	52	22	18	50	158	24
22	47	35	e130	24	e300	804	45	22	17	208	174	24
23	35	32	e75	24	e200	777	39	20	17	129	101	48
24	34	29	e62	27	e150	818	35	19	18	59	66	33
25	31	27	59	30	124	964	32	47	32	45	51	26
26	26	25	49	32	99	701	29	64	20	49	44	196
27	24	29	e42	31	e73	712	27	73	45	73	39	392
28	24	1020	36	66	71	665	24	36	41	60	41	107
29	24	234	e33	271	---	549	38	29	25	43	50	77
30	27	113	37	164	---	473	48	25	42	33	35	51
31	72	---	35	118	---	365	---	22	---	27	27	---
TOTAL	872	2463	2999	1372	2184	10406	5417	1311	959	1182	2237	1456
MEAN	28.1	82.1	96.7	44.3	78.0	336	181	42.3	32.0	38.1	72.2	48.5
MAX	72	1020	439	271	300	964	745	139	152	208	523	392
MIN	19	23	33	23	33	57	24	19	17	17	20	17
CFSM	.55	1.60	1.89	.86	1.52	6.54	3.52	.82	.62	.74	1.41	.95
IN.	.63	1.79	2.17	.99	1.58	7.55	3.93	.95	.70	.86	1.62	1.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1994, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	46.2	89.1	90.8	59.2	101	136	120	69.6	57.7	37.6	32.5	34.5				
MAX	211	149	231	123	243	336	286	228	221	102	87.0	99.8				
(WY)	1991	1987	1984	1991	1981	1994	1993	1989	1982	1984	1990	1987				
MIN	16.5	34.4	22.2	27.5	25.6	38.3	42.9	20.0	16.0	13.4	18.3	18.7				
(WY)	1983	1981	1990	1981	1993	1981	1988	1987	1991	1991	1991	1984				

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1979 - 1994

ANNUAL TOTAL	28738		32858		72.7	
ANNUAL MEAN	78.7		90.0		108	1984
HIGHEST ANNUAL MEAN					52.2	1988
LOWEST ANNUAL MEAN					2080	Mar 15 1986
HIGHEST DAILY MEAN	1020	Nov 28	1020	Nov 28	6.2	Jul 27 1991
LOWEST DAILY MEAN	14	May 30 ^a	17	Jun 4 ^b	11	Jun 26 1991
ANNUAL SEVEN-DAY MINIMUM	15	Sep 8	17	Sep 10	c3510	Jun 28 1983
INSTANTANEOUS PEAK FLOW			c1940	Nov 28	10.82	Jun 28 1983
INSTANTANEOUS PEAK STAGE			7.92	Nov 28	1.42	
ANNUAL RUNOFF (CFSM)	1.53		1.75		19.24	
ANNUAL RUNOFF (INCHES)	20.84		23.83			
10 PERCENT EXCEEDS	195		203		145	
50 PERCENT EXCEEDS	27		37		37	
90 PERCENT EXCEEDS	16		19		18	

^a Also Sept. 2, 10, 1993.

^b Also several days in June, July, and September.

^c From rating curve extended above 1,300 ft³/s.

^e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

RESERVOIRS IN WEST BRANCH SUSQUEHANNA RIVER BASIN

01541180 CURWENSVILLE LAKE.--Lat 40°57'13", long 78°31'40", Clearfield County, Hydrologic Unit 02050201, at Curwensville Dam on West Branch Susquehanna River, 0.7 mi upstream from State Highway 453, 1.2 mi south of Curwensville, and 2.5 mi upstream from Anderson Creek. DRAINAGE AREA, 365 mi². PERIOD OF RECORD, November 1965 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by earthfill dam with excavated chute spillway and concrete control sill at elevation 1,228.00 ft. Storage began in November 1965. Capacity at elevation 1,228.00 ft is 124,200 acre-ft. Conservation pool elevation is 1,155.00 ft, capacity, 4,870 acre-ft. Reservoir is used for flood control, recreation and study of water quality. Figures given herein represent total contents. Flow regulated by three gates and low-flow by-pass system. Satellite and landline telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 87,650 acre-ft, June 25, 1972, elevation, 1,214.11 ft; minimum, 252 acre-ft, Nov. 6, 1968, elevation, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 38,170 acre-ft, Mar. 28, elevation, 1,186.78 ft; minimum, 3,570 acre-ft, Dec. 29, elevation, 1,152.42 ft.

01541340 GLENDALE LAKE.--Lat 40°41'50", long 78°32'15", Cambria County, Hydrologic Unit 02050201, at Glendale Dam on Beaverdam Run, 1.0 mi upstream from Dutch Run, 1.3 mi southwest of Flinton, 1.9 mi above mouth, and 3.4 mi south of Coalport. DRAINAGE AREA, 41.9 mi². PERIOD OF RECORD, January 1963 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 1,435.00 ft. Storage began Dec. 1, 1960. Capacity at elevation 1,435.00 ft is 41,200 acre-ft of which 15,900 acre-ft is controlled storage above elevation 1,427.00 ft. Dead storage is 25,300 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Outflow is controlled by 72-inch gate and an 8-inch bypass valve. Satellite telemetry at station.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 33,390 acre-ft, June 24, 1972, elevation, 1,431.63 ft; minimum, 10,640 acre-ft, Nov. 16, 1965, elevation, 1,415.53 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 32,440 acre-ft, Mar. 25, elevation, 1,430.12 ft; minimum recorded, 11,040 acre-ft, Apr. 9, elevation, 1,415.87 ft.

01543900 FIRST FORK SINNEMAHONING CREEK RESERVOIR.--Lat 41°24'25", long 78°01'10", Cameron County, Hydrologic Unit 02050202, at control tower of George B. Stevenson Dam, on First Fork Sinnemahoning Creek, 8.0 mi northeast of Sinnemahoning, and 8.0 mi upstream from mouth. DRAINAGE AREA, 243 mi². PERIOD OF RECORD, January 1956 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Jan. 31, 1956. Capacity, 75,800 acre-ft between elevations 890.00 ft (sill of outlet gates) and 1,026.00 ft (crest of spillway). No dead storage. Ordinary minimum (conservation) pool elevation is 920.00 ft, capacity, 2,000 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Satellite telemetry at station.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 62,030 acre-ft, June 26, 1972, elevation, 1,015.87 ft; minimum, (after first filling), 37 acre-ft many days in October 1973, elevation, 891.84 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,400 acre-ft, Nov. 29, elevation, 968.72 ft; minimum, 1,910 acre-ft, June 15, elevation, 919.13 ft.

01544800 KETTLE CREEK LAKE (formerly published as Alvin R. Bush Reservoir).--Lat 41°21'37", long 77°55'27", Clinton County, Hydrologic Unit 02050203, at control tower of dam on Kettle Creek, 1.1 mi downstream from Sugar Camp Run, and 8.5 mi upstream from mouth and Westport. DRAINAGE AREA, 226 mi². PERIOD OF RECORD, February 1962 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill embankment, rock faced, with ungated concrete spillway at elevation 937.00 ft. Storage began Feb. 7, 1962; water in reservoir first reached conservation pool elevation in March 1962. Total capacity at elevation 937.00 ft is 75,000 acre-ft. No dead storage. Ordinary minimum (conservation) pool elevation is 840.00 ft, capacity, 1,590 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Storage is regulated by three gates and low-flow bypass system. Satellite and landline telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 52,960 acre-ft, Apr. 2, 1993, elevation, 920.23 ft; minimum, no storage, June 7, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,080 acre-ft, Nov. 29, elevation, 880.05 ft; minimum, 1,370 acre-ft, Oct. 1, elevation, 838.34 ft.

01547480 FOSTER JOSEPH SAYERS LAKE.--Lat 41°02'53", long 77°36'35", Centre County, Hydrologic Unit 02050204, at Foster Joseph Sayers Dam, on Bald Eagle Creek, 1.0 mi upstream from Marsh Creek, and 1.2 mi south of Blanchard. DRAINAGE AREA, 339 mi². PERIOD OF RECORD, March 1971 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill dam with ungated concrete ogee weir at elevation 657.00 ft with abutting concrete gravity walls and partially paved exit channel. Storage began in March 1971. Capacity at elevation 657.00 ft is 99,100 acre-ft. Dead storage is 25 acre-ft. Ordinary minimum (conservation) pool elevation is 610.0 ft, capacity, 6,300 acre-ft. Reservoir used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by two gates. Satellite and landline telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,900 acre-ft, June 25, 1972, elevation, 658.41 ft; minimum, 3,250 acre-ft, Oct. 27, 1987, elevation, 604.45 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 80,090 acre-ft, Apr. 14, elevation, 651.14 ft; minimum, 6,070 acre-ft, Mar. 19, elevation, 609.62 ft.

WEST BRANCH SUSQUEHANNA RIVER BASIN

Reservoirs in West Branch Susquehanna River basin--Continued

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
01541180 Curwensville Lake				01541340 Glendale Lake		
Sept. 30.....	1,162.01	9,550	--	1,427.46	26,040	--
Oct. 31.....	1,162.17	9,680	+ 2.1	1,427.33	25,830	- 3.4
Nov. 30.....	1,173.11	20,320	+179	1,428.48	27,670	+ 30.9
Dec. 31.....	1,155.44	5,120	-247	1,427.34	25,840	- 29.8
CAL YR 1993.....	--	--	- 5.1	--	--	+ 1.7
Jan. 31.....	1,159.36	7,590	+ 40.2	1,427.88	26,710	+ 14.1
Feb. 28.....	1,155.82	5,330	- 40.7	1,427.94	26,800	+ 1.6
Mar. 31.....	1,181.58	30,730	+413	1,429.12	28,700	+ 30.9
Apr. 30.....	1,159.48	7,670	-388	1,427.83	26,630	- 34.8
May 31.....	1,161.81	9,400	+ 28.1	1,427.40	25,940	- 11.2
June 30.....	1,161.99	9,530	+ 2.2	1,427.15	25,540	- 6.7
July 31.....	1,162.33	9,810	+ 4.6	1,427.04	25,360	- 2.9
Aug. 31.....	1,162.15	9,660	- 2.4	1,427.46	26,040	+ 11.1
Sept. 30.....	1,162.06	9,590	- 1.2	1,427.18	25,590	- 7.6
WTR YR 1994.....	--	--	+ 0.1	--	--	- 0.6
01543900 F. F. Simmemahoning Cr. Reservoir				01544800 Kettle Creek Lake		
Sept. 30.....	921.39	2,340	--	838.34	1,370	--
Oct. 31.....	924.21	2,740	+ 6.5	840.85	1,720	+ 5.7
Nov. 30.....	966.68	19,140	+276	875.70	14,470	+214
Dec. 31.....	922.81	2,520	-270	841.12	1,760	-207
CAL YR 1993.....	--	--	- 1.4	--	--	- 0.1
Jan. 31.....	922.28	2,440	- 1.3	840.50	1,670	- 1.5
Feb. 28.....	922.19	2,430	- 0.2	840.50	1,670	0
Mar. 31.....	921.18	2,320	- 1.8	840.00	1,590	- 1.3
Apr. 30.....	921.40	2,340	+ 0.3	841.59	1,840	+ 4.2
May 31.....	921.17	2,320	- 0.3	841.23	1,780	- 1.0
June 30.....	921.34	2,330	+ 0.2	841.06	1,750	- 0.5
July 31.....	921.25	2,320	- 0.2	841.06	1,750	0
Aug. 31.....	920.13	2,040	- 4.6	841.23	1,780	+ 0.5
Sept. 30.....	919.60	1,960	- 1.3	841.06	1,750	- 0.5
WTR YR 1994.....	--	--	- 0.5	--	--	+ 0.5
01547480 Foster Joseph Sayers Lake						
Sept. 30.....	627.50	24,740	--			
Oct. 31.....	615.50	10,420	-233			
Nov. 30.....	627.96	25,440	+252			
Dec. 31.....	610.37	6,550	-307			
CAL YR 1993.....	--	--	- 0.6			
Jan. 31.....	610.70	6,770	+ 3.6			
Feb. 28.....	610.18	6,420	- 6.3			
Mar. 31.....	644.15	59,430	+862			
Apr. 30.....	630.23	29,210	-508			
May 31.....	630.07	28,920	- 4.7			
June 30.....	630.29	29,320	+ 6.7			
July 31.....	630.17	29,100	- 3.6			
Aug. 31.....	630.20	29,160	+ 1.0			
Sept. 30.....	629.97	28,750	- 6.9			
WTR YR 1994.....	--	--	+ 5.5			

SUSQUEHANNA RIVER BASIN

01554000 SUSQUEHANNA RIVER AT SUNBURY, PA

LOCATION.--Lat 40°51'15", long 76°48'21", Snyder County, Hydrologic Unit 02050301, on right bank at borough of Shamokin Dam, on grounds of Pennsylvania Power and Light Co. generating plant, 1.0 mi downstream from Shamokin Creek, 1.5 mi downstream from Sunbury Fabridam, and 1.8 mi south of Sunbury.

DRAINAGE AREA.--18,300 mi², approximately (excluding that of Shamokin Creek).

PERIOD OF RECORD.--October 1937 to current year. June 1918 to September 1918 (gage heights only), in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 891: 1936(M). WDR PA-79-2: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 408.61 ft above sea level. See WSP 1903 for history of changes prior to Dec. 13, 1937. Dec. 13, 1937, to Mar. 23, 1967, water-stage recorder at site 1.7 mi upstream at datum 11.05 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 14 flood-control reservoirs which have a capacity of about 809,000 acre-ft, and during low flow by Fabridam upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14300	14000	111000	e13800	e48000	e35000	124000	34200	13400	37900	15600	28000
2	13100	16800	82700	e14700	e45000	e30000	122000	40900	12500	30300	13800	24500
3	12200	16700	64200	e15000	e40000	e27000	143000	44700	11900	26500	13000	21200
4	11400	16500	54400	e14000	e35000	e24000	188000	43600	12300	23700	12200	18500
5	10600	16700	56300	e13000	e31000	e24500	199000	38300	12400	18400	11900	16500
6	9800	17700	72200	e12400	e28000	e25000	171000	34000	11500	19200	12700	14200
7	9230	22300	77200	e12300	e27000	e26000	174000	30300	11300	20400	13200	13700
8	8520	28400	68300	e11700	e25000	e28000	188000	30100	10900	18700	12700	12600
9	7230	29500	56800	e10600	e23000	e32000	162000	31900	12000	22000	11800	11600
10	6410	26700	48000	e10000	e20000	e41500	133000	32900	11900	24600	10200	10900
11	9780	22500	51900	e11000	e19000	60000	132000	32300	10700	21300	9190	10300
12	7150	19800	55600	e12000	e18000	66100	133000	30000	12500	17900	8360	9730
13	6320	18100	56700	e12800	e17000	61100	146000	28200	21600	15200	7570	9160
14	6570	16300	50000	e11500	e16000	58500	180000	26000	24400	13700	7770	8700
15	5620	15800	42400	e10500	e15000	60200	169000	24100	36800	14400	16500	8400
16	5790	18400	37000	e10000	e16000	67600	141000	21800	77600	14200	38000	7990
17	5510	21400	34200	e11000	e15500	73500	126000	21900	56700	14200	36400	7930
18	5310	25300	31200	e10000	e15000	69200	118000	23000	38100	13000	67000	10300
19	5480	45300	28500	e9200	e15200	60800	102000	22100	29600	12000	168000	11300
20	6970	65600	26600	e8900	e15800	52700	88200	21200	22000	11600	153000	10300
21	9110	56400	26100	e8000	e22000	47200	74700	20300	19500	13200	101000	9940
22	11500	43500	31800	e9000	e45000	57400	62800	18800	16500	13800	83300	8910
23	13700	34600	31000	e11000	e110000	96600	53900	17500	14700	16300	81400	8760
24	15000	29600	28400	e12000	e100000	156000	47300	16500	12100	17300	68900	8920
25	13900	25500	e25000	e14000	e90000	216000	41000	15900	12400	17100	53000	8900
26	12800	23000	e20000	e15300	e62000	251000	35600	15600	22800	18700	42000	9810
27	11800	21000	e18000	e13500	e48000	210000	32900	16200	29900	20500	39800	26000
28	11000	51800	e15000	e16000	e41000	184000	30900	17300	26600	19900	34100	40300
29	10300	161000	e13000	e21000	---	178000	28600	17000	28100	18100	31600	39100
30	9550	150000	e12500	e33000	---	165000	27800	15700	40600	17600	33800	28900
31	9930	---	e13000	e50000	---	143000	---	13400	---	16900	33500	---
TOTAL	295880	1070200	1339000	437200	1002500	2626900	3374700	795700	673300	578600	1241290	455350
MEAN	9545	35670	43190	14100	35800	84740	112500	25670	22440	18660	40040	15180
MAX	15000	161000	111000	50000	110000	251000	199000	44700	77600	37900	168000	40300
MIN	5310	14000	12500	8000	15000	24000	27800	13400	10700	11600	7570	7930
CFSM	.52	1.95	2.36	.77	1.96	4.63	6.15	1.40	1.23	1.02	2.19	.83
IN.	.60	2.18	2.72	.89	2.04	5.34	6.86	1.62	1.37	1.18	2.52	.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

	MEAN	13120	22370	29050	26450	32020	55080	60200	35610	20520	10870	8093	8679
MAX	62760	54540	71460	67320	78120	115800	170900	69950	111600	38930	40040	55820	
(WY)	1978	1978	1973	1979	1981	1945	1993	1989	1972	1972	1994	1975	
MIN	1607	1673	5802	4510	7500	21370	14560	9826	5423	2390	2533	1372	
(WY)	1965	1965	1961	1981	1980	1969	1946	1941	1991	1965	1939	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1938 - 1994

ANNUAL TOTAL	12660610	13890620											
ANNUAL MEAN	34690	38060											
HIGHEST ANNUAL MEAN										26790		1978	
LOWEST ANNUAL MEAN										42520		1965	
HIGHEST DAILY MEAN	329000	Apr 2	251000	Mar 26	609000	Jun 24	1972						
LOWEST DAILY MEAN	2530	Jul 28	5310	Oct 18	1110	Sep 24	1964						
ANNUAL SEVEN-DAY MINIMUM	2690	Jul 24	5800	Oct 13	1140	Sep 22	1964						
INSTANTANEOUS PEAK FLOW			257000	Mar 26	620000	Jun 24	1972						
INSTANTANEOUS PEAK STAGE			23.86	Mar 26	35.80	Jun 24	1972						
INSTANTANEOUS LOW FLOW			4230	Oct 15	a964	Oct 16	1971						
ANNUAL RUNOFF (CFSM)	1.90		2.08		1.46								
ANNUAL RUNOFF (INCHES)	25.74		28.24		19.89								
10 PERCENT EXCEEDS	109000		92600		61000								
50 PERCENT EXCEEDS	13900		21400		15700								
90 PERCENT EXCEEDS	3670		9880		3780								

a Result of shutoff at Fabridam.

e Estimated.

PENNS CREEK BASIN

01555000 PENNS CREEK AT PENNS CREEK, PA

LOCATION.--Lat 40°52'00", Long 77°02'55", Union County, Hydrologic Unit 02050301, on left bank 200 ft downstream from bridge on State Highway 104, 0.8 mi northeast of Penns Creek, and 2.9 mi upstream from Sweitzers Run.

DRAINAGE AREA.--301 mi².

PERIOD OF RECORD.--October 1929 to current year. Prior to October 1965, published as Penn Creek at Penns Creek.

REVISED RECORDS.--WSP 891: 1934(M). WSP 1502: 1933(M), 1934, 1936(M). WDR PA-72-1: 1933-34(M), 1936(M), 1940(M), 1951(M). WDR PA-79-2: 1978.

GAGE.--Water-stage recorder. Datum of gage is 506.72 ft above sea level. Prior to Feb. 1, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	309	1330	e290	e1150	e480	2440	716	253	159	131	432
2	149	268	1050	e310	e990	e450	2690	634	242	146	121	384
3	146	229	907	e350	e920	e430	3270	569	231	140	203	346
4	132	224	810	e330	e800	e410	3420	550	224	138	183	317
5	122	212	1320	e280	e760	e400	2810	547	218	134	152	297
6	114	214	1120	e250	e740	e380	2560	496	292	152	172	277
7	107	205	961	e260	e720	e370	3580	506	422	268	156	259
8	103	188	856	e300	e700	e600	2890	831	291	185	134	243
9	99	174	773	e280	e740	700	2250	714	249	160	124	230
10	94	164	885	e250	778	932	2030	645	229	164	117	222
11	89	158	1220	e250	e730	988	2030	611	223	140	111	212
12	92	157	958	e240	764	863	2180	605	269	126	110	203
13	102	154	e860	e230	776	825	2910	583	293	121	109	195
14	98	168	e790	e220	e700	927	2740	521	272	118	116	188
15	91	189	e740	e200	e670	1170	2170	489	244	229	164	183
16	86	188	e700	e180	e660	1510	1850	483	265	178	145	180
17	86	186	e620	e170	e660	1270	1540	457	220	141	247	192
18	86	232	e570	e160	e690	1110	1270	431	209	130	2380	474
19	87	271	e550	e150	e720	980	1100	411	232	142	1230	310
20	107	247	e540	e150	e820	886	979	391	209	144	723	219
21	151	233	619	e140	1510	911	882	368	194	139	568	198
22	154	215	579	e140	2620	1620	800	347	198	218	571	191
23	139	203	488	e140	2690	2550	733	329	179	184	599	259
24	121	195	e430	e230	1940	3730	680	314	177	203	433	242
25	112	187	e390	e250	1040	5190	633	345	179	176	381	211
26	106	177	e360	e270	e800	4440	587	397	164	165	1040	234
27	104	208	e330	e300	e640	4380	551	392	182	148	715	489
28	101	6090	e320	e700	e530	4450	511	330	176	155	565	390
29	98	3730	e300	e1950	---	3810	535	296	161	142	704	338
30	99	1910	e280	1870	---	3380	667	277	172	134	609	308
31	180	---	e270	1370	---	2820	---	263	---	151	469	---
TOTAL	3524	17285	21926	12210	27258	52962	53288	14848	6869	4930	13482	8223
MEAN	114	576	707	394	973	1708	1776	479	229	159	435	274
MAX	180	6090	1330	1950	2690	5190	3580	831	422	268	2380	489
MIN	86	154	270	140	530	370	511	263	161	118	109	180
CFSM	.38	1.91	2.35	1.31	3.23	5.68	5.90	1.59	.76	.53	1.44	.91
IN.	.44	2.14	2.71	1.51	3.37	6.55	6.59	1.84	.85	.61	1.67	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1994, BY WATER YEAR (WY)

	MEAN	214	356	441	422	529	910	904	623	399	196	155	153
	MAX	1355	1567	1352	1155	1697	3093	2855	1793	2845	759	684	1295
	(WY)	1991	1978	1951	1978	1984	1936	1993	1978	1972	1989	1984	1979
	MIN	35.9	34.1	47.9	76.0	108	195	330	179	107	57.2	37.0	36.4
	(WY)	1931	1931	1931	1981	1940	1931	1946	1941	1962	1962	1966	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1930 - 1994

ANNUAL TOTAL	228934	236805	
ANNUAL MEAN	627	649	441
HIGHEST ANNUAL MEAN			878
LOWEST ANNUAL MEAN			205
HIGHEST DAILY MEAN	7460	6090	24600
LOWEST DAILY MEAN	64	86	21
ANNUAL SEVEN-DAY MINIMUM	72	91	24
INSTANTANEOUS PEAK FLOW		a7980	a34600
INSTANTANEOUS PEAK STAGE		9.46	b14.85
INSTANTANEOUS LOW FLOW		84	7.0
ANNUAL RUNOFF (CFSM)	2.08	2.16	1.47
ANNUAL RUNOFF (INCHES)	28.29	29.27	19.91
10 PERCENT EXCEEDS	1500	1520	975
50 PERCENT EXCEEDS	224	300	260
90 PERCENT EXCEEDS	81	133	68

a From rating curve extended above 6,800 ft³/s on basis of contracted-opening measurement of peak flow.

b From floodmark in gage.

c Estimated.

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA
(National water-quality assessment station)

LOCATION.--Lat 40°39'48", long 76°41'30", Schuylkill County, Hydrologic Unit 02050301, on left bank at Klingerstown, 400 ft upstream from highway bridge on State Route 4002, and 0.2 mi upstream from Pine Creek.
DRAINAGE AREA.--44.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 520 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	58	184	e43	e7.5	e90	285	263	17	71	12	29
2	24	59	141	e48	e7.2	79	275	198	16	51	11	24
3	40	52	111	e52	e6.9	e76	274	148	15	40	10	21
4	29	43	98	e43	e6.7	e72	270	119	15	33	8.3	19
5	25	38	512	e36	e6.6	e70	215	100	14	27	10	18
6	21	32	416	e33	e6.6	65	179	90	34	25	13	17
7	19	24	243	e30	e6.4	63	286	83	39	33	8.6	16
8	18	20	173	e27	e6.2	131	262	132	25	22	7.2	14
9	16	19	135	e25	e6.0	167	205	101	20	18	6.7	15
10	15	18	154	e24	e5.9	431	183	91	18	18	6.0	17
11	13	17	197	e23	e5.6	398	150	82	19	15	5.4	13
12	21	17	162	e23	e5.6	280	162	84	27	13	5.1	12
13	e18	16	130	e22	e5.6	248	316	70	20	12	5.7	11
14	e16	18	112	e22	e5.6	322	463	60	22	12	28	9.8
15	15	17	100	e21	e5.6	429	296	56	17	14	29	9.6
16	15	15	86	e20	e6.0	384	242	56	20	24	14	10
17	14	18	72	e18	e10	266	178	48	37	13	27	10
18	15	45	65	e17	e25	207	147	43	37	11	119	78
19	13	36	66	e13	e70	167	126	40	42	9.7	80	30
20	16	38	58	e11	e150	147	105	36	29	8.2	56	21
21	17	30	105	e9.8	708	174	89	34	24	10	50	18
22	18	25	126	e9.3	451	512	78	31	21	18	124	21
23	17	23	120	e9.1	339	672	69	30	18	40	133	76
24	16	21	100	e9.0	249	677	63	35	18	70	94	56
25	16	20	e90	e8.9	179	756	57	34	34	37	69	45
26	16	18	e70	e8.8	144	605	51	35	22	27	57	248
27	16	30	e55	e8.6	122	618	48	29	55	22	45	365
28	15	2290	e50	e8.3	e100	683	43	24	82	27	41	208
29	14	657	e45	e8.0	---	573	45	22	153	19	51	150
30	16	285	e42	e7.9	---	441	48	20	112	15	37	104
31	29	---	e40	e7.8	---	348	---	18	---	12	32	---
TOTAL	580	3999	4058	646.5	2647.0	10151	5210	2212	1022	766.9	1195.0	1685.4
MEAN	18.7	133	131	20.9	94.5	327	174	71.4	34.1	24.7	38.5	56.2
MAX	40	2290	512	52	708	756	463	263	153	71	133	365
MIN	13	15	40	7.8	5.6	63	43	18	14	8.2	5.1	9.6
CFSM	.42	2.98	2.93	.47	2.11	7.33	3.89	1.60	.76	.55	.86	1.26
IN.	.48	3.33	3.38	.54	2.20	8.45	4.34	1.84	.85	.64	.99	1.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	MEAN	27.6	133	109	46.0	61.9	284	234	66.1	23.2	16.5	23.5	38.2
MAX	36.4	133	131	71.2	94.5	327	293	71.4	34.1	24.7	38.5	56.2	
(WY)	1993	1993	1994	1993	1994	1994	1993	1994	1994	1994	1994	1994	
MIN	18.7	133	87.5	20.9	29.2	242	174	60.8	12.3	8.27	8.48	20.3	
(WY)	1994	1994	1993	1994	1993	1993	1994	1993	1993	1993	1993	1993	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1993 - 1994

ANNUAL TOTAL	31337.8	34172.8	
ANNUAL MEAN	85.9	93.6	88.7
HIGHEST ANNUAL MEAN			93.6
LOWEST ANNUAL MEAN			83.7
HIGHEST DAILY MEAN	2290	Nov 28	2290
LOWEST DAILY MEAN	2.0	Aug 10	2.0
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 4	2.9
INSTANTANEOUS PEAK FLOW		3470	3470
INSTANTANEOUS PEAK STAGE		9.07	9.07
INSTANTANEOUS LOW FLOW		4.6	1.9
ANNUAL RUNOFF (CFSM)	1.92	2.09	1.98
ANNUAL RUNOFF (INCHES)	26.08	28.44	26.95
10 PERCENT EXCEEDS	222	254	241
50 PERCENT EXCEEDS	28	33	35
90 PERCENT EXCEEDS	5.8	9.7	7.5

a Computed using estimated daily discharges.
e Estimated.

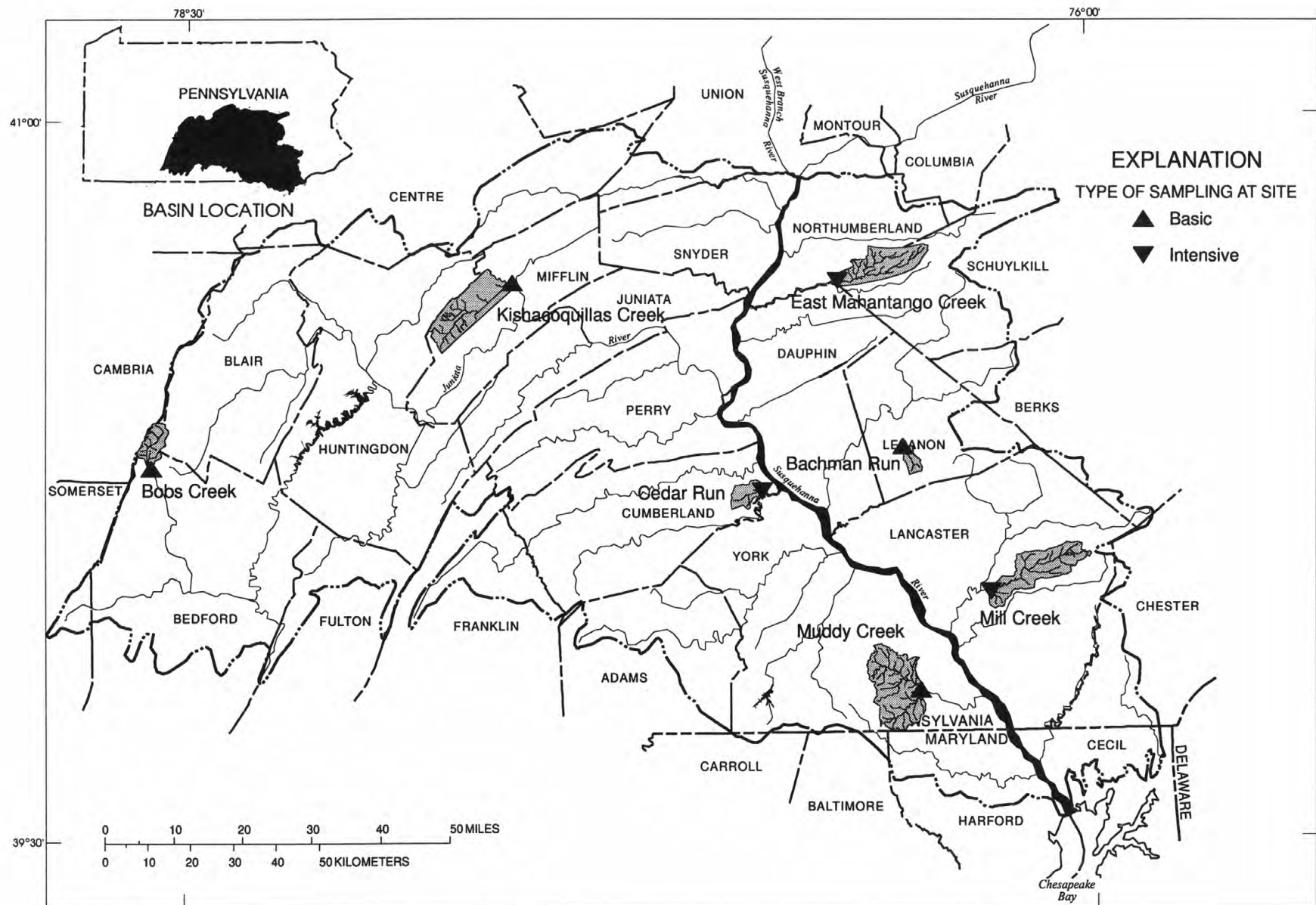


Figure 10. Location of fixed-station network drainage basins monitored by the Lower Susquehanna River Basin NAWQA program.

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1993 to current year.

TEMPERATURE: April 1993 to current year.

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the fixed-station network are shown in figure 10, page 111. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 2, page 116.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 206 microsiemens, Sept. 20, 1993; minimum, 50 microsiemens, Sept. 17, 1994.

WATER TEMPERATURE: Maximum, 28.0°C, July 8, 9, 1994; minimum, 0.0°C, many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 199 microsiemens, June 28; minimum, 50 microsiemens, Sept. 17.

WATER TEMPERATURE: Maximum, 28.0°C, July 8, 9; minimum, 0.0°C, many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM- PLING METHOD, CODES (82398)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT											
12...	1020	1028	80020	15	8010	10	15	175	7.4	8.5	746
26...	1020	1028	80020	15	3045	10	16	188	7.8	9.0	756
NOV											
08...	0845	1028	80020	15	3045	30	20	184	7.7	2.0	763
22...	0955	1028	80020	15	3045	10	25	189	7.9	3.0	757
DEC											
05...	1630	1028	80020	15	8010	70	707	155	7.0	--	--
14...	0925	1028	80020	15	3045	10	112	150	7.2	2.5	750
JAN											
10...	0845	1028	80020	15	3045	10	E 24	141	6.8	0.0	769
FEB											
15...	1015	1028	80020	15	3045	10	E 5.6	132	7.0	0.0	753
MAR											
25...	1030	1028	80020	15	3045	30	716	132	6.9	6.0	747
APR											
05...	0930	1028	80020	15	3045	10	220	88	7.1	6.0	750
19...	1020	1028	80020	15	3045	10	129	111	7.5	11.0	747
MAY											
03...	0945	1028	80020	15	3045	10	151	124	7.2	9.0	761
17...	1000	1028	80020	15	3045	10	48	111	7.6	11.5	750
JUN											
06...	0955	1028	80020	15	3045	10	14	121	7.2	18.5	748
06...	1935	1028	80020	15	3045	40	99	109	7.2	21.0	745
28...	0945	1028	80020	15	3045	10	90	191	8.2	20.0	748
JUL											
11...	0930	1028	80020	15	3045	10	15	146	7.4	20.5	761
26...	0850	1028	80020	15	3045	10	26	173	7.4	21.5	747
AUG											
10...	0930	1028	80020	15	3045	10	5.9	148	7.9	21.0	757
22...	1230	1028	80020	15	3045	10	156	173	7.6	19.0	748
SEP											
07...	0930	1028	80020	15	3045	10	16	151	7.8	15.0	751

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)
OCT												
12...	9.3	81	64	33	15	6.5	5.0	14	0.3	3.0	--	38
26...	11.1	97	68	36	16	6.7	5.3	14	0.3	2.1	--	38
NOV												
08...	12.2	88	67	44	16	6.6	4.8	13	0.3	2.3	--	28
22...	13.9	104	68	47	16	6.9	4.7	13	0.2	2.1	--	26
DEC												
05...	--	--	54	39	13	5.2	3.3	11	0.2	3.2	--	19
14...	12.8	95	55	44	13	5.5	3.6	12	0.2	1.8	--	14
JAN												
10...	13.9	94	50	35	12	4.8	4.3	15	0.3	1.5	--	18
FEB												
15...	13.5	93	43	30	10	4.4	4.3	17	0.3	1.5	--	17
MAR												
25...	11.0	90	44	36	10	4.6	2.5	11	0.2	1.8	--	10
APR												
05...	11.8	96	30	23	6.8	3.1	2.3	14	0.2	1.1	--	8
19...	11.4	106	39	24	8.8	4.0	3.1	14	0.2	1.3	--	17
MAY												
03...	11.5	99	43	31	9.9	4.4	2.9	12	0.2	1.4	--	14
17...	10.2	95	37	23	8.7	3.7	2.9	14	0.2	1.4	--	17
JUN												
06...	8.3	90	40	21	9.7	3.9	3.7	16	0.3	1.7	<0.010	23
06...	7.1	81	38	19	9.1	3.6	3.4	16	0.2	1.8	--	23
28...	8.0	90	70	44	18	6.1	4.5	11	0.2	4.4	<0.010	32
JUL												
11...	8.8	98	51	22	12	5.1	4.3	15	0.3	2.2	<0.010	35
26...	8.0	92	66	35	16	6.2	5.0	14	0.3	3.0	<0.010	37
AUG												
10...	8.3	94	53	22	13	5.0	4.9	16	0.3	2.3	<0.010	38
22...	8.2	90	65	33	16	6.0	5.1	14	0.3	3.9	0.020	39
SEP												
07...	10.0	100	54	29	13	5.3	4.5	15	0.3	2.1	<0.010	31

DATE	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT											
12...	0	31	14	9.7	0.1	4.0	103	101	0.14	4.17	5.59
26...	0	31	15	10	0.1	4.4	103	107	0.14	4.45	6.39
NOV											
08...	0	23	16	9.9	0.2	5.7	120	111	0.16	6.48	7.99
22...	0	21	16	13	0.1	5.8	117	116	0.16	7.90	8.79
DEC											
05...	0	15	16	5.9	0.2	5.4	91	102	0.12	174	--
14...	0	11	15	7.3	0.1	6.5	98	94	0.13	29.6	--
JAN											
10...	0	15	13	8.8	<0.1	6.3	87	87	0.12	--	--
FEB											
15...	0	13	13	8.4	<0.1	6.1	82	80	0.11	--	5.37
MAR											
25...	0	8	16	6.1	<0.1	4.9	72	78	0.10	139	6.19
APR											
05...	0	7	11	4.6	<0.1	4.6	49	52	0.07	29.1	--
19...	0	14	13	5.7	<0.1	4.7	88	68	0.12	30.7	--
MAY											
03...	0	12	14	6.2	<0.1	5.2	80	73	0.11	32.6	4.89
17...	0	14	12	6.5	<0.1	3.9	67	64	0.09	8.68	3.68
JUN											
06...	0	19	11	7.2	<0.1	4.5	80	68	0.11	3.02	3.27
06...	0	19	11	6.4	<0.1	4.3	68	64	0.09	18.2	2.97
28...	0	26	16	8.9	<0.1	6.1	130	98	0.18	31.6	4.03
JUL											
11...	0	29	12	8.4	<0.1	3.0	90	80	0.12	3.65	--
26...	0	30	14	9.4	<0.1	5.2	115	103	0.16	8.07	--
AUG											
10...	0	31	11	8.8	0.1	2.0	93	79	0.13	1.48	--
22...	0	32	14	9.0	0.1	7.1	114	104	0.16	48.0	5.28
SEP											
07...	0	26	13	8.4	<0.1	4.5	99	88	0.13	4.28	--

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT											
12...	25	0.010	0.03	5.60	0.020	0.03	--	0.40	<0.20	--	0.020
26...	28	0.010	0.03	6.40	<0.010	--	--	0.30	0.20	6.6	0.010
NOV											
08...	35	0.010	0.03	8.00	0.020	0.03	--	<0.20	<0.20	--	<0.010
22...	39	0.010	0.03	8.80	0.020	0.03	0.18	<0.20	0.20	9.0	0.010
DEC											
05...	--	<0.010	--	9.00	0.080	0.10	0.52	0.90	0.60	9.6	0.230
14...	--	<0.010	--	7.80	0.030	0.04	0.27	<0.20	0.30	8.1	0.010
JAN											
10...	--	<0.010	--	6.30	<0.010	--	--	<0.20	0.20	6.5	0.010
FEB											
15...	24	0.030	0.10	5.40	0.040	0.05	--	0.20	<0.20	--	0.030
MAR											
25...	27	0.010	0.03	6.20	0.050	0.06	--	<0.20	<0.20	--	0.050
APR											
05...	--	<0.010	--	3.30	0.010	0.01	--	<0.20	<0.20	--	0.040
19...	--	<0.010	--	4.30	<0.010	--	--	<0.20	<0.20	--	<0.010
MAY											
03...	22	0.010	0.03	4.90	0.020	0.03	--	0.30	<0.20	--	0.040
17...	16	0.020	0.07	3.70	0.040	0.05	--	0.30	<0.20	--	0.020
JUN											
06...	14	0.030	0.10	3.30	0.050	0.06	0.15	0.40	0.20	3.5	0.050
06...	13	0.030	0.10	3.00	0.100	0.13	0.30	1.1	0.40	3.4	0.170
28...	18	0.070	0.23	4.10	0.180	0.23	0.62	1.7	0.80	4.9	0.460
JUL											
11...	--	<0.010	--	3.60	0.020	0.03	0.28	0.30	0.30	3.9	0.040
26...	--	<0.010	--	5.80	<0.010	--	--	0.40	0.50	6.3	0.060
AUG											
10...	--	<0.010	--	2.90	0.030	0.04	0.37	0.30	0.40	3.3	0.040
22...	23	0.020	0.07	5.30	0.070	0.09	0.63	1.2	0.70	6.0	0.310
SEP											
07...	--	<0.010	--	4.80	0.030	0.04	--	0.30	<0.20	--	0.030

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
12...	<0.010	<0.010	--	46	23	--	11	0.2	2	0.08	90
26...	<0.010	0.030	0.09	23	9	--	6.6	0.2	4	0.17	71
NOV											
08...	<0.010	<0.010	--	20	9	80	3.2	0.2	2	0.11	83
22...	<0.010	<0.010	--	19	10	70	6.7	0.2	2	0.13	89
DEC											
05...	0.100	0.100	0.31	85	22	60	4.0	2.9	130	248	85
14...	0.020	0.020	0.06	24	20	50	1.1	0.2	13	3.9	76
JAN											
10...	<0.010	<0.010	--	19	11	50	1.2	0.2	5	--	68
FEB											
15...	0.010	0.010	0.03	17	10	30	1.0	0.3	6	--	73
MAR											
25...	0.020	0.030	0.09	45	29	50	1.6	1.8	169	327	70
APR											
05...	<0.010	<0.010	--	19	33	30	1.0	0.6	19	11	95
19...	<0.010	<0.010	--	17	16	50	--	0.4	7	2.4	100
MAY											
03...	<0.010	0.010	0.03	19	23	40	5.6	0.4	18	7.3	87
17...	<0.010	0.010	0.03	30	13	40	1.4	0.2	5	0.65	90
JUN											
06...	0.030	0.030	0.09	43	13	40	1.9	0.3	8	0.30	91
06...	0.040	<0.010	--	65	19	60	3.4	3.1	136	36	95
28...	0.120	0.110	0.34	110	13	70	5.5	>3.9	207	50	99
JUL											
11...	0.020	0.020	0.06	40	10	60	2.0	0.3	--	--	--
26...	0.050	0.020	0.06	47	15	60	2.6	0.3	9	0.63	97
AUG											
10...	0.030	0.030	0.09	36	10	70	2.4	0.4	3	0.05	92
22...	0.110	0.080	0.25	81	5	70	5.4	3.6	132	56	94
SEP											
07...	0.050	<0.010	--	28	8	70	1.5	0.2	13	0.56	63

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

REMARKS.--The following table contains data from the fixed-site ecological survey. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional targeted habitat (DTH). This site was sampled in three reaches. Site EFS06 begins 550 ft upstream of the bridge on SR 4002 and extends 726 ft upstream. Site EFS06.1 begins 1,600 ft upstream from the SR 4002 bridge and extends 954 ft upstream. Site EFS06.2 begins 3,293 ft upstream of the SR 4002 bridge and extends 878 ft upstream. Multiple reaches were assessed to determine variability in aquatic communities from reach-to-reach. The fixed station sites are shown in figure 18, page 300. Data from all sites sampled for the fixed-station ecological survey can be found on pages 301-303.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM VELOCITY, MEAN (F/S) (00055)	SPECIFIC CONDUCTANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)
EFS06 -RTH	01555400	06-13-94	1200	1028	80020	.892	139	--	22.0	--
QA -RTH		06-13-94	1235	1028	80020	.892	139	--	22.0	--
-DTH		06-13-94	1215	1028	80020	.208	139	--	22.0	--
QA -DTH		06-13-94	1230	1028	80020	.208	139	--	22.0	--
EFS06		06-13-94	1330	1028	1028	--	129	7.6	23.0	753
EFS06.1-RTH		06-14-94	1000	1028	80020	1.33	141	--	22.0	--
-DTH		06-14-94	1015	1028	80020	.037	141	--	22.0	--
EFS06.1		06-14-94	1130	1028	1028	--	134	7.8	26.0	751
EFS06.2-RTH		06-14-94	1500	1028	80020	1.75	140	--	26.0	--
-DTH		06-14-94	1515	1028	80020	.098	140	--	26.0	--
EFS06.2		06-14-94	1600	1028	1028	--	135	7.5	27.0	751

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	BICARBONATE WATER FIELD (MG/L AS HCO3) (00440)	CARBONATE WATER FIELD (MG/L AS CO3) (00445)	ALKALINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQM) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM) ()
EFS06 -RTH	06-13-94	--	--	--	--	--	8.8	2.9	240	250	10
QA -RTH	06-13-94	--	--	--	--	--	13	2.2	--	--	--
-DTH	06-13-94	--	--	--	--	--	3.3	.4	370	390	20
QA -DTH	06-13-94	--	--	--	--	--	--	--	1400	1400	0
EFS06	06-13-94	9.0	106	34	0	28	--	--	--	--	--
EFS06.1-RTH	06-14-94	--	--	--	--	--	15	4.7	270	280	10
-DTH	06-14-94	--	--	--	--	--	12	2.4	1000	1100	100
EFS06.1	06-14-94	8.7	109	31	0	25	--	--	--	--	--
EFS06.2-RTH	06-14-94	--	--	--	--	--	19	3.4	230	230	0
-DTH	06-14-94	--	--	--	--	--	4.9	.9	180	190	10
EFS06.2	06-14-94	8.6	107	28	0	23	--	--	--	--	--

WATER RESOURCES DATA - PENNSYLVANIA, 1994

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM (NAWQA)

TABLE 2.--PESTICIDE SCHEDULE FOR FIXED STATIONS

REMARKS.--Water samples from the three intensive fixed sites (figure 10, page 111) were analyzed for pesticides. The table below lists the 47 pesticides on the schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. The pesticide schedule includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid-phase extraction and are sufficiently volatile and thermally stable for analysis by gas chromatography. Water samples are filtered through a glass-fiber filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. This pesticide reporting level table is applicable only to surface-water samples collected at fixed stations during the 1994 water year. Only pesticide compounds measured at or above the following reporting levels are listed in the water-quality data tables.

ALACHLOR ($\mu\text{G/L}$) (46342)	ALPHA BHC ($\mu\text{G/L}$) (34253)	ATRAZINE ($\mu\text{G/L}$) (39632)	BENFLURALIN ($\mu\text{G/L}$) (82673)	BUTYLATE ($\mu\text{G/L}$) (04028)	CARBARYL ($\mu\text{G/L}$) (82680)
<0.009	<0.007	<0.017	<0.013	<0.008	<0.046
CARBOFURAN ($\mu\text{G/L}$) (82674)	CHLOR- PYRIFOS ($\mu\text{G/L}$) (38933)	CYANAZINE ($\mu\text{G/L}$) (04041)	DCPA ($\mu\text{G/L}$) (82682)	DESETHYL ATRAZINE ($\mu\text{G/L}$) (04040)	DIAZINON ($\mu\text{G/L}$) (39572)
<0.013	<0.008	<0.027	<0.005	<0.003	<0.008
DIELDRIN ($\mu\text{G/L}$) (39381)	DIETHYL- ANALINE-2,6 ($\mu\text{G/L}$) (82660)	DIMETHOATE ($\mu\text{G/L}$) (82662)	DISULFOTON ($\mu\text{G/L}$) (82677)	EPTC ($\mu\text{G/L}$) (82668)	ETHAL- FLURALIN ($\mu\text{G/L}$) (82663)
<0.02	<0.006	<0.024	<0.06	<0.01	<0.013
ETHOPROP ($\mu\text{G/L}$) (82672)	FONOFOS ($\mu\text{G/L}$) (04095)	LINDANE ($\mu\text{G/L}$) (39341)	LINURON ($\mu\text{G/L}$) (82666)	MALATHION ($\mu\text{G/L}$) (39532)	METHYL AZINPHOS ($\mu\text{G/L}$) (82686)
<0.012	<0.008	<0.011	<0.039	<0.014	<0.08
METHYL PARATHION ($\mu\text{G/L}$) (82667)	METOLACHLOR ($\mu\text{G/L}$) (39415)	METRIBUZIN ($\mu\text{G/L}$) (82630)	MOLINATE ($\mu\text{G/L}$) (82671)	NAPROP- AMIDE ($\mu\text{G/L}$) (82684)	P, P-DDE ($\mu\text{G/L}$) (34653)
<0.035	<0.009	<0.012	<0.007	<0.01	<0.02
PARATHION ($\mu\text{G/L}$) (39542)	PEBULATE ($\mu\text{G/L}$) (82669)	PENDI- METHALIN ($\mu\text{G/L}$) (82683)	PERMETHRIN- CIS ($\mu\text{G/L}$) (82687)	PHORATE ($\mu\text{G/L}$) (82664)	PROMETON ($\mu\text{G/L}$) (04037)
<0.022	<0.009	<0.018	<0.016	<0.02	<0.008
PRONAMIDE ($\mu\text{G/L}$) (82676)	PROPACHLOR ($\mu\text{G/L}$) (04024)	PROPANIL ($\mu\text{G/L}$) (82679)	PROPARGITE ($\mu\text{G/L}$) (82685)	SIMAZINE ($\mu\text{G/L}$) (04035)	TEBUTHIURON ($\mu\text{G/L}$) (82670)
<0.009	<0.015	<0.016	<0.01	<0.010	<0.015
TERBACIL ($\mu\text{G/L}$) (82665)	TERBUFOS ($\mu\text{G/L}$) (82675)	THIOBENCARB ($\mu\text{G/L}$) (82681)	TRIALATE ($\mu\text{G/L}$) (82678)	TRIFLURALIN ($\mu\text{G/L}$) (82661)	
<0.03	<0.012	<0.008	<0.008	<0.012	

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, ($\mu\text{G/L}$) (46342)	ATRA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (39632)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82680)	CARBO- FURAN WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82674)	CHLOR- PYRIFOS DIS- SOLVED ($\mu\text{G/L}$) (38933)	CYANA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (04041)	DCPA WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82682)	DESETHYL ATRA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (04040)	DI- AZINON, DIS- SOLVED ($\mu\text{G/L}$) (39572)
OCT											
12...	1020	15	<0.009	0.064	<0.046	<0.013	<0.008	0.052	<0.005	e 0.048	<0.008
26...	1020	16	<0.009	0.064	<0.046	<0.013	<0.008	0.031	<0.005	e 0.050	<0.008
NOV											
08...	0845	20	<0.009	0.059	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.070	<0.008
22...	0955	25	<0.009	0.055	<0.046	<0.013	<0.008	0.027	<0.005	e 0.056	<0.008
DEC											
05...	1630	707	0.035	0.120	<0.046	<0.013	<0.008	0.029	<0.005	e 0.051	<0.008
14...	0925	112	0.012	0.060	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.055	<0.008
JAN											
10...	0845	E 24	<0.009	0.040	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.034	<0.008
FEB											
15...	1015	E 5.6	<0.009	0.026	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.057	<0.008
MAR											
25...	1030	716	0.022	0.067	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.045	<0.008
APR											
05...	0930	220	<0.009	0.050	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.042	<0.008
19...	1020	129	<0.009	0.046	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.100	<0.008
MAY											
03...	0945	151	0.011	0.084	<0.046	0.035	<0.008	<0.027	0.018	e 0.051	<0.008
17...	1000	48	<0.009	0.150	<0.046	<0.013	<0.008	0.110	0.029	e 0.050	<0.008
JUN											
06...	0955	14	0.017	0.160	<0.046	<0.013	<0.008	0.056	<0.005	e 0.064	<0.008
06...	1935	99	0.069	0.820	<0.046	<0.013	<0.008	0.056	0.005	e 0.077	<0.008
28...	0945	90	0.210	3.20	0.046	0.310	0.013	1.20	0.720	e 0.300	<0.008
JUL											
11...	0930	15	0.027	0.670	<0.046	<0.013	<0.008	0.150	0.019	e 0.130	0.017
26...	0850	26	0.042	0.460	0.065	<0.013	<0.008	0.110	0.053	e 0.180	<0.008
AUG											
10...	0930	5.9	0.012	0.250	<0.046	<0.013	<0.008	<0.027	0.007	e 0.110	<0.008
22...	1230	156	0.036	0.380	0.650	0.043	<0.008	0.056	0.016	e 0.120	<0.008
SEP											
07...	0930	16	<0.009	0.100	<0.046	<0.013	<0.008	<0.027	<0.005	e 0.091	<0.008

DATE	EPTC WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82668)	ETHO- PROP WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82672)	FONOFOS WATER DISS REC ($\mu\text{G/L}$) (04095)	LIN- URON WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 μ GF, REC ($\mu\text{G/L}$) (82686)	METO- LACHLOR WATER DISSOLV ($\mu\text{G/L}$) (39415)	METRI- BUZIN SENCOR WATER DISSOLV ($\mu\text{G/L}$) (82630)	NAPROP- AMIDE WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82684)	PENDI- METH- ALIN WAT FLT 0.7 μ GF, REC ($\mu\text{G/L}$) (82683)	PRO- METON, WATER, DISS, REC ($\mu\text{G/L}$) (04037)	SI- MAZINE, WATER, DISS, REC ($\mu\text{G/L}$) (04035)
OCT											
12...	<0.010	<0.012	<0.008	<0.039	<0.080	0.130	<0.012	<0.010	<0.018	<0.008	0.016
26...	<0.010	<0.012	<0.008	<0.039	<0.080	0.130	<0.012	<0.010	<0.018	<0.008	<0.010
NOV											
08...	<0.010	<0.012	<0.008	<0.039	<0.080	0.130	<0.012	<0.010	<0.018	<0.008	<0.010
22...	<0.010	<0.012	<0.008	<0.039	<0.080	0.120	<0.012	<0.010	<0.018	<0.008	<0.010
DEC											
05...	<0.010	<0.012	<0.008	<0.039	<0.080	0.250	<0.012	0.067	<0.018	<0.008	<0.010
14...	<0.010	<0.012	<0.008	<0.039	<0.080	0.110	<0.012	<0.010	<0.018	<0.008	<0.010
JAN											
10...	<0.010	<0.012	<0.008	<0.039	<0.080	0.061	<0.012	<0.010	<0.018	<0.008	<0.010
FEB											
15...	<0.010	<0.012	<0.008	<0.039	<0.080	0.038	<0.012	<0.010	<0.018	<0.008	<0.010
MAR											
25...	<0.010	<0.012	<0.008	<0.039	<0.080	0.085	<0.012	<0.010	<0.018	<0.008	<0.010
APR											
05...	<0.010	<0.012	<0.008	<0.039	<0.080	0.070	<0.012	<0.010	<0.018	<0.008	<0.010
19...	<0.010	<0.012	<0.008	<0.039	<0.080	0.051	<0.012	<0.010	<0.018	<0.008	<0.010
MAY											
03...	<0.010	<0.012	<0.008	<0.039	<0.080	0.110	0.013	<0.010	<0.018	<0.008	0.011
17...	<0.010	<0.012	<0.008	<0.039	<0.080	0.320	<0.012	<0.010	<0.018	<0.008	<0.010
JUN											
06...	<0.010	<0.012	<0.008	<0.039	--	0.200	<0.012	<0.010	<0.018	<0.008	0.053
06...	<0.010	<0.012	<0.008	<0.039	--	0.690	<0.012	<0.010	<0.018	<0.008	0.045
28...	0.024	0.020	0.008	0.110	0.320	4.60	0.087	0.029	0.091	<0.008	0.960
JUL											
11...	<0.010	<0.012	<0.008	<0.039	<0.080	0.760	0.012	<0.010	<0.018	0.033	0.086
26...	<0.010	<0.012	<0.008	<0.039	<0.080	0.940	0.014	<0.010	<0.018	0.340	0.093
AUG											
10...	<0.010	<0.012	<0.008	<0.039	<0.080	0.310	<0.012	<0.010	<0.018	0.060	0.047
22...	<0.010	<0.012	<0.008	<0.039	0.410	0.730	<0.012	<0.010	<0.018	0.066	0.042
SEP											
07...	<0.010	<0.012	<0.008	<0.039	<0.080	0.120	<0.012	<0.010	<0.018	0.023	0.018

e Estimated.

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	189	185	187	191	168	181	141	138	140	139	129	133
2	198	131	182	195	191	193	142	140	141	129	126	127
3	---	---	---	195	193	194	145	142	144	128	126	127
4	192	184	187	193	190	192	148	144	146	130	127	128
5	193	189	191	190	186	188	166	140	149	133	128	130
6	191	187	188	186	184	185	169	160	165	135	131	134
7	189	184	186	184	181	182	160	150	153	134	126	130
8	186	181	184	182	179	180	152	145	148	129	126	127
9	184	178	182	180	176	178	145	140	143	136	128	131
10	181	178	179	177	174	176	140	136	138	138	136	137
11	180	177	179	175	172	174	151	138	145	138	132	135
12	180	93	169	174	171	173	153	150	151	132	127	129
13	---	---	---	173	167	170	150	144	147	127	126	126
14	---	---	---	169	166	167	145	140	143	128	125	126
15	---	---	---	170	167	169	140	137	138	135	128	131
16	---	---	---	170	166	169	138	134	136	140	135	139
17	---	---	---	170	156	165	135	131	133	140	138	139
18	---	---	---	182	154	170	132	130	131	138	133	135
19	---	---	---	187	181	185	132	129	130	133	129	132
20	---	---	---	187	185	186	134	132	133	131	129	130
21	---	---	---	187	185	186	152	127	135	131	130	130
22	---	---	---	185	181	183	164	152	158	131	130	131
23	---	---	---	182	178	180	165	162	164	131	129	130
24	---	---	---	179	174	176	163	157	160	129	127	128
25	---	---	---	176	172	174	157	151	155	134	127	130
26	---	---	---	174	170	172	156	151	153	147	133	141
27	184	178	180	172	132	165	158	151	155	155	147	152
28	181	176	179	181	124	154	152	142	146	156	128	143
29	180	176	178	178	147	154	146	143	144	147	133	142
30	179	155	169	147	140	143	148	140	143	149	147	148
31	170	163	167	---	---	---	143	138	140	149	146	147
MONTH	198	93	180	195	124	175	169	127	145	156	125	134

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	146	144	145	128	126	127	106	104	105	---	---	---
2	144	143	143	128	127	127	105	102	103	---	---	---
3	144	141	142	128	127	128	103	96	99	---	---	---
4	141	138	139	127	125	126	96	89	91	116	109	112
5	139	135	137	126	124	125	90	84	87	110	106	108
6	136	133	134	124	123	123	87	84	86	110	104	107
7	133	131	132	123	122	122	107	85	97	107	100	104
8	131	130	131	126	122	123	110	107	109	126	102	117
9	130	130	130	133	126	130	108	104	106	123	119	121
10	131	130	130	134	131	133	106	103	105	122	115	118
11	130	129	130	136	133	135	113	105	109	116	111	113
12	129	127	128	135	134	134	117	113	115	112	108	110
13	127	126	126	134	133	133	119	116	117	116	108	112
14	126	125	126	133	132	133	126	119	124	116	110	112
15	129	125	127	133	132	132	122	110	115	111	109	110
16	128	128	128	134	133	133	111	104	107	111	109	110
17	129	128	128	134	133	133	114	108	112	113	108	109
18	131	129	130	133	131	132	114	110	112	112	108	109
19	132	131	132	131	130	131	110	104	108	111	107	109
20	133	132	133	131	129	130	106	103	105	111	107	110
21	134	132	133	130	129	129	105	102	103	112	109	110
22	134	132	133	131	130	130	105	102	103	114	111	112
23	134	132	133	132	129	131	104	102	103	115	112	113
24	133	131	132	133	131	132	106	103	104	130	113	116
25	132	131	131	131	122	128	---	---	---	133	103	121
26	131	130	130	123	119	120	---	---	---	130	120	124
27	130	128	129	121	119	120	---	---	---	126	121	123
28	128	127	128	120	112	117	---	---	---	123	119	121
29	---	---	---	112	105	108	---	---	---	121	118	120
30	---	---	---	107	105	106	---	---	---	121	118	120
31	---	---	---	107	105	106	---	---	---	123	119	120
MONTH	146	125	132	136	105	126	126	84	105	133	100	114

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	123	120	121	185	182	183	158	154	156	161	154	157
2	122	120	121	184	181	183	157	128	152	161	152	156
3	122	119	120	184	163	176	153	147	152	161	150	154
4	122	118	120	166	158	162	155	150	152	161	148	153
5	121	118	119	168	159	162	155	142	149	---	---	---
6	145	94	119	171	154	164	149	146	148	176	147	156
7	167	140	158	166	154	158	149	143	147	174	146	154
8	164	152	156	170	159	166	149	146	147	156	146	150
9	152	146	149	169	142	161	149	144	146	---	---	---
10	147	142	143	160	147	153	148	144	146	---	---	---
11	142	136	139	152	143	147	148	144	146	---	---	---
12	138	126	133	147	141	144	152	144	146	---	---	---
13	140	129	135	145	139	143	151	145	147	---	---	---
14	143	132	140	146	125	140	181	75	138	---	---	---
15	149	140	143	140	137	139	161	141	155	---	---	---
16	150	125	146	146	131	138	173	159	168	---	---	---
17	173	134	159	155	146	151	173	124	158	153	50	142
18	168	141	158	153	148	151	178	146	168	156	71	142
19	189	167	182	150	143	147	181	178	180	176	156	165
20	189	173	176	147	143	145	180	177	179	180	166	170
21	178	168	171	146	106	137	179	162	171	169	163	166
22	170	159	164	142	117	137	173	158	167	170	89	156
23	161	153	157	143	93	134	178	172	176	171	133	156
24	161	129	155	176	132	157	176	169	172	176	171	175
25	152	125	148	179	175	177	170	162	166	176	173	174
26	155	143	149	178	171	174	165	159	161	176	111	156
27	161	119	151	173	158	169	163	157	158	175	166	171
28	199	160	188	162	157	159	161	150	155	179	150	156
29	194	155	173	163	161	162	163	133	152	---	---	---
30	184	176	182	165	159	162	---	---	---	---	---	---
31	---	---	---	162	156	159	162	155	158	---	---	---
MONTH	199	94	149	185	93	156	181	75	157	180	50	158
YEAR	199	50	143									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	11.0	8.0	10.0	7.0	5.5	6.5	6.0	4.0	5.0	.0	.0	.0
2	13.5	10.5	12.0	7.0	4.5	6.0	7.0	5.0	6.0	.0	.0	.0
3	14.0	12.5	13.5	7.5	5.5	6.5	7.5	6.5	7.0	.0	.0	.0
4	13.5	10.5	12.0	8.5	6.0	7.5	7.5	7.0	7.0	.0	.0	.0
5	13.0	11.0	12.0	10.5	8.0	9.0	8.5	7.5	8.0	.0	.0	.0
6	11.5	8.5	10.5	10.5	7.5	9.0	8.0	7.0	7.5	.0	.0	.0
7	14.0	10.0	12.0	7.5	4.5	6.5	8.0	7.5	8.0	.0	.0	.0
8	15.0	11.5	13.0	5.0	2.5	4.0	7.5	6.0	7.0	.0	.0	.0
9	15.0	12.5	14.0	5.0	2.0	3.5	6.0	4.5	5.5	.0	.0	.0
10	13.5	9.0	11.5	5.0	2.0	3.5	7.5	5.5	6.5	.0	.0	.0
11	9.5	6.5	8.5	5.0	2.0	3.5	7.5	3.5	6.0	.0	.0	.0
12	10.0	8.5	9.0	7.5	3.5	5.5	3.5	1.5	2.5	.0	.0	.0
13	---	---	---	7.0	4.5	5.5	4.0	2.5	3.0	.0	.0	.0
14	---	---	---	10.0	7.0	8.5	4.5	3.0	4.0	.0	.0	.0
15	11.0	8.5	9.5	13.0	10.0	11.5	6.5	4.5	5.5	.0	.0	.0
16	12.0	8.5	10.5	11.5	8.0	10.0	6.5	4.5	6.0	.0	.0	.0
17	13.5	11.5	12.5	9.5	7.5	8.5	4.5	2.5	3.0	.0	.0	.0
18	15.0	12.0	13.5	9.5	7.0	8.5	4.0	2.0	3.0	.0	.0	.0
19	12.0	9.5	11.0	7.5	6.5	7.0	5.0	4.0	4.5	.0	.0	.0
20	12.5	11.0	12.0	7.5	4.5	6.5	5.0	4.5	4.5	.0	.0	.0
21	13.5	12.0	12.5	4.5	2.5	3.5	4.5	3.5	4.0	.0	.0	.0
22	12.0	9.5	11.0	5.5	3.0	4.0	3.5	2.5	3.0	.0	.0	.0
23	10.5	7.0	9.0	5.0	2.5	4.0	4.0	3.0	3.5	.0	.0	.0
24	10.5	6.5	8.5	6.5	4.0	5.0	3.5	1.5	2.0	.0	.0	.0
25	11.0	7.0	9.0	6.5	3.5	5.5	2.0	1.0	1.5	.0	.0	.0
26	10.5	8.5	9.5	3.5	1.5	3.0	1.5	.0	.0	.0	.0	.0
27	12.0	10.0	11.0	8.5	3.5	5.0	.0	.0	.0	.0	.0	.0
28	11.0	8.0	9.5	11.0	8.5	10.0	.0	.0	.0	.0	.0	.0
29	10.0	7.0	8.5	8.5	7.5	8.0	.0	.0	.0	.0	.0	.0
30	9.0	8.5	8.5	7.5	6.0	6.5	.0	.0	.0	.0	.0	.0
31	8.5	7.0	7.5	---	---	---	.0	.0	.0	.0	.0	.0
MONTH	15.0	6.5	10.7	13.0	1.5	6.4	8.5	.0	4.0	.0	.0	.0

EAST MAHANTANGO CREEK BASIN

01555400 EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	.0	.0	.0	2.0	.0	1.0	10.0	5.5	7.5	16.5	12.0	15.0
2	.0	.0	.0	1.5	.0	.5	10.0	6.0	8.0	13.5	9.5	11.5
3	.0	.0	.0	.5	.0	.5	9.5	7.5	8.5	12.5	9.0	11.0
4	.0	.0	.0	.5	.0	.0	10.0	7.0	8.5	12.0	11.0	11.5
5	.0	.0	.0	2.0	.5	1.0	11.5	6.0	9.0	16.5	11.0	13.5
6	.0	.0	.0	2.5	1.0	2.0	11.0	9.0	10.0	16.0	12.5	14.0
7	.0	.0	.0	5.0	2.0	3.5	10.0	8.0	9.0	14.5	11.0	12.5
8	.0	.0	.0	4.5	3.5	4.0	10.5	5.0	8.0	12.5	11.0	11.5
9	.0	.0	.0	3.5	1.5	2.5	11.0	6.5	9.0	15.0	9.5	12.5
10	.0	.0	.0	4.0	1.5	2.5	10.5	9.5	10.0	15.5	13.0	14.0
11	.0	.0	.0	5.5	3.5	4.0	11.5	7.5	9.5	15.5	10.5	13.0
12	.0	.0	.0	6.0	2.5	4.0	11.0	9.0	9.5	15.5	12.0	14.0
13	.0	.0	.0	6.5	3.5	5.0	10.0	8.5	9.0	15.0	9.5	12.5
14	.0	.0	.0	7.0	5.0	6.0	13.5	8.5	10.5	16.0	10.0	13.0
15	.0	.0	.0	6.0	5.0	5.5	15.5	9.5	12.5	15.0	12.5	14.0
16	.0	.0	.0	5.5	4.0	4.5	14.5	11.0	12.5	16.0	13.0	15.0
17	.0	.0	.0	4.5	2.0	3.5	11.0	8.0	9.5	13.0	11.0	11.5
18	.0	.0	.0	4.0	2.5	3.0	13.0	7.5	10.5	12.0	10.5	11.0
19	.0	.0	.0	5.0	2.5	4.0	14.5	11.0	13.0	11.5	10.5	11.0
20	.0	.0	.0	6.0	3.0	4.5	14.5	11.0	13.0	15.0	10.5	12.5
21	3.0	.0	1.0	6.0	3.5	4.5	14.0	9.5	12.0	18.0	10.5	14.5
22	5.0	3.0	4.0	7.0	4.0	5.5	13.5	8.5	11.0	20.5	13.5	17.0
23	4.5	1.5	2.5	8.0	4.5	6.0	13.5	8.0	11.0	21.5	16.0	18.5
24	4.0	2.5	3.0	8.0	5.5	6.5	16.0	9.0	12.5	21.0	16.5	19.0
25	3.5	1.5	2.5	7.5	5.5	6.5	17.5	12.0	15.0	19.5	17.5	18.5
26	3.5	2.0	3.0	8.0	5.0	6.0	20.0	14.0	17.0	18.0	16.0	17.0
27	2.0	.0	.5	6.5	5.0	5.5	21.5	16.0	19.0	17.5	13.5	15.0
28	.5	.0	.0	6.5	6.0	6.0	20.0	16.0	18.0	17.0	11.0	14.0
29	---	---	---	7.0	5.5	6.5	16.5	15.0	15.5	19.5	12.5	16.0
30	---	---	---	8.0	5.0	6.5	18.0	14.5	16.0	21.5	15.0	18.5
31	---	---	---	8.0	4.5	6.0	---	---	---	22.5	17.0	20.0
MONTH	5.0	.0	.6	8.0	.0	4.1	21.5	5.0	11.5	22.5	9.0	14.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	22.5	19.0	20.5	22.0	18.5	20.0	25.0	21.5	23.0	20.5	18.0	19.5
2	20.5	15.5	18.0	23.5	19.0	21.0	26.0	22.0	23.5	19.0	16.0	17.5
3	20.5	14.5	17.5	22.5	20.5	21.5	26.0	22.0	23.5	18.0	14.5	16.5
4	21.5	15.0	18.0	24.0	20.0	22.0	26.5	22.0	24.0	18.5	15.5	16.5
5	21.0	17.0	19.0	24.5	21.5	23.0	24.5	19.0	22.0	17.5	14.0	16.0
6	22.5	18.5	20.0	26.5	22.0	24.0	21.0	15.5	18.5	17.0	13.0	15.0
7	23.5	19.5	21.0	26.5	22.0	24.5	21.0	15.5	18.5	17.5	14.5	16.0
8	21.0	17.0	19.5	28.0	24.0	26.0	22.0	16.5	19.5	18.5	14.0	16.0
9	21.0	14.5	17.5	28.0	24.5	26.0	24.0	18.0	21.0	18.5	14.5	16.5
10	22.0	16.0	19.0	26.0	23.0	24.5	23.5	20.5	22.0	17.5	15.0	16.5
11	19.0	17.5	18.0	24.0	20.0	22.0	20.5	19.0	20.0	16.0	12.5	14.5
12	21.0	17.0	18.5	24.5	19.0	21.5	22.0	19.0	20.5	16.5	12.0	14.0
13	24.5	19.0	21.5	26.5	20.5	23.0	24.5	20.0	22.5	18.5	13.5	16.0
14	26.5	21.0	23.5	24.5	22.0	23.0	23.5	21.0	22.5	19.0	16.0	17.5
15	27.5	22.0	25.0	26.5	22.0	24.0	21.0	18.0	19.5	18.5	17.0	18.0
16	27.5	23.0	25.0	25.5	22.5	24.0	20.0	16.0	18.0	21.5	18.0	19.5
17	26.0	23.0	24.5	24.5	20.0	22.5	19.5	19.0	19.5	20.0	19.0	19.5
18	27.5	23.0	25.0	24.5	22.0	23.0	19.5	19.0	19.5	19.0	17.0	18.5
19	26.5	23.0	24.5	27.0	22.0	24.5	20.5	18.0	19.0	17.5	14.0	15.5
20	26.0	21.0	23.5	27.5	23.0	25.5	22.0	19.0	20.5	17.0	13.0	15.0
21	24.5	21.5	23.0	26.5	24.5	25.0	22.0	21.0	21.0	17.0	13.0	15.0
22	25.5	21.0	23.0	26.0	23.5	24.5	21.0	18.0	19.5	15.5	14.5	15.0
23	26.0	20.0	22.5	25.0	22.5	23.5	18.5	15.5	17.0	15.5	14.5	15.0
24	25.5	22.5	24.0	24.5	21.0	23.0	18.5	15.5	17.0	17.5	15.5	16.5
25	24.5	22.0	23.5	24.5	22.0	23.0	19.5	16.5	18.0	18.0	16.5	17.0
26	24.5	19.5	22.0	23.5	21.0	22.5	20.5	18.5	19.0	18.0	17.0	17.5
27	23.5	21.0	22.0	23.0	21.0	22.0	21.5	18.0	19.5	17.5	16.5	17.0
28	22.0	20.0	21.0	21.0	20.0	20.5	22.0	18.5	20.0	17.0	14.5	15.0
29	22.0	20.0	21.0	23.5	19.0	21.0	22.0	19.0	20.5	14.5	13.0	13.5
30	21.5	19.0	20.0	25.0	21.0	23.0	19.5	16.5	18.0	14.0	11.5	13.0
31	---	---	---	24.5	21.0	22.5	19.5	17.5	18.5	---	---	---
MONTH	27.5	14.5	21.4	28.0	18.5	23.1	26.5	15.5	20.2	21.5	11.5	16.3
YEAR	28.0	.0	11.1									

JUNIATA RIVER BASIN

01556000 FRANKSTOWN BRANCH JUNIATA RIVER AT WILLIAMSBURG, PA

LOCATION.--Lat 40°27'47", long 78°12'00", Blair County, Hydrologic Unit 02050302, on left bank 10 ft downstream from highway bridge on SR 2015 at Williamsburg, and 2.5 mi upstream from Clover Creek.

DRAINAGE AREA.--291 mi².

PERIOD OF RECORD.--October 1916 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WDR PA-71-1: 1954(M), 1960(M), 1961(M). WDR PA-77-2: 1936-39(M)

GAGE.--Water-stage recorder. Datum of gage is 831.78 ft above sea level (Penn Central Railroad bench mark). Prior to Aug. 14, 1928, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation at low flow by mill above station. Several measurements of water temperature were made during the year. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 19.1 ft, from floodmark, discharge, about 35,500 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	322	692	e150	487	556	1800	458	186	108	93	150
2	124	230	553	e140	365	517	2060	346	174	98	89	133
3	113	193	480	e140	e300	508	2520	304	168	94	242	122
4	103	179	e421	e130	e270	562	2470	305	159	96	116	121
5	96	171	e1800	e130	e250	548	1850	304	155	96	121	115
6	91	201	1180	e125	e230	545	1770	303	152	93	138	110
7	e88	173	856	e150	e270	507	2470	319	154	94	101	106
8	e84	160	660	e190	248	1160	1660	1760	146	110	91	101
9	e80	148	555	166	e220	1120	1240	962	142	97	88	97
10	e76	141	e760	e150	e210	1440	1230	714	137	89	86	93
11	e74	137	1060	e140	e200	1280	1320	573	135	86	84	91
12	e90	134	719	e130	e190	1010	1140	556	146	84	85	88
13	104	142	602	e125	e190	979	1410	465	134	84	107	88
14	92	e185	530	e120	e180	1160	1480	392	126	83	147	87
15	94	214	483	e110	e180	1830	1150	353	121	88	173	143
16	100	175	435	e110	e200	2620	1040	366	120	86	109	123
17	113	182	366	e105	e220	1560	820	335	118	82	300	103
18	142	445	329	e100	e230	1200	670	300	117	81	1500	205
19	126	289	410	e98	e250	960	588	278	120	81	391	124
20	123	257	350	e96	695	853	519	264	116	83	256	102
21	151	221	361	e92	2960	1180	464	248	133	97	245	93
22	154	195	344	e90	3470	3390	420	232	125	106	1850	91
23	132	176	299	e88	2280	4330	385	217	108	155	885	135
24	120	165	274	e110	1650	6100	359	210	105	106	462	121
25	114	155	263	e140	1200	7480	339	359	107	93	331	103
26	111	144	236	e180	934	3750	318	325	103	89	263	97
27	107	e146	e210	e300	713	4300	303	276	106	84	217	107
28	106	e8900	e190	e500	606	4420	281	230	112	107	209	96
29	106	2750	e180	e1100	---	3240	314	214	105	97	209	97
30	110	1140	e170	819	---	2550	381	202	113	88	176	94
31	252	---	e160	599	---	2020	---	193	---	82	153	---
TOTAL	3532	18070	15928	6623	19198	63675	32771	12363	3943	2917	9317	3336
MEAN	114	602	514	214	686	2054	1092	399	131	94.1	301	111
MAX	252	8900	1800	1100	3470	7480	2520	1760	186	155	1850	205
MIN	74	134	160	88	180	507	281	193	103	81	84	87
CFSM	.39	2.07	1.77	.73	2.36	7.06	3.75	1.37	.45	.32	1.03	.38
IN.	.45	2.31	2.04	.85	2.45	8.14	4.19	1.58	.50	.37	1.19	.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1994, BY WATER YEAR (WY)

	181	267	372	412	549	907	779	521	304	184	144	134
MEAN	181	267	372	412	549	907	779	521	304	184	144	134
MAX	969	937	1268	1446	1340	3561	2194	1314	1743	824	738	648
(WY)	1977	1986	1973	1937	1971	1936	1993	1924	1972	1989	1956	1945
MIN	45.9	48.0	52.4	61.3	86.0	263	215	127	83.0	49.7	46.9	45.9
(WY)	1931	1931	1931	1918	1934	1990	1925	1934	1965	1965	1966	1932

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1917 - 1994

ANNUAL TOTAL	198564	191673	395
ANNUAL MEAN	544	525	670
HIGHEST ANNUAL MEAN			1972
LOWEST ANNUAL MEAN			200
HIGHEST DAILY MEAN	8900	Nov 28	25000
LOWEST DAILY MEAN	68	Sep 15	31
ANNUAL SEVEN-DAY MINIMUM	71	Sep 11	32
INSTANTANEOUS PEAK FLOW		12300	Nov 28
INSTANTANEOUS PEAK STAGE		16.03	Nov 28
INSTANTANEOUS LOW FLOW			13
ANNUAL RUNOFF (CFSM)	1.87	1.80	1.36
ANNUAL RUNOFF (INCHES)	25.38	24.50	18.46
10 PERCENT EXCEEDS	1210	1260	880
50 PERCENT EXCEEDS	190	185	204
90 PERCENT EXCEEDS	83	92	71

a Using estimated daily values.

b From rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmark in gage.

e Estimated.

JUNIATA RIVER BASIN

01557500 BALD EAGLE CREEK AT TYRONE, PA

LOCATION.--Lat 40°41'01", long 78°14'02", Blair County, Hydrologic Unit 02050302, on left bank 0.2 mi upstream from plant of West Virginia Pulp and Paper Co. at Tyrone, 0.2 mi upstream from Laurel Run, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--44.1 mi².

PERIOD OF RECORD.--October 1944 to current year. Prior to October 1967, published as South Bald Eagle Creek at Tyrone.

REVISED RECORDS.--WSP 1903: 1954(M). WDR PA-75-2: 1974.

GAGE.--Water-stage recorder. Datum of gage is 921.80 ft above sea level. Oct. 1, 1944, to Nov. 15, 1950, water-stage recorder, and Nov. 16, 1950, to Nov. 30, 1952, nonrecording gage at site 0.5 mi downstream at datum 17.99 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to Nov. 30, 1952, daily discharges were affected by diversion of West Virginia Pulp and Paper Co. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 15 ft, Mar. 17 or 18, 1936, site and datum in use prior to Dec. 1, 1952.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	72	141	e30	147	e76	280	460	44	20	8.8	e31
2	19	51	111	e29	124	e70	366	366	44	19	8.7	e28
3	17	47	95	e28	e105	e64	472	219	42	19	8.5	e26
4	15	43	200	e27	e90	e70	441	172	41	18	8.3	e25
5	14	48	301	e26	e80	e66	354	152	39	18	8.2	e23
6	13	55	198	e25	e72	61	364	140	38	17	8.2	e22
7	12	50	146	e24	e64	59	456	131	38	16	8.0	e21
8	12	47	114	e23	e58	96	305	876	38	16	7.9	e19
9	11	44	93	e22	e52	96	234	406	37	15	7.7	e18
10	11	42	201	e22	e48	108	273	252	36	15	7.6	e18
11	10	40	166	e21	e44	95	254	186	35	14	7.4	e17
12	11	37	128	e21	e41	88	290	168	34	14	7.2	e17
13	11	53	105	e20	e39	88	411	155	33	13	7.1	e16
14	10	83	91	e20	e37	109	546	140	32	13	7.0	e16
15	10	111	83	e19	e35	166	385	127	31	12	6.8	e27
16	10	73	70	e19	e37	204	304	115	30	12	6.8	e24
17	25	119	60	e18	e40	145	245	104	30	11	8.6	e21
18	39	150	57	e18	e44	119	189	94	29	11	69	e40
19	22	114	59	e18	e48	94	162	86	28	12	73	e30
20	40	106	52	e18	e52	87	145	79	27	11	60	e22
21	54	86	58	e17	e330	165	130	74	27	11	52	e18
22	41	75	55	e17	350	467	116	69	26	11	78	e17
23	32	67	49	e17	243	574	105	65	25	11	94	e24
24	28	62	45	e21	194	736	97	60	24	10	80	e21
25	26	56	e43	e31	147	704	92	57	24	10	e66	e19
26	24	51	e41	e50	120	406	86	56	23	10	e56	e17
27	23	511	e38	e80	e100	582	80	54	22	9.8	e49	e18
28	22	1280	e37	e130	e86	501	75	51	22	9.6	e44	e17
29	21	364	e34	e250	---	398	92	49	21	9.5	e39	e16
30	27	210	e33	221	---	335	318	47	20	9.2	e36	e15
31	66	---	e32	178	---	276	---	45	---	9.1	e33	---
TOTAL	698	4147	2936	1460	2827	7105	7667	5055	940	406.2	961.8	643
MEAN	22.5	138	94.7	47.1	101	229	256	163	31.3	13.1	31.0	21.4
MAX	66	1280	301	250	350	736	546	876	44	20	94	40
MIN	10	37	32	17	35	59	75	45	20	9.1	6.8	15
CFSM	.51	3.13	2.15	1.07	2.29	5.20	5.80	3.70	.71	.30	.70	.49
IN.	.59	3.50	2.48	1.23	2.38	5.99	6.47	4.26	.79	.34	.81	.54

e Estimated.

JUNIATA RIVER BASIN

01557500 BALD EAGLE CREEK AT TYRONE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.5	55.9	77.1	79.8	102	167	149	110	66.0	31.8	21.9	22.9
MAX	178	216	217	226	251	364	399	304	377	138	99.8	125
(WY)	1991	1951	1973	1952	1981	1945	1993	1978	1972	1956	1956	1975
MIN	4.10	5.95	6.43	10.9	15.9	48.1	34.0	23.8	12.1	5.41	4.15	3.59
(WY)	1964	1954	1966	1981	1963	1990	1946	1976	1965	1965	1966	1965

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1945 - 1994	
ANNUAL TOTAL	36663.6		34846.0		76.3	
ANNUAL MEAN	100		95.5		133	
HIGHEST ANNUAL MEAN					46.7	
LOWEST ANNUAL MEAN					1951	
HIGHEST DAILY MEAN	1280	Mar 30	1280	Nov 28	2800	Jun 23 1972
LOWEST DAILY MEAN	e4.9	Aug 27-31	6.8	Aug 15,16	1.4	Sep 13 1973
ANNUAL SEVEN-DAY MINIMUM	a5.0	Aug 25	7.1	Aug 10	1.7	Sep 7 1973
INSTANTANEOUS PEAK FLOW			b2950	Nov 28	b5140	Nov 25 1950
INSTANTANEOUS PEAK STAGE			6.33	Nov 28	c7.50	Nov 25 1950
INSTANTANEOUS LOW FLOW			6.6	Aug 16,17	1.4	Sep 12 1973
ANNUAL RUNOFF (CFSM)	2.28		2.16		1.73	
ANNUAL RUNOFF (INCHES)	30.93		29.39		23.52	
10 PERCENT EXCEEDS	237		253		174	
50 PERCENT EXCEEDS	40		44		41	
90 PERCENT EXCEEDS	7.1		11		7.8	

a Using estimated daily discharges.

b From rating curve extended above 2,100 ft³/s on basis of contracted-opening measurement of peak flow.

c From floodmark, site and datum then in use.

e Estimated.

JUNIATA RIVER BASIN

01559000 JUNIATA RIVER AT HUNTINGDON, PA

LOCATION.--Lat 40°29'05", long 78°01'09", Huntingdon County, Hydrologic Unit 02050302, on right bank 170 ft downstream from Smithfield Bridge on State Highway 26 at Huntingdon, and 0.8 mi upstream from Standing Stone Creek.

DRAINAGE AREA.--816 mi².

PERIOD OF RECORD.--October 1941 to current year. Gage-height records collected in this vicinity for the period May 1895 to December 1938 are contained in reports of U.S. Weather Bureau. Prior to October 1950, published as Frankstown Branch Juniata River at Huntingdon.

REVISED RECORDS.--WDR PA-73-1: 1936(M). WDR PA-80-2: 1972(M). WDR PA-84-2: 1936(M) 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 599.69 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Flow regulated September 1941 to June 1972, and since December 15, 1985 by Warrior Ridge Hydroelectric Plant 4 mi upstream (reservoir capacity 400 acre-ft). Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.87 ft, from floodmark, discharge, 81,000 ft³/s, from rating curve extended on basis of computation of peak discharge at dam and runoff comparison with downstream station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	455	797	2240	e500	1150	1430	5230	1600	639	426	369	657
2	370	625	1730	e470	904	1290	5720	1440	605	388	424	590
3	352	508	1460	e450	e780	1190	6760	1250	575	377	546	541
4	317	421	1370	e430	e700	1390	6860	1210	554	362	519	520
5	304	446	3820	e410	e620	1330	5470	1190	536	362	440	507
6	291	500	3110	e400	e560	1340	5030	1140	533	373	522	481
7	282	499	2300	e380	e500	1210	6320	1150	614	445	451	466
8	281	441	1830	e370	e480	2030	4910	3850	567	444	395	446
9	266	414	1540	e410	e470	2400	3880	2880	517	418	385	427
10	275	392	1910	e450	e450	2740	3600	2280	494	374	367	414
11	258	380	2900	e500	e440	2780	4040	1900	485	358	356	398
12	274	364	1980	e420	e430	2250	3690	1780	492	351	358	387
13	278	374	1670	e450	e420	2180	3900	1670	489	347	387	380
14	283	695	1480	e500	e420	2350	4360	1370	463	354	461	375
15	264	697	1350	568	e410	3410	3520	1250	447	373	668	423
16	270	608	1230	515	e440	5490	3160	1270	449	369	483	512
17	287	590	1070	e460	e480	3690	2700	1200	449	353	597	433
18	368	1210	958	e420	e500	2920	2260	1080	433	344	4010	905
19	334	1040	991	e390	e620	2400	2050	1010	439	392	1530	618
20	339	892	982	e370	e900	2060	1810	945	434	357	951	465
21	394	780	907	e350	e4000	2430	1620	891	437	360	808	420
22	418	656	939	e330	7080	7080	1490	838	464	397	2380	402
23	370	603	827	e320	4970	9780	1390	764	418	476	2490	452
24	320	556	742	e310	3610	14000	1280	764	396	464	1320	516
25	309	511	690	e560	2830	18000	1220	1010	395	404	1000	441
26	306	471	661	e540	2240	10600	1160	1090	390	395	868	430
27	289	577	602	e530	1740	10900	1100	980	386	365	758	443
28	292	18800	606	e1000	1510	11800	1020	803	406	382	797	427
29	284	8440	622	e2200	---	8920	1180	735	399	426	899	409
30	295	3420	569	1920	---	7210	1560	695	408	393	861	409
31	463	---	e540	1410	---	5920	---	664	---	367	695	---
TOTAL	9888	46707	43626	18333	39654	152520	98290	40699	14313	11996	27095	14294
MEAN	319	1557	1407	591	1416	4920	3276	1313	477	387	874	476
MAX	463	18800	3820	2200	7080	18000	6860	3850	639	476	4010	905
MIN	258	364	540	310	410	1190	1020	664	386	344	356	375
CFSM	.39	1.91	1.72	.72	1.74	6.03	4.02	1.61	.58	.47	1.07	.58
IN.	.45	2.13	1.99	.84	1.81	6.95	4.48	1.86	.65	.55	1.24	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1994, BY WATER YEAR (WY)

	MEAN	543	770	1064	1108	1435	2298	2072	1477	970	572	454	430
MAX	2114	2577	3100	2655	3059	4920	5739	3217	5562	1920	1447	1571	
(WY)	1991	1951	1973	1949	1971	1994	1993	1978	1972	1989	1956	1975	
MIN	146	233	232	265	379	693	747	528	312	201	163	143	
(WY)	1964	1964	1966	1981	1963	1969	1946	1976	1965	1966	1966	1963	
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR						FOR 1994 WATER YEAR			WATER YEARS 1942 - 1994			
ANNUAL TOTAL	529787						517415						
ANNUAL MEAN	1451						1418			1097			
HIGHEST ANNUAL MEAN										1830			
LOWEST ANNUAL MEAN										595			
HIGHEST DAILY MEAN	18800						18800			50400			
LOWEST DAILY MEAN	253						258			40			
ANNUAL SEVEN-DAY MINIMUM	267						271			117			
INSTANTANEOUS PEAK FLOW							a24700			a57000			
INSTANTANEOUS PEAK STAGE							13.07			20.03			
INSTANTANEOUS LOW FLOW							149			b14			
ANNUAL RUNOFF (CFSM)	1.78						1.74			1.34			
ANNUAL RUNOFF (INCHES)	24.15						23.59			18.27			
10 PERCENT EXCEEDS	3370						3460			2350			
50 PERCENT EXCEEDS	581						567			653			
90 PERCENT EXCEEDS	289						358			264			

a From rating curve extended above 22,000 ft³/s on basis of computation of peak discharge at dam, slope-conveyance study, and Pennsylvania Department of Environmental Resources step-backwater study.

b Minimum recorded; Also Aug. 2, 1954.

c Estimated.

JUNIATA RIVER BASIN

01559795 BOBS CREEK NEAR PAVIA, PA
(National water-quality assessment station)

LOCATION.--Lat 40°16'21", long 78°35'55", Bedford County, Hydrologic Unit 02050303, on left bank 0.7 mi upstream from highway bridge on SR 869, 0.8 mi upstream from Wallacks Branch, and 1.3 mi northwest of Pavia at Blue Knob State Park.

DRAINAGE AREA.--16.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1993 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,510 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	13	80	e10	e16	e30	144	27	14	3.7	3.0	13
2	7.6	12	58	e12	e11	e26	260	22	13	3.2	4.4	10
3	7.5	13	45	e11	e10	e30	434	23	12	8.5	9.5	9.4
4	6.3	17	48	e9.8	e12	e29	409	26	11	6.8	4.8	8.9
5	5.7	24	120	e9.0	e15	e25	300	25	9.9	4.4	8.1	8.1
6	5.2	28	130	e7.0	e16	e23	355	26	9.4	3.8	6.9	7.3
7	4.7	27	99	e7.4	e15	e22	527	36	8.9	9.2	5.6	7.2
8	4.3	24	73	e8.0	e14	50	269	139	8.2	6.5	5.0	6.5
9	4.2	21	55	e7.0	e12	58	185	122	7.7	4.5	4.7	6.0
10	4.0	19	72	e6.0	e10	60	244	88	6.9	4.0	4.2	5.6
11	3.8	17	75	e6.0	e8.0	54	245	65	9.2	3.5	3.9	5.2
12	5.8	16	76	e6.6	e9.0	49	184	57	8.6	3.2	3.8	5.0
13	4.8	21	65	e7.8	e11	46	235	42	6.6	3.0	4.3	4.8
14	4.2	24	53	e8.6	e12	50	208	35	6.0	3.0	7.2	4.7
15	3.9	23	44	e7.4	e10	71	157	31	5.6	4.9	6.1	5.1
16	3.7	23	37	e5.4	e11	106	118	33	5.3	3.4	4.3	4.6
17	5.3	34	30	e5.2	e12	88	82	29	5.2	2.8	62	4.6
18	6.4	55	27	e5.6	e14	74	63	26	5.1	2.8	92	7.3
19	4.7	55	26	e4.6	22	59	52	25	5.0	2.5	50	4.5
20	5.5	52	23	e3.5	48	50	42	23	4.4	2.6	37	4.1
21	8.5	41	22	e3.3	268	61	37	22	5.9	4.0	35	3.8
22	6.9	34	20	e3.4	291	187	33	21	4.7	11	286	3.7
23	6.2	29	19	e5.2	176	321	29	19	4.0	10	158	5.0
24	6.1	26	17	e11	114	537	26	19	3.8	5.8	83	4.2
25	6.0	23	e16	e15	79	579	23	27	3.7	4.6	55	3.8
26	5.9	20	e16	e12	63	287	21	22	3.6	4.0	39	3.8
27	5.9	151	e13	e9.0	e50	260	19	19	4.6	3.9	29	3.7
28	5.8	800	e11	e8.2	e40	381	18	18	4.7	5.3	23	3.5
29	5.6	296	e12	e7.8	---	282	19	17	3.8	3.9	22	4.2
30	8.0	131	e12	e32	---	178	20	16	5.4	3.4	16	3.4
31	14	---	e11	e25	---	131	---	15	---	3.0	15	---
MEAN	5.98	69.0	45.3	9.03	48.9	136	159	36.0	6.87	4.68	35.1	5.70
MAX	14	800	130	32	291	579	527	139	14	11	286	13
MIN	3.7	12	11	3.3	8.0	22	18	15	3.6	2.5	3.0	3.4
CFSM	.36	4.15	2.73	.54	2.95	8.17	9.55	2.17	.41	.28	2.11	.34
IN.	.42	4.64	3.15	.63	3.07	9.42	10.66	2.50	.46	.33	2.44	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	MEAN	5.98	69.0	45.3	9.03	48.9	136	159	36.0	11.8	4.45	20.0	5.01
MAX	5.98	69.0	45.3	9.03	48.9	136	159	36.0	16.8	4.68	35.1	5.70	
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1993	1994	1994	1994	
MIN	5.98	69.0	45.3	9.03	48.9	136	159	36.0	6.87	4.21	4.92	4.32	
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1993	1993	1993	

SUMMARY STATISTICS

FOR 1994 WATER YEAR

WATER YEARS 1993 - 1994

ANNUAL MEAN	46.6	46.6	
HIGHEST ANNUAL MEAN		46.6	1994
LOWEST ANNUAL MEAN		46.6	1994
HIGHEST DAILY MEAN	800	Nov 28	800
LOWEST DAILY MEAN	2.5	Jul 19	1.2
ANNUAL SEVEN-DAY MINIMUM	3.1	Jul 14	1.4
INSTANTANEOUS PEAK FLOW	1220	Nov 28	1220
INSTANTANEOUS PEAK STAGE	10.50	Nov 28	10.50
INSTANTANEOUS LOW FLOW	2.4	Jul 19	1.2
ANNUAL RUNOFF (CFSM)	2.80		2.80
ANNUAL RUNOFF (INCHES)	38.09		38.11
10 PERCENT EXCEEDS	125		79
50 PERCENT EXCEEDS	13		9.1
90 PERCENT EXCEEDS	4.0		2.5

e Estimated.

JUNIATA RIVER BASIN

01559795 BOBS CREEK NEAR PAVIA, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1993 to current year.

WATER TEMPERATURE: December 1993 to current year.

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the fixed-station network are shown in figure 10, page 111.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 93 microsiemens, April 2; minimum recorded, 51 microsiemens, August 17.

WATER TEMPERATURE: Maximum, 22.5°C, July 20; minimum, 0.0°C, many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL-LECTING	AGENCY ANA-LYZING	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC	SPE-CIFIC CON-DUCT-ANCE	PH WATER WHOLE FIELD (STAND-ARD	TEMPER-ATURE WATER	BARO-METRIC PRES-SURE	
		SAMPLE (CODE NUMBER) (00027)	SAMPLE (CODE NUMBER) (00028)				FEET PER SECOND (00061)	(μS/CM) (00095)	(UNITS) (00400)	(DEG C) (00010)	(MM OF HG) (00025)	
OCT												
20...	1135	1028	80020	15	3045	10	5.6	78	7.1	10.5	727	
NOV												
04...	1035	1028	80020	15	3045	10	15	83	7.4	6.0	723	
DEC												
09...	1000	1028	80020	15	3045	10	58	65	7.1	4.0	727	
JAN												
25...	1110	1028	80020	15	3045	30	15	65	7.0	0.0	728	
MAR												
15...	1110	1028	80020	15	3045	10	57	71	7.0	4.5	712	
APR												
28...	1215	1028	80020	15	3045	10	18	62	7.4	13.5	732	
MAY												
12...	1150	1028	80020	15	3045	10	61	61	7.3	10.0	720	
25...	1540	1028	80020	15	3045	10	25	65	7.2	13.0	717	
JUN												
16...	1035	1028	80020	15	3045	10	5.3	70	7.4	18.0	731	
JUL												
07...	1100	1028	80020	15	3045	10	3.5	71	7.2	19.5	725	
AUG												
01...	1315	1028	80020	15	3045	10	2.9	71	7.7	19.5	729	
DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	BICAR-BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)
OCT												
20...	9.9	93	27	10	6.4	2.7	2.2	14	0.2	1.2	--	21
NOV												
04...	12.6	107	28	15	6.5	2.8	3.0	18	0.2	1.1	--	15
DEC												
09...	12.1	97	23	17	5.4	2.3	1.6	13	0.1	0.9	--	7
JAN												
25...	13.7	98	22	14	5.2	2.2	2.0	16	0.2	1.1	--	10
MAR												
15...	11.8	98	23	16	5.5	2.2	2.5	19	0.2	0.8	--	8
APR												
28...	9.8	98	20	12	4.8	2.0	1.8	15	0.2	0.9	--	10
MAY												
12...	9.9	93	20	14	4.8	2.0	1.8	15	0.2	0.9	--	8
25...	8.7	88	21	11	5.1	2.1	2.0	16	0.2	1.0	<0.010	13
JUN												
16...	8.5	94	25	12	5.7	2.5	2.2	16	0.2	1.2	<0.010	15
JUL												
07...	8.3	96	24	9	5.6	2.4	2.2	16	0.2	1.3	<0.010	18
AUG												
01...	7.4	84	26	5	6.0	2.6	2.5	17	0.2	1.1	0.020	26

JUNIATA RIVER BASIN

01559795 BOBS CREEK NEAR PAVIA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)
OCT 20...	0	17	11	4.5	0.2	4.4	47	43	0.06	0.71	--
NOV 04...	0	13	12	6.2	0.1	4.7	47	47	0.06	1.93	--
DEC 09...	0	6	13	2.8	0.1	5.6	38	40	0.05	5.98	--
JAN 25...	0	8	11	3.4	<0.1	4.9	39	40	0.05	1.63	1.19
MAR 15...	0	7	13	4.3	<0.1	4.6	37	42	0.05	5.69	0.980
APR 28...	0	8	12	3.0	<0.1	4.1	37	36	0.05	1.80	--
MAY 12...	0	6	12	2.6	<0.1	4.8	39	36	0.05	6.42	--
MAY 25...	0	10	12	2.9	<0.1	4.9	39	39	0.05	2.62	0.660
JUN 16...	0	13	11	3.1	<0.1	5.7	45	42	0.06	0.64	--
JUL 07...	0	14	11	3.3	<0.1	5.6	46	43	0.06	0.43	--
AUG 01...	0	21	11	3.1	0.1	4.4	32	45	0.04	0.25	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L) AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L) AS N) (00602)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)
OCT 20...	--	<0.010	--	0.100	<0.010	--	--	<0.20	<0.20	--	<0.010
NOV 04...	--	<0.010	--	0.670	0.020	0.03	0.28	<0.20	0.30	0.97	<0.010
DEC 09...	--	<0.010	--	1.20	0.010	0.01	--	<0.20	<0.20	--	<0.010
JAN 25...	5.3	0.010	0.03	1.20	<0.010	--	--	<0.20	<0.20	--	<0.010
MAR 15...	4.3	0.020	0.07	1.00	<0.010	--	--	<0.20	<0.20	--	<0.010
APR 28...	--	<0.010	--	0.670	0.010	0.01	--	<0.20	<0.20	--	<0.010
MAY 12...	--	<0.010	--	0.800	<0.010	--	--	<0.20	<0.20	--	<0.010
MAY 25...	2.9	0.020	0.07	0.680	0.060	0.08	--	<0.20	<0.20	--	0.020
JUN 16...	--	<0.010	--	0.560	0.020	0.03	--	<0.20	<0.20	--	0.030
JUL 07...	--	<0.010	--	0.540	0.030	0.04	--	<0.20	<0.20	--	0.020
AUG 01...	--	<0.010	--	0.410	0.020	0.03	--	<0.20	<0.20	--	0.020

JUNIATA RIVER BASIN

01559795 BOBS CREEK NEAR PAVIA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (µG/L AS SR) (01080)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PENDE- TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE- (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 20...	<0.010	<0.010	--	17	5	--	2.0	0.2	1	0.02	67
NOV 04...	<0.010	<0.010	--	12	3	40	1.3	0.2	2	0.08	67
DEC 09...	0.020	0.010	0.03	8	3	30	0.9	0.1	9	1.4	25
JAN 25...	<0.010	<0.010	--	8	2	30	1.6	0.1	1	0.04	50
MAR 15...	<0.010	<0.010	--	7	1	40	1.0	0.2	5	0.77	45
APR 28...	<0.010	<0.010	--	7	2	30	1.5	0.2	<1	--	100
MAY 12...	<0.010	<0.010	--	10	3	20	1.2	0.2	6	0.99	69
MAY 25...	0.020	0.020	0.06	11	4	30	--	--	6	0.40	68
JUN 16...	0.010	0.010	0.03	17	6	30	1.4	0.3	1	0.01	--
JUL 07...	0.010	0.020	0.06	13	5	20	1.4	0.4	7	0.07	62
AUG 01...	0.020	0.020	0.06	14	4	20	1.1	0.3	2	0.02	86

REMARKS.--The following table contains data from the fixed-site ecological survey. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional targeted habitat (DTH). This site was sampled in three reaches described from a reference hub established 136 feet downstream from the gage. Site EFS01 begins at the hub and extends 686 ft upstream; site EFS01.1 begins 762 ft upstream of the hub and extends 710 ft upstream; and site EFS01.2 begins 1,472 feet upstream from the hub and extends 561 ft upstream. Multiple reaches were assessed to determine variability in aquatic communities from reach-to-reach. The fixed-station sites are shown in figure 18, page 300. Data from all sites sampled for the fixed-station ecological survey can be found on pages 301-303.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	STREAM VELOC-ITY, MEAN (F/S) (00055)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (DEG C) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)
EFS01 -RTH	01559795	06-20-94	1400	1028	80020	.954	71	--	21.5	--
QA -RTH		06-20-94	1430	1028	80020	.954	71	--	21.5	--
-DTH		06-20-94	1415	1028	80020	.051	71	--	21.5	--
QA -DTH		06-20-94	1445	1028	80020	.051	71	--	21.5	--
EFS01		06-20-94	1600	1028	1028	--	64	6.8	21.5	726
EFS01.1-RTH		06-21-94	1200	1028	80020	.711	69	--	20.5	--
-DTH		06-21-94	1215	1028	80020	.125	69	--	20.5	--
EFS01.1		06-21-94	1400	1028	1028	--	61	6.9	20.5	723
EFS01.2-RTH		06-22-94	1500	1028	80020	.533	70	--	21.0	--
-DTH		06-22-94	1515	1028	80020	.203	70	--	21.0	--
EFS01.2		06-21-94	1400	1028	1028	--	61	7.1	20.0	723

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (PER-CENT) (00301)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HC03) (00440)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3) (00445)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CAC03) (00410)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQM) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM) ()
EFS01 -RTH	06-20-94	--	--	--	--	--	2.3	1.2	250	260	10
QA -RTH	06-20-94	--	--	--	--	--	2.2	1.3	--	--	--
-DTH	06-20-94	--	--	--	--	--	3.9	1.3	380	410	30
QA -DTH	06-20-94	--	--	--	--	--	6.1	1.9	--	--	--
EFS01	06-20-94	7.6	89	18	0	14	6.2	2.4	180	190	10
EFS01.1-RTH	06-21-94	--	--	--	--	--	7.6	2.9	190	200	10
-DTH	06-21-94	--	--	--	--	--	--	--	--	--	--
EFS01.1	06-21-94	8.8	105	15	0	13	--	--	--	--	--
EFS01.2-RTH	06-22-94	--	--	--	--	--	0.9	0.4	230	230	0
-DTH	06-22-94	--	--	--	--	--	4.4	2.1	510	580	70
EFS01.2	06-21-94	8.5	99	14	0	17	--	--	--	--	--

JUNIATA RIVER BASIN

01559795 BOBS CREEK NEAR PAVIA, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, DECEMBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	---	---	---	63	61	62
2	---	---	---	---	---	---	---	---	---	62	60	61
3	---	---	---	---	---	---	---	---	---	62	61	62
4	---	---	---	---	---	---	---	---	---	62	61	61
5	---	---	---	---	---	---	---	---	---	63	61	62
6	---	---	---	---	---	---	---	---	---	63	62	63
7	---	---	---	---	---	---	---	---	---	62	60	61
8	---	---	---	---	---	---	---	---	---	62	59	60
9	---	---	---	---	---	---	---	---	---	62	60	61
10	---	---	---	---	---	---	62	57	60	64	62	63
11	---	---	---	---	---	---	62	59	60	64	62	63
12	---	---	---	---	---	---	59	59	59	62	60	61
13	---	---	---	---	---	---	60	59	59	61	60	61
14	---	---	---	---	---	---	60	59	60	61	60	61
15	---	---	---	---	---	---	60	59	60	64	61	63
16	---	---	---	---	---	---	60	60	60	64	63	63
17	---	---	---	---	---	---	61	60	60	64	63	63
18	---	---	---	---	---	---	61	60	61	63	62	63
19	---	---	---	---	---	---	63	59	61	64	63	64
20	---	---	---	---	---	---	64	62	63	64	63	64
21	---	---	---	---	---	---	62	60	61	64	63	64
22	---	---	---	---	---	---	62	61	62	63	62	63
23	---	---	---	---	---	---	63	62	62	64	62	63
24	---	---	---	---	---	---	63	62	62	62	60	61
25	---	---	---	---	---	---	63	61	62	---	---	---
26	---	---	---	---	---	---	65	62	64	---	---	---
27	---	---	---	---	---	---	67	63	65	70	67	68
28	---	---	---	---	---	---	64	62	63	67	60	63
29	---	---	---	---	---	---	65	63	64	82	64	76
30	---	---	---	---	---	---	64	63	63	75	68	71
31	---	---	---	---	---	---	67	62	64	69	66	68
MONTH	---	---	---	---	---	---	67	57	62	82	59	63

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	68	66	66	64	62	63	---	---	---	68	63	66
2	68	66	67	64	62	63	93	84	90	66	63	64
3	80	64	67	63	60	62	84	74	80	65	63	64
4	65	63	64	62	59	60	74	67	70	65	62	64
5	65	63	64	61	59	60	68	66	67	65	63	64
6	65	64	65	63	61	62	67	64	65	65	62	64
7	66	64	65	63	60	62	65	61	62	65	60	63
8	67	65	66	69	60	67	66	60	63	65	62	64
9	66	64	65	67	62	64	69	66	67	64	63	63
10	66	64	65	66	61	62	69	67	68	64	63	63
11	65	64	65	66	63	64	70	66	68	65	63	64
12	64	63	64	65	63	64	70	69	70	65	61	63
13	64	62	63	66	64	65	71	67	70	62	61	62
14	64	63	64	68	64	65	---	---	---	63	61	62
15	72	63	66	70	64	67	---	---	---	64	62	63
16	67	64	66	70	65	67	---	---	---	64	61	63
17	68	66	66	66	64	65	---	---	---	63	62	63
18	71	66	68	65	63	64	---	---	---	63	62	63
19	77	67	72	65	63	64	---	---	---	64	61	63
20	83	70	77	67	64	65	---	---	---	64	62	63
21	82	67	73	72	64	67	---	---	---	63	62	62
22	67	63	65	73	65	68	---	---	---	64	62	63
23	65	61	62	---	---	---	67	59	62	68	64	65
24	65	63	63	---	---	---	61	56	58	67	65	66
25	65	63	64	---	---	---	63	60	61	69	63	66
26	64	63	63	---	---	---	64	62	63	66	64	65
27	66	63	65	---	---	---	64	60	62	66	63	64
28	65	63	64	---	---	---	65	62	63	65	63	64
29	---	---	---	---	---	---	65	62	64	65	63	64
30	---	---	---	---	---	---	68	64	65	67	64	65
31	---	---	---	---	---	---	---	---	---	67	64	65
MONTH	83	61	66	73	59	64	93	56	67	69	60	64

JUNIATA RIVER BASIN

01559795 BOBS CREEK NEAR PAVIA, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, DECEMBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	66	64	65	72	71	71	74	71	73	63	61	62
2	65	64	64	72	71	72	74	67	72	63	61	62
3	67	64	65	72	58	69	77	65	72	63	62	62
4	67	65	66	71	64	70	72	67	70	63	61	62
5	68	65	66	72	70	71	69	64	66	63	61	62
6	68	66	67	72	70	72	72	69	70	63	61	62
7	68	67	68	73	61	70	69	66	67	64	62	63
8	68	67	68	74	72	72	67	65	66	64	63	63
9	68	67	68	74	72	73	67	65	66	64	62	63
10	69	68	68	74	72	73	68	65	66	66	63	64
11	70	68	69	73	72	73	67	65	66	65	62	63
12	71	69	70	73	72	73	68	65	66	66	63	64
13	71	70	70	74	72	73	68	66	67	66	63	64
14	72	70	71	74	72	73	71	67	69	67	64	66
15	73	71	72	74	70	72	75	69	72	69	65	67
16	73	70	72	75	73	74	72	68	70	70	66	68
17	72	70	71	75	72	73	70	51	65	69	66	68
18	73	70	72	75	72	73	66	63	64	71	64	67
19	73	71	72	74	72	73	64	63	64	70	65	68
20	73	71	72	76	72	74	67	62	64	69	66	68
21	73	70	71	74	68	71	68	63	66	69	65	67
22	73	72	73	71	56	68	67	59	61	72	66	69
23	73	72	72	75	66	73	61	59	60	72	69	70
24	76	71	72	74	71	73	61	60	60	75	71	73
25	73	71	72	74	72	73	61	60	61	76	71	73
26	72	70	71	73	71	72	62	61	61	76	69	74
27	72	69	71	73	70	72	62	61	61	76	71	73
28	71	69	70	73	70	71	62	61	62	77	70	73
29	72	70	71	74	71	73	63	61	62	74	70	71
30	71	67	69	75	71	73	63	61	62	73	71	72
31	---	---	---	74	71	73	63	61	62	---	---	---
MONTH	76	64	70	76	56	72	77	51	66	77	61	67

WATER TEMPERATURE, DEGREES CELSIUS, DECEMBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	---	---	---	.0	.0	.0
2	---	---	---	---	---	---	---	---	---	.0	.0	.0
3	---	---	---	---	---	---	---	---	---	.5	.0	.5
4	---	---	---	---	---	---	---	---	---	.0	.0	.0
5	---	---	---	---	---	---	---	---	---	.0	.0	.0
6	---	---	---	---	---	---	---	---	---	.0	.0	.0
7	---	---	---	---	---	---	---	---	---	.0	.0	.0
8	---	---	---	---	---	---	---	---	---	.0	.0	.0
9	---	---	---	---	---	---	---	---	---	.0	.0	.0
10	---	---	---	---	---	---	6.0	5.0	5.5	.0	.0	.0
11	---	---	---	---	---	---	6.0	1.5	4.0	.0	.0	.0
12	---	---	---	---	---	---	2.5	1.0	2.0	.0	.0	.0
13	---	---	---	---	---	---	4.5	2.5	3.0	.0	.0	.0
14	---	---	---	---	---	---	5.0	3.5	4.0	.5	.0	.0
15	---	---	---	---	---	---	5.5	4.0	5.0	.0	.0	.0
16	---	---	---	---	---	---	5.5	3.5	5.0	.0	.0	.0
17	---	---	---	---	---	---	3.5	3.0	3.5	.0	.0	.0
18	---	---	---	---	---	---	4.0	3.0	3.5	.0	.0	.0
19	---	---	---	---	---	---	3.5	3.5	3.5	.0	.0	.0
20	---	---	---	---	---	---	3.5	3.0	3.5	.0	.0	.0
21	---	---	---	---	---	---	3.0	.5	1.5	.0	.0	.0
22	---	---	---	---	---	---	1.5	.0	1.0	.0	.0	.0
23	---	---	---	---	---	---	2.0	1.0	1.5	.0	.0	.0
24	---	---	---	---	---	---	1.0	.0	.5	.0	.0	.0
25	---	---	---	---	---	---	.5	.0	.0	---	---	---
26	---	---	---	---	---	---	.0	.0	.0	---	---	---
27	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
28	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
29	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
30	---	---	---	---	---	---	.0	.0	.0	1.5	.0	.5
31	---	---	---	---	---	---	.0	.0	.0	2.0	.5	1.5
MONTH	---	---	---	---	---	---	6.0	.0	2.1	2.0	.0	.1

JUNIATA RIVER BASIN

01560000 DUNNING CREEK AT BELDEN, PA

LOCATION.--Lat 40°04'18", long 78°29'34", Bedford County, Hydrologic Unit 02050303, on left bank 10 ft upstream from highway bridge on SR 1014, 0.8 mi southeast of Belden, 3.8 mi north of Bedford, and 4.3 mi upstream from mouth.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--May 1939 to current year. Prior to October 1939 monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WSP 971: 1940(M). WSP 1502: 1940-41. WDR PA-72-1: 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 1,051.16 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 17.8 ft, Mar. 18, 1936, from floodmarks (backwater from Raystown Branch Juniata River), discharge, about 16,900 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	201	437	e72	379	368	903	261	89	32	23	54
2	42	158	321	e68	282	328	1020	198	78	28	21	46
3	38	132	260	e66	251	295	1280	186	70	26	45	41
4	34	123	273	e62	216	371	1260	196	64	39	35	39
5	30	121	1400	e60	197	471	911	193	59	34	38	38
6	27	134	958	e60	176	447	853	188	55	39	63	34
7	26	125	616	e58	159	446	1150	192	54	32	36	31
8	25	110	410	e58	e140	1090	814	1140	48	81	27	29
9	24	99	313	e56	e130	1080	588	832	48	40	23	26
10	22	91	435	e56	e125	1270	586	547	46	31	21	25
11	22	84	478	e54	e115	1030	639	385	43	26	19	23
12	26	78	362	e52	e110	819	560	365	53	24	18	21
13	39	98	320	e52	e105	762	896	279	45	22	e23	21
14	31	284	279	e52	e100	912	1030	222	39	21	e52	20
15	28	192	251	e56	e96	1540	822	196	36	26	e40	20
16	26	161	225	e90	e92	2060	673	235	38	25	e30	21
17	28	160	182	e130	e90	1130	477	199	51	20	e210	21
18	54	358	162	e120	e120	855	370	177	37	23	e860	26
19	47	268	193	e100	e160	679	316	163	34	31	e190	26
20	46	250	165	e90	e430	649	271	151	36	20	e120	20
21	80	202	167	e80	1770	1030	232	135	41	26	98	18
22	73	167	161	e80	2330	3450	203	121	52	58	787	17
23	58	145	149	e80	1530	3500	179	109	37	64	551	21
24	51	132	139	e110	1090	3920	162	98	33	42	288	23
25	47	119	132	e200	801	4120	147	208	33	30	194	22
26	43	107	116	e350	626	2060	134	192	32	26	150	22
27	41	430	e100	e700	500	2250	123	178	30	23	117	26
28	39	6480	e96	916	445	2410	111	146	36	32	93	23
29	37	1930	e88	1620	---	1880	123	129	35	32	78	20
30	40	740	e82	1010	---	1370	179	113	32	24	66	20
31	135	---	e76	740	---	1050	---	100	---	21	56	---
TOTAL	1312	13679	9346	7308	12565	43642	17012	7834	1384	998	4372	794
MEAN	42.3	456	301	236	449	1408	567	253	46.1	32.2	141	26.5
MAX	135	6480	1400	1620	2330	4120	1280	1140	89	81	860	54
MIN	22	78	76	52	90	295	111	98	30	20	18	17
CFSM	.25	2.65	1.75	1.37	2.61	8.18	3.30	1.47	.27	.19	.82	.15
IN.	.28	2.96	2.02	1.58	2.72	9.44	3.68	1.69	.30	.22	.95	.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	MEAN	99.1	159	249	253	353	564	453	270	165	89.9	57.3	54.1
MAX	798	702	859	664	825	1408	1370	662	1015	740	214	367	
(WY)	1977	1986	1973	1952	1971	1994	1993	1960	1972	1989	1979	1945	
MIN	14.0	18.3	20.0	45.8	65.2	129	112	45.7	25.6	8.96	8.05	9.86	
(WY)	1970	1954	1944	1981	1963	1990	1946	1941	1965	1966	1966	1985	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1940 - 1994

ANNUAL TOTAL	125484	120246	230	1972
ANNUAL MEAN	344	329	107	1954
HIGHEST ANNUAL MEAN			378	
LOWEST ANNUAL MEAN			107	
HIGHEST DAILY MEAN	6480	Nov 28	9140	Jun 23 1972
LOWEST DAILY MEAN	15	Aug 28-31	6.4	Sep 6 1964
ANNUAL SEVEN-DAY MINIMUM	16	Aug 25	6.7	Aug 5 1966
INSTANTANEOUS PEAK FLOW		a9690	Nov 28	Jul 20 1977
INSTANTANEOUS PEAK STAGE		12.10	Nov 28	Jul 20 1977
INSTANTANEOUS LOW FLOW		17	Sep 22	Sep 6 1964
ANNUAL RUNOFF (CFSM)	2.00	1.92	2.6	1.34
ANNUAL RUNOFF (INCHES)	27.14	26.01	18.15	
10 PERCENT EXCEEDS	787	911	566	
50 PERCENT EXCEEDS	96	110	98	
90 PERCENT EXCEEDS	22	25	20	

a From rating curve extended above 9,200 ft³/s on basis of contracted-opening measurement at gage height 12.67 ft and contracted-opening and flow-over-road measurement at gage height 13.03 ft.

e Estimated.

JUNIATA RIVER BASIN

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA

LOCATION.--Lat 40°12'57", long 78°15'56", Bedford County, Hydrologic Unit 02050303, on left bank 500 ft downstream from bridge on State Highway 913, 0.5 mi west of Saxton, and 1.5 mi upstream from Shoup Run.

DRAINAGE AREA.--756 mi².

PERIOD OF RECORD.--September 1911 to current year. Monthly discharge only for September 1911 published in WSP 1302.

REVISED RECORDS.--WSP 1302: 1912-13(M), 1914-15. WSP 1502: 1934, 1936.

GAGE.--Water-stage recorder. Datum of gage is 795.77 ft above sea level. Prior to Oct. 1, 1931, nonrecording gage at site 0.8 mi downstream at datum 4.82 ft lower.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 23.0 ft at present site and datum, from floodmarks, discharge, about 71,300 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	467	1910	e240	4500	1310	3380	966	383	162	141	266
2	192	620	1300	e230	2950	1160	2940	1160	354	152	179	250
3	173	486	972	e230	e2300	1050	2910	917	333	148	164	262
4	154	400	883	e220	e1900	1260	2960	837	315	148	156	228
5	142	360	1880	e210	e1500	1320	2620	840	302	152	174	210
6	135	344	3460	e220	e1200	1660	2100	802	298	211	200	199
7	128	345	2310	e290	e1150	1510	2140	757	293	337	202	191
8	122	344	1640	e350	e2100	2970	2120	1610	265	230	223	179
9	119	304	1190	e410	e3500	4320	1610	2430	254	200	176	169
10	117	273	1200	351	e2700	4640	1450	1780	243	228	153	163
11	113	252	1600	357	e2100	5000	1660	1450	242	167	141	155
12	130	210	1400	e310	e1700	3510	1500	1190	247	138	142	149
13	146	211	1070	e270	e3600	2990	1930	1090	235	125	e145	145
14	146	280	955	e230	3110	3000	4480	912	241	118	e310	140
15	149	499	945	e210	e2000	4510	3260	796	218	121	e220	145
16	150	435	802	e190	e1500	7510	2650	775	203	137	e180	150
17	142	381	766	e190	e1100	4910	2140	766	208	125	e800	145
18	141	417	604	e290	e800	3420	1730	684	238	125	e3000	149
19	133	627	591	e250	e700	2740	1440	630	225	122	e820	148
20	155	552	641	e210	e1200	2300	1280	590	198	131	e740	142
21	196	501	636	e180	e3500	2720	1150	553	203	133	e660	139
22	220	437	573	e190	7970	7260	992	519	214	138	e2400	131
23	267	375	542	e190	6050	10900	901	484	208	275	2070	154
24	225	333	502	e200	4130	12700	830	453	206	403	1170	158
25	198	303	462	e300	3210	14100	777	480	201	269	737	160
26	179	280	518	e800	2480	9150	724	575	192	188	577	164
27	172	344	342	e2000	1890	6450	677	630	195	156	517	165
28	161	14300	e310	e4000	1550	8360	638	580	191	153	437	166
29	151	11800	e280	e8000	---	7260	608	485	177	146	403	179
30	157	3380	e270	e13900	---	5540	627	441	179	146	339	150
31	233	---	e250	10000	---	4130	---	411	---	147	293	---
TOTAL	5074	39860	30804	45018	72390	149660	54224	26593	7261	5431	17869	5151
MEAN	164	1329	994	1452	2585	4828	1807	858	242	175	576	172
MAX	267	14300	3460	13900	7970	14100	4480	2430	383	403	3000	266
MIN	113	210	250	180	700	1050	608	411	177	118	141	131
CFSM	.22	1.76	1.31	1.92	3.42	6.39	2.39	1.13	.32	.23	.76	.23
IN.	.25	1.96	1.52	2.22	3.56	7.36	2.67	1.31	.36	.27	.88	.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1994, BY WATER YEAR (WY)

	MEAN	427	581	851	996	1432	2129	1758	1229	720	399	268	257
MAX	3561	2630	3254	3477	4817	7669	5811	3425	4624	2847	851	1475	
(WY)	1977	1986	1973	1937	1979	1936	1993	1924	1972	1989	1915	1975	
MIN	59.5	65.3	93.6	132	138	459	338	211	134	66.6	55.1	57.6	
(WY)	1964	1931	1931	1981	1934	1990	1915	1926	1965	1966	1966	1963	

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1912 - 1994	
ANNUAL TOTAL	502545		459335			
ANNUAL MEAN	1377		1258		918	
HIGHEST ANNUAL MEAN					1517	
LOWEST ANNUAL MEAN					402	
HIGHEST DAILY MEAN	20500	Apr 17	14300	Nov 28	58300	Mar 18 1936
LOWEST DAILY MEAN	99	Aug 30	113	Oct 11	39	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	103	Aug 27	123	Oct 6	41	Sep 7 1966
INSTANTANEOUS PEAK FLOW			a21800	Nov 28	a80500	Mar 18 1936
INSTANTANEOUS PEAK STAGE			14.34	Nov 28	b24.54	Mar 18 1936
INSTANTANEOUS LOW FLOW			110	Oct 11	39	Sep 6 1966
ANNUAL RUNOFF (CFSM)	1.82		1.66		1.21	
ANNUAL RUNOFF (INCHES)	24.73		22.60		16.49	
10 PERCENT EXCEEDS	3480		3230		2170	
50 PERCENT EXCEEDS	381		381		420	
90 PERCENT EXCEEDS	125		146		119	

a From rating curve extended above 21,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmark in gage.

e Estimated.

JUNIATA RIVER BASIN

01563100 RAYSTOWN LAKE NEAR HUNTINGDON, PA

LOCATION.--Lat 40°26'06", long 78°00'25", Huntingdon County, Hydrologic Unit 02050303, at Raystown Dam on Raystown Branch Juniata River, 3.5 mi south of Huntingdon, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--959 mi².

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum is given in feet above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with a gated spillway in right abutment at elevation 768.6 ft (capacity, 383,500 acre-ft), and an ungated spillway separate from embankment at elevation 812.0 ft (capacity, 762,000 acre-ft). Storage began November 1972. Conservation pool elevation is 786.0 ft, capacity 514,000 acre-ft. Lake is used for flood control, low-flow augmentation, and recreation. Figures given herein represent total contents. Satellite telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 667,010 acre-ft, Apr. 3, 1993, elevation, 802.89 ft; minimum, 2,240 acre-ft, March 2, 1973, elevation, 628.80 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 561,000 acre-ft, Nov. 29, elevation, 791.53 ft; minimum, 463,970 acre-ft, Nov. 19, elevation, 779.97 ft.

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	785.35	508,340	--
Oct. 31	785.01	505,390	- 48.0
Nov. 30	790.11	548,940	+ 732
Dec. 31	786.23	515,960	- 536
CAL YR 1993.....	--	--	- 10.8
Jan. 31	786.42	517,570	+ 26.2
Feb. 28	786.07	514,600	- 53.5
Mar. 31	787.07	523,100	+ 138
Apr. 30	786.48	518,080	- 84.4
May 31	786.72	520,120	+ 33.2
June 30	786.44	517,740	- 40.0
July 31	786.48	518,080	+ 5.5
Aug. 31	786.50	518,250	+ 2.8
Sept. 30	786.30	516,550	- 28.6
WTR YR 1994.....	--	--	+ 11.3

JUNIATA RIVER BASIN

01563200 RAYSTOWN BRANCH JUNIATA RIVER BELOW RAYSTOWN DAM NEAR HUNTINGDON, PA

LOCATION.--Lat 40°25'44", long 77°59'29", Huntingdon County, Hydrologic Unit 02050303, on left bank 1.0 mi downstream from Raystown Dam on Township Route 430, 4.0 mi south of Huntingdon, and 4.7 mi upstream from mouth.

DRAINAGE AREA.--960 mi².

PERIOD OF RECORD.--January 1946 to current year. Prior to October 1946 monthly discharge only, published in WSP 1302. Prior to Oct. 1, 1969, published as Raystown Branch Juniata River near Huntingdon.

GAGE.--Water-stage recorder. Datum of gage is 597.36 ft above sea level (U.S. Army Corps of Engineers benchmark). Prior to Oct. 1, 1969, water-stage recorder at site 4.3 mi upstream at datum 22.72 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1972 by Raystown Dam (station 01563100). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 31.0 ft, discharge, 87,000 ft³/s, at previous site and datum, by computation of peak discharge at dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	206	200	9480	456	2860	1600	4470	911	521	208	202	306
2	207	241	3210	456	1950	1590	4430	1340	523	206	203	244
3	207	220	1600	456	1580	1890	3810	1520	453	208	202	202
4	207	218	1600	470	1250	1870	3770	1520	392	208	202	202
5	207	204	2080	466	1030	1590	3610	1300	400	208	204	202
6	204	201	3440	458	1030	2110	3080	1150	355	227	205	202
7	201	201	4090	460	1020	2400	3070	1160	323	200	204	203
8	201	201	2500	461	1030	3560	3070	1440	322	195	202	214
9	201	226	1520	461	1250	5850	2280	1600	321	198	202	202
10	201	201	2050	459	1110	7580	1600	1600	321	199	204	202
11	201	201	2820	458	1030	10100	1600	1600	316	199	205	202
12	202	200	2080	460	962	11800	1880	2130	284	199	206	202
13	201	201	1580	472	859	11600	2590	2210	260	199	205	202
14	201	201	1580	656	960	10500	5320	1600	247	200	205	202
15	201	360	1580	780	895	8860	4600	1600	220	199	205	205
16	200	487	1580	780	792	10700	3750	1600	210	199	205	205
17	201	487	1580	604	792	9810	3460	1160	211	199	430	205
18	201	493	1580	476	869	5990	2390	610	226	202	2660	205
19	193	490	1580	979	927	4520	1790	473	205	199	2250	205
20	200	492	1580	1540	1320	3350	1600	470	205	198	1090	205
21	282	493	1520	1500	6470	4280	1600	501	213	198	737	205
22	268	485	1120	930	11200	8830	1570	523	217	202	738	205
23	201	489	819	474	11100	9960	1580	523	208	201	1850	205
24	201	490	766	474	7390	7760	1260	524	207	202	2220	205
25	201	485	730	481	4340	5570	759	428	205	202	1240	205
26	217	485	726	799	4310	10500	569	528	205	202	713	206
27	201	493	558	1390	2630	12400	570	622	206	202	514	205
28	206	967	456	2550	1620	11100	568	682	205	202	513	406
29	201	8070	457	4620	---	12000	575	525	205	202	419	434
30	203	13500	456	5360	---	13000	650	518	208	203	359	208
31	201	---	456	3880	---	7560	---	518	---	202	328	---
TOTAL	6425	31682	57174	34266	72576	220230	71871	32886	8394	6268	19322	6701
MEAN	207	1056	1844	1105	2592	7104	2396	1061	280	202	623	223
MAX	282	13500	9480	5360	11200	13000	5320	2210	523	227	2660	434
MIN	193	200	456	456	792	1590	568	428	205	195	202	202
MEAN $\frac{1}{2}$	159	1788	1308	1131	2538	7242	2312	1094	240	208	626	194
CFSM $\frac{1}{2}$	.17	1.86	1.36	1.18	2.64	7.54	2.41	1.14	.25	.22	.65	.20
IN. $\frac{1}{2}$	.20	2.08	1.57	1.36	2.75	8.69	2.69	1.31	.28	.25	.75	.22

‡ Adjusted for change in contents in Raystown Lake.

JUNIATA RIVER BASIN

01563200 RAYSTOWN BRANCH JUNIATA RIVER BELOW RAYSTOWN DAM NEAR HUNTINGDON, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	797	988	1297	1130	1769	2540	2432	1410	733	541	357	374
MAX	4616	3778	4204	3008	3999	7104	8605	3438	2241	3484	802	1880
(WY)	1977	1974	1973	1974	1984	1994	1993	1978	1989	1989	1979	1975
MIN	150	125	215	208	440	360	370	18.6	59.1	133	118	134
(WY)	1975	1975	1981	1981	1992	1974	1974	1973	1973	1973	1973	1973

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1973 - 1994

ANNUAL TOTAL	621767		567795									
ANNUAL MEAN	1703	‡1692	1556	‡1567					1194	‡1147		
HIGHEST ANNUAL MEAN									1608			1993
LOWEST ANNUAL MEAN									525			1992
HIGHEST DAILY MEAN	15400	Apr 7	13500	Nov 30					15400	Apr 7		1993
LOWEST DAILY MEAN	193	Oct 19	193	Oct 19					5.0	May 18		1973
ANNUAL SEVEN-DAY MINIMUM	200	Oct 14	198	Jul 7					8.3	May 18		1973
INSTANTANEOUS PEAK FLOW			13900	Mar 26					16200	Apr 6		1993
INSTANTANEOUS PEAK STAGE			14.03	Mar 26					15.12	Apr 6		1993
ANNUAL RUNOFF (CFSM)	1.77	‡1.76	1.62	‡1.63					1.24	‡1.19		
ANNUAL RUNOFF (INCHES)	24.09	‡24.08	22.00	‡22.15					16.90	‡16.17		
10 PERCENT EXCEEDS	4630		4290						2860			
50 PERCENT EXCEEDS	487		487						503			
90 PERCENT EXCEEDS	206		201						198			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1972, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	343	651	985	1195	1649	2695	2132	1500	875	442	303	229
MAX	1587	2796	2877	2915	4150	4481	4632	3346	5740	1722	925	648
(WY)	1955	1971	1951	1949	1971	1963	1970	1960	1972	1972	1956	1950
MIN	64.7	65.3	131	220	317	754	683	482	180	80.1	66.0	67.6
(WY)	1964	1958	1966	1954	1954	1969	1968	1969	1965	1966	1966	1963

SUMMARY STATISTICS WATER YEARS 1947 - 1972

ANNUAL MEAN	1080											
HIGHEST ANNUAL MEAN	1960											1972
LOWEST ANNUAL MEAN	497											1969
HIGHEST DAILY MEAN	22200	Apr 3										1970
LOWEST DAILY MEAN	5.0	Oct 30										1957
ANNUAL SEVEN-DAY MINIMUM	7.7	Nov 3										1957
INSTANTANEOUS PEAK FLOW	a24500	Nov 25										1950
INSTANTANEOUS PEAK STAGE	b18.54	Apr 3										1970
INSTANTANEOUS LOW FLOW	4.3	Oct 31										1957
ANNUAL RUNOFF (CFSM)	1.13											
ANNUAL RUNOFF (INCHES)	15.29											
10 PERCENT EXCEEDS	2580											
50 PERCENT EXCEEDS	475											
90 PERCENT EXCEEDS	114											

‡ Adjusted for change in contents in Raystown Lake.

a From rating curve extended above 16,000 ft³/s on basis of computation of peak discharge at dam, gage height, 16.74 ft, site and datum then in use.

b Present site and datum.

JUNIATA RIVER BASIN

01563500 JUNIATA RIVER AT MAPLETON DEPOT, PA

LOCATION.--Lat 40°23'32", long 77°56'07", Huntingdon County, Hydrologic Unit 02050304, on right bank 0.2 mi downstream from Scrub Run, and 0.3 mi downstream from bridge on State Highway 655 at Mapleton Depot.

DRAINAGE AREA.--2,030 mi².

PERIOD OF RECORD.--October 1937 to current year.

REVISED RECORDS.--WDR PA-73-1: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 557.31 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since October 1972 by Raystown Dam (station 01563100) 12 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 38.2 ft, from floodmark, discharge, 165,000 ft³/s from rating curve extended as explained on following page.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	784	1400	13300	e1000	4840	3850	11000	2910	1330	707	554	1060
2	717	1190	6090	e960	3600	3630	11500	3180	1300	658	625	954
3	666	945	3800	e920	3000	3650	12200	3180	1210	631	774	820
4	628	890	3640	e900	2610	4190	12100	3120	1120	628	824	794
5	597	830	7300	e860	2270	3750	10500	2910	1070	624	685	775
6	575	873	7920	e820	e2100	4220	9100	2610	1090	693	758	746
7	558	912	7440	e800	e2000	4430	10800	2640	1110	1300	706	729
8	558	819	5520	e780	e1900	6630	9230	6110	1080	804	616	708
9	549	799	3830	e760	e1800	9200	7260	5360	993	728	592	682
10	538	751	4660	e820	e1800	11800	6000	4490	959	651	570	664
11	521	734	7410	e960	e1700	13900	6600	4010	941	614	553	648
12	567	713	5400	e1100	e1700	15100	6350	4240	938	595	548	632
13	543	730	4200	e1200	e1600	14700	7520	4470	884	582	600	623
14	591	1100	3890	1400	e1600	14200	11000	3350	838	599	656	618
15	549	1260	3690	1440	e1600	13900	9400	3190	780	659	921	675
16	539	1340	3520	1420	e1550	18500	7710	3220	747	630	747	780
17	558	1260	3280	1300	e1600	15800	7130	2840	825	588	959	703
18	651	2010	3110	1190	e1700	10100	5480	2050	752	573	e12000	1130
19	655	1940	3130	e1100	e2000	8290	4540	1730	775	607	e4500	982
20	641	1680	3160	e1000	e2900	6500	3990	1660	754	597	e2000	744
21	797	1550	3010	e900	11600	7620	3750	1610	736	579	e1800	682
22	847	1370	2750	e800	21800	18000	3540	1590	780	611	e6600	656
23	718	1290	2150	e760	18500	23700	3410	1490	716	690	4690	733
24	653	1230	1960	e780	13200	26500	3040	1480	681	717	3920	822
25	623	1190	1850	e1100	8390	29400	2430	1620	677	629	2500	724
26	621	1130	1760	e1600	7580	24600	2060	1950	672	604	1930	724
27	598	1310	1490	e2300	5530	27500	1990	1870	669	575	1460	e700
28	591	24500	1410	e4000	3920	28000	1890	1730	682	585	1420	e740
29	578	19700	1260	e7500	---	24300	1960	1490	681	630	1470	e780
30	606	18200	e1150	8390	---	23000	2620	1400	681	610	1430	705
31	868	---	e1100	6280	---	16200	---	1360	---	572	1150	---
TOTAL	19485	93646	124180	55140	134390	435160	196100	84860	26471	20270	58558	22733
MEAN	629	3122	4006	1779	4800	14040	6537	2737	882	654	1889	758
MAX	868	24500	13300	8390	21800	29400	12200	6110	1330	1300	12000	1130
MIN	521	713	1100	760	1550	3630	1890	1360	669	572	548	618
MEAN‡	581	3854	3470	1805	4746	14180	6453	2770	842	660	1892	729
CFSM‡	.29	1.90	1.71	.89	2.34	6.98	3.18	1.36	.41	.33	.93	.36
IN.‡	.33	2.12	1.97	1.03	2.44	8.05	3.55	1.57	.46	.38	1.07	.40

‡ Adjusted for change in contents in Raystown Lake.

e Estimated.

JUNIATA RIVER BASIN

01563500 JUNIATA RIVER AT MAPLETON DEPOT, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1689	2163	2955	2580	3855	5586	5329	3338	1998	1333	949	971
MAX	7397	5802	8006	5712	8159	14040	15970	7725	5274	6123	2020	3757
(WY)	1977	1986	1973	1974	1984	1994	1993	1978	1989	1989	1979	1975
MIN	494	578	872	481	1269	1612	2601	1309	679	608	528	496
(WY)	1992	1979	1981	1981	1993	1990	1976	1976	1991	1988	1974	1985

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1973 - 1994

ANNUAL TOTAL	1309915		1270993									
ANNUAL MEAN	3589	‡3578	3482	‡3493					2722	‡2831		
HIGHEST ANNUAL MEAN									3647			1978
LOWEST ANNUAL MEAN									1360			1992
HIGHEST DAILY MEAN	25700	Apr 17	29400	Mar 25					32000		Feb 15	1984
LOWEST DAILY MEAN	466	Aug 30	521	Oct 11					416		Nov 5	1991
ANNUAL SEVEN-DAY MINIMUM	481	Aug 25	548	Oct 7					423		Jan 11	1981
INSTANTANEOUS PEAK FLOW			32900	Nov 28					39400		Feb 15	1984
INSTANTANEOUS PEAK STAGE			16.73	Nov 28					18.33		Feb 15	1984
ANNUAL RUNOFF (CFSM)	1.77	‡1.76	1.72	‡1.72					1.34		‡1.39	
ANNUAL RUNOFF (INCHES)	24.00	‡23.96	23.29	‡23.36					18.22		‡18.97	
10 PERCENT EXCEEDS	13200		9300						6030			
50 PERCENT EXCEEDS	1200		1300						1550			
90 PERCENT EXCEEDS	522		611						564			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1972, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	925	1473	2124	2500	3303	5542	4766	3324	2215	1058	812	664
MAX	3136	6057	6058	6342	8327	8641	9845	7044	14450	3864	2638	3073
(WY)	1938	1951	1951	1949	1971	1967	1940	1960	1972	1972	1956	1945
MIN	245	377	374	610	826	1763	1697	849	540	317	244	262
(WY)	1964	1958	1966	1940	1963	1969	1968	1941	1965	1966	1966	1964

SUMMARY STATISTICS

WATER YEARS 1938 - 1972

ANNUAL MEAN	2387											
HIGHEST ANNUAL MEAN	4479											1972
LOWEST ANNUAL MEAN	1329											1969
HIGHEST DAILY MEAN	115000			Jun 23	1972							
LOWEST DAILY MEAN	101			Aug 21	1966							
ANNUAL SEVEN-DAY MINIMUM	203			Sep 7	1964							
INSTANTANEOUS PEAK FLOW	a125000			Jun 23	1972							
INSTANTANEOUS PEAK STAGE	33.07			Jun 23	1972							
INSTANTANEOUS LOW FLOW	68			Sep 13	1964							
ANNUAL RUNOFF (CFSM)	1.18											
ANNUAL RUNOFF (INCHES)	15.97											
10 PERCENT EXCEEDS	5520											
50 PERCENT EXCEEDS	1210											
90 PERCENT EXCEEDS	393											

‡ Adjusted for change in contents in Raystown Lake.

a From rating curve extended above 39,000 ft³/s on basis of runoff comparison with upstream and downstream stations.

JUNIATA RIVER BASIN

01564500 AUGHNICK CREEK NEAR THREE SPRINGS, PA

LOCATION.--Lat 40°12'45", long 77°55'32", Huntingdon County, Hydrologic Unit 02050304, on right bank 10 ft downstream from bridge on State Highway 994, 300 ft upstream from East Broad Top Railroad bridge, 350 ft upstream from Three Springs Creek, and 3.5 mi northeast of Three Springs. Records include flow of Three Springs Creek.

DRAINAGE AREA.--205 mi², includes that of Three Springs Creek.

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

GAGE.--Water-stage recorder. Datum of gage is 618.65 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of about 19.3 ft, discharge, about 24,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	147	532	e74	691	475	995	695	62	23	37	60
2	22	102	405	e68	567	416	842	484	56	21	27	62
3	19	68	340	e66	e460	335	750	356	51	20	28	49
4	18	54	311	e64	e380	473	635	314	49	21	30	43
5	16	47	1600	e78	e340	507	510	292	46	20	39	41
6	15	47	1220	e90	e310	539	444	252	46	19	52	38
7	14	46	723	e105	e280	523	456	238	92	54	44	35
8	13	40	530	e115	e260	1250	352	693	62	80	29	31
9	12	35	420	105	e240	1350	296	511	46	34	23	28
10	12	34	479	88	e230	1970	289	399	41	27	20	26
11	10	31	670	e70	e220	1770	314	324	44	29	18	25
12	22	29	503	e74	e210	1190	273	294	56	21	18	23
13	42	31	411	e80	e210	1060	959	258	62	18	52	22
14	55	60	357	e90	e200	1380	1780	214	48	16	31	21
15	45	80	322	e84	e190	1930	934	192	36	19	24	31
16	40	62	299	e76	e220	2390	758	191	36	32	20	114
17	32	54	244	e68	e250	1400	568	178	55	21	109	69
18	30	82	213	e64	e280	1040	450	158	49	19	1940	52
19	30	94	226	e58	e440	815	389	146	35	17	480	48
20	32	77	209	e54	e780	737	338	137	30	16	229	36
21	37	66	215	e50	e1400	1010	292	126	29	15	149	29
22	38	54	229	e48	e2100	2860	259	112	31	16	1000	26
23	37	47	188	e45	1850	3180	233	101	30	65	814	83
24	33	43	168	e52	1290	3860	213	91	27	87	329	112
25	27	40	158	e110	968	3890	198	103	26	67	208	64
26	23	38	133	e230	772	2340	183	117	25	37	160	153
27	20	83	e110	e500	601	2750	175	130	25	26	131	195
28	20	7670	e94	e1000	547	2980	159	99	25	26	103	116
29	20	1890	e86	e2000	---	2440	149	80	29	29	86	87
30	24	833	e82	1430	---	1830	186	72	27	59	75	69
31	80	---	e76	930	---	1280	---	67	---	84	63	---
TOTAL	865	11984	11553	7966	16286	49970	14379	7424	1276	1038	6368	1788
MEAN	27.9	399	373	257	582	1612	479	239	42.5	33.5	205	59.6
MAX	80	7670	1600	2000	2100	3890	1780	695	92	87	1940	195
MIN	10	29	76	45	190	335	149	67	25	15	18	21
CFSM	.14	1.95	1.82	1.25	2.84	7.86	2.34	1.17	.21	.16	1.00	.29
IN.	.16	2.17	2.10	1.45	2.96	9.07	2.61	1.35	.23	.19	1.16	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1994, BY WATER YEAR (WY)

	MEAN	108	181	264	241	383	580	481	313	185	85.2	64.1	52.8
MAX	656	946	890	683	1399	1612	1296	798	1985	848	355	406	
(WY)	1977	1951	1973	1953	1984	1994	1993	1960	1972	1989	1967	1979	
MIN	6.59	18.3	16.2	14.2	63.5	93.0	103	55.0	25.0	8.40	3.25	5.08	
(WY)	1964	1942	1966	1981	1963	1990	1971	1941	1991	1966	1966	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1939 - 1994

ANNUAL TOTAL	128211.5	130897	244	1972
ANNUAL MEAN	351	359	486	1992
HIGHEST ANNUAL MEAN			105	1992
LOWEST ANNUAL MEAN			18700	Jun 23 1972
HIGHEST DAILY MEAN	7670	Nov 28	18700	Jun 23 1972
LOWEST DAILY MEAN	6.2	Sep 2	.80	Sep 3 1966
ANNUAL SEVEN-DAY MINIMUM	7.2	Aug 28	1.2	Aug 29 1966
INSTANTANEOUS PEAK FLOW			a13300	Nov 28
INSTANTANEOUS PEAK STAGE			15.99	Nov 28
INSTANTANEOUS LOW FLOW			9.3	Oct 11
ANNUAL RUNOFF (CFSM)	1.71	1.75	1.19	Sep 2 1966b
ANNUAL RUNOFF (INCHES)	23.27	23.75	16.18	
10 PERCENT EXCEEDS	902	997	577	
50 PERCENT EXCEEDS	70	87	98	
90 PERCENT EXCEEDS	12	23	14	

a From rating curve extended above 7,100 ft³/s on basis of contracted-opening measurement at gage height 18.04 ft.

b Also Sept. 3, 4, 11, 12, 13, 1966.

c Estimated.

JUNIATA RIVER BASIN

01564997 KISHACOQUILLAS CREEK AT LUMBER CITY, PA
(National water-quality assessment station)

LOCATION.--Lat 40°39'42", long 77°36'01", Mifflin County, Hydrologic Unit 02050304, on left bank 20 ft upstream from bridge at Lumber City.

DRAINAGE AREA.--57.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 590 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	44	150	e42	e90	113	465	112	44	28	19	68
2	17	31	127	e43	e78	113	437	93	41	26	24	62
3	16	26	112	e47	e75	116	444	87	40	26	26	59
4	15	24	105	e44	e71	113	395	86	39	26	20	57
5	15	24	196	e43	e70	118	333	84	38	25	24	54
6	14	24	154	e39	e64	117	301	82	41	51	23	51
7	14	21	138	e37	e61	107	356	89	50	110	19	50
8	13	20	e130	e38	e58	150	261	130	40	45	18	47
9	13	19	e120	e35	e48	161	232	104	38	38	17	46
10	13	19	e180	e30	e47	222	224	100	36	34	16	44
11	12	18	e190	e29	e46	218	201	95	37	31	15	42
12	16	18	e160	e28	e44	194	203	102	36	29	15	40
13	17	19	e150	e37	e45	185	253	91	34	28	15	39
14	14	30	e140	e36	48	213	256	84	33	28	47	38
15	13	24	e130	e31	47	291	235	80	32	28	37	e37
16	13	21	e110	e21	48	382	225	80	52	26	24	e37
17	14	23	e100	e20	48	295	196	74	51	23	127	e39
18	14	38	e94	e21	48	254	177	70	47	23	290	e51
19	13	30	e93	e18	50	216	165	67	46	23	130	e42
20	15	29	e87	e15	60	199	151	65	39	21	102	e38
21	18	25	e93	e16	144	215	140	61	38	21	87	e37
22	18	25	e88	e16	249	456	131	59	36	23	127	e36
23	15	24	e77	e18	231	715	123	57	34	31	97	e48
24	14	23	e70	e27	197	967	117	56	33	24	83	e41
25	14	22	e64	e40	167	1280	111	62	32	32	78	e37
26	13	21	e53	e58	149	890	106	61	31	22	98	e74
27	13	28	e50	e54	130	1160	101	55	31	21	80	e67
28	13	960	e46	e90	119	1010	96	50	31	23	78	e57
29	12	273	e45	e160	---	812	101	48	29	20	93	e55
30	15	191	e44	e120	---	650	97	46	32	28	76	e51
31	35	---	e43	e99	---	530	---	44	---	20	72	---
MEAN	15.2	69.8	108	43.6	90.4	402	221	76.6	38.0	30.1	63.8	48.1
MAX	35	960	196	160	249	1280	465	130	52	110	290	74
MIN	12	18	43	15	44	107	96	44	29	20	15	36
CFSM	.26	1.22	1.88	.76	1.58	7.00	3.85	1.33	.66	.52	1.11	.84
IN.	.30	1.36	2.16	.88	1.64	8.08	4.30	1.54	.74	.61	1.28	.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

MEAN	15.2	69.8	108	43.6	90.4	402	221	76.6	39.0	25.8	39.8	31.8
MAX	15.2	69.8	108	43.6	90.4	402	221	76.6	40.1	30.1	63.8	48.1
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1993	1994	1994	1994
MIN	15.2	69.8	108	43.6	90.4	402	221	76.6	38.0	21.5	15.9	15.4
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1993	1993	1993

SUMMARY STATISTICS

FOR 1994 WATER YEAR

WATER YEARS 1993 - 1994

ANNUAL MEAN	101	101
HIGHEST ANNUAL MEAN	101	1994
LOWEST ANNUAL MEAN	101	1994
HIGHEST DAILY MEAN	1280	Mar 25 1994
LOWEST DAILY MEAN	12	Oct 11, 29
ANNUAL SEVEN-DAY MINIMUM	13	Oct 5
INSTANTANEOUS PEAK FLOW	2080	Nov 28 1993
INSTANTANEOUS PEAK STAGE	5.58	Nov 28 1993
INSTANTANEOUS LOW FLOW	11	Oct 11, 29
ANNUAL RUNOFF (CFSM)	1.75	1.75
ANNUAL RUNOFF (INCHES)	23.82	23.83
10 PERCENT EXCEEDS	215	181
50 PERCENT EXCEEDS	48	38
90 PERCENT EXCEEDS	18	14

e Estimated.

JUNIATA RIVER BASIN

01564997 KISHACOQUILLAS CREEK AT LUMBER CITY, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1994 to current year.

WATER TEMPERATURE: February 1994 to current year.

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the fixed-station network are shown in figure 10, page 111. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 2, page 116.

EXTREMES FOR CURRENT PERIOD.--

SPECIFIC CONDUCTANCE: Maximum, 757 microsiemens, May 29; minimum, 179 microsiemens, July 7.

WATER TEMPERATURE: Maximum, 27.5°C, July 6; minimum, 0.0°C Feb. 10,11, Mar. 2,3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM- PLING METHOD, CODES (82398)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT											
21...	1025	1028	80020	15.0	3045	10	17	541	8.4	12.5	747
NOV											
02...	0930	1028	80020	15.0	3045	10	30	473	8.3	4.5	761
DEC											
08...	1020	1028	80020	15.0	3045	10	127	407	8.3	6.5	753
JAN											
13...	1050	1028	80020	15.0	3045	10	39	463	8.5	1.5	745
FEB											
17...	1020	1028	80020	15.0	3045	10	47	475	8.6	2.5	760
MAR											
29...	1100	1028	80020	15.0	3038	10	813	353	8.0	7.0	748
MAY											
05...	1130	1028	80020	15.0	3045	10	86	415	9.0	13.5	747
10...	1320	1028	80020	15.0	3045	10	102	363	8.7	13.0	751
JUN											
06...	1905	1028	80020	15.0	3045	10	43	453	8.6	20.0	743
14...	1215	1028	80020	15.0	3045	10	33	480	8.4	21.0	751
JUL											
06...	0945	1028	80020	15.0	3045	10	25	520	8.4	21.0	751
AUG											
02...	1715	1028	80020	15.0	3045	10	18	494	9.0	23.5	750

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	BICAR- BONATE WAT. DIS FIELD HCO3 (MG/L) (29804)
OCT												
21...	9.5	91	250	33	66	20	8.2	7	0.2	6.2	--	260
NOV												
02...	13.8	107	220	78	62	16	6.9	6	0.2	7.6	--	170
DEC												
08...	12.0	99	190	55	54	14	4.1	4	0.1	2.6	--	170
JAN												
13...	14.7	107	220	38	59	18	6.1	6	0.2	2.7	--	220
FEB												
17...	16.1	118	220	49	60	17	8.1	7	0.2	2.6	--	190
MAR												
29...	11.1	93	160	45	44	12	3.4	4	0.1	3.2	--	140
MAY												
05...	14.8	145	210	36	56	17	4.6	4	0.1	5.2	--	170
10...	11.3	109	170	34	46	14	4.1	5	0.1	2.0	--	150
JUN												
06...	7.0	79	220	46	60	18	4.3	4	0.1	2.8	--	220
14...	12.3	141	250	53	64	21	6.1	5	0.2	2.8	<0.010	230
JUL												
06...	10.2	117	250	37	65	21	6.1	5	0.2	3.0	<0.010	240
AUG												
02...	10.9	131	260	46	69	22	8.9	7	0.2	3.8	0.030	210

JUNIATA RIVER BASIN

01564997 KISHACOQUILLAS CREEK AT LUMBER CITY, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT 21...	2	210	23	18	0.2	3.5	309	303	0.42	14.2	6.18
NOV 02...	0	140	32	18	0.2	6.8	276	268	0.38	22.2	6.97
DEC 08...	0	140	23	11	0.1	6.9	228	232	0.31	78.2	7.38
JAN 13...	4	180	20	13	<0.1	3.7	262	267	0.36	27.5	7.16
FEB 17...	8	170	20	18	<0.1	1.7	261	255	0.35	33.1	5.38
MAR 29...	0	120	17	9.5	<0.1	5.7	198	192	0.27	435	6.18
MAY 05...	22	170	17	11	<0.1	3.4	253	248	0.34	59.1	6.38
10...	7	140	16	9.3	<0.1	4.7	211	205	0.29	58.1	5.57
JUN 06...	--	180	19	12	<0.1	5.9	283	259	0.38	33.2	6.44
14...	5	190	19	14	<0.1	6.1	292	279	0.40	26.0	6.36
JUL 06...	7	210	20	14	0.1	3.3	324	293	0.44	21.9	7.08
AUG 02...	29	220	20	15	0.2	1.9	298	295	0.41	14.5	5.09
DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 21...	27	0.020	0.07	6.20	0.020	0.03	0.28	0.30	0.30	6.5	0.800
NOV 02...	31	0.030	0.10	7.00	0.040	0.05	0.46	0.70	0.50	7.5	0.390
DEC 08...	33	0.020	0.07	7.40	0.040	0.05	--	0.20	<0.20	--	0.130
JAN 13...	32	0.040	0.13	7.20	0.020	0.03	--	<0.20	<0.20	--	0.460
FEB 17...	24	0.020	0.07	5.40	0.020	0.03	--	<0.20	<0.20	--	0.020
MAR 29...	27	0.020	0.07	6.20	0.170	0.22	0.23	0.60	0.40	6.6	0.170
MAY 05...	28	0.020	0.07	6.40	<0.010	--	--	0.30	<0.20	--	0.190
10...	25	0.030	0.10	5.60	0.020	0.03	--	0.40	<0.20	--	0.160
JUN 06...	29	0.060	0.20	6.50	0.030	0.04	0.27	0.50	0.30	6.8	0.240
14...	28	0.040	0.13	6.40	0.030	0.04	0.27	0.40	0.30	6.7	0.350
JUL 06...	31	0.020	0.07	7.10	0.020	0.03	0.18	0.30	0.20	7.3	0.410
AUG 02...	23	0.010	0.03	5.10	0.030	0.04	0.27	0.40	0.30	5.4	0.300

JUNIATA RIVER BASIN

01564997 KISHACOQUILLAS CREEK AT LUMBER CITY, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTH, DIS- SOLVED (MG/L AS PO ₄) (00660)	IRON, DIS- SOLVED (μG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (μG/L AS SR) (01080)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 21...	0.740	0.750	2.3	9	4	--	11	0.3	2	0.09	63
NOV 02...	0.360	0.360	1.1	24	5	460	4.4	0.4	4	0.32	88
DEC 08...	0.100	0.120	0.37	12	4	420	1.7	0.6	24	8.2	86
JAN 13...	0.400	0.430	1.3	4	3	540	1.2	0.3	10	1.1	81
FEB 17...	<0.010	<0.010	--	<3	6	510	0.7	0.3	9	1.1	81
MAR 29...	0.090	0.090	0.28	23	10	250	2.8	1.0	43	94	82
MAY 05...	0.180	0.170	0.52	4	6	420	1.7	0.4	1	0.23	100
MAY 10...	0.130	0.140	0.43	5	8	350	1.5	0.5	8	2.2	94
JUN 06...	0.200	0.220	0.67	12	9	460	2.3	0.6	14	1.6	91
JUN 14...	0.310	0.330	1.0	3	7	520	1.7	0.3	3	0.27	--
JUL 06...	0.380	0.380	1.2	5	7	540	1.6	0.3	11	0.74	64
AUG 02...	0.290	0.260	0.80	5	4	520	2.0	0.3	5	0.24	71

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (μG/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (μG/L) (39632)	CYANA- ZINE, WATER, DISS, REC, (μG/L) (04041)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (μG/L) (04040)	METO- LACHLOR WATER DISSOLV (μG/L) (39415)	PRO- METON, WATER, DISS, REC, (μG/L) (04037)	SI- MAZINE, WATER, DISS, REC, (μG/L) (04035)
JUN 06...	1905	43	0.026	0.150	0.033	e0.100	0.085	0.031	0.380
AUG 02...	1715	20	0.010	0.280	0.056	e0.210	0.170	0.062	0.100

e Estimated.

JUNIATA RIVER BASIN

01564997 KISHACOQUILLAS CREEK AT LUMBER CITY, PA--Continued

REMARKS.--The following table contains data from the fixed-site ecological survey. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional targeted habitat (DTH). This site was sampled approximately 200 feet upstream from the bridge at Lumber City. The fixed-station sites are shown in figure 18, page 300. Data from all sites sampled for the fixed-station ecological survey can be found on pages 301-303.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM VELOC-ITY, MEAN (F/S)	SPE-CIFIC CON-DUCT-ANCE (μS/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)
EFS05 -RTH	01564997	06-27-94	1100	1028	80020	1.54	560	--	19.5	--
-DTH		06-27-94	1115	1028	80020	.166	530	--	19.5	--
QA -DTH		06-27-94	1130	1028	80020	.166	530	--	19.5	--
QA -DTH		06-27-94	1135	1028	80020	.166	530	--	19.5	--
EFS05		06-27-94	1300	1028	1028	--	498	8.6	19.0	743

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HCO3) (00440)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3) (00445)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQM) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM) ()
EFS05 -RTH	06-27-94	--	--	--	--	--	49	25	310	340	30
-DTH	06-27-94	--	--	--	--	--	24	4.3	530	600	70
QA -DTH	06-27-94	--	--	--	--	--	84	26	--	--	--
QA -DTH	06-27-94	--	--	--	--	--	--	--	1100	1300	200
EFS05	06-27-94	9.5	105	215	12	196	--	--	--	--	--

JUNIATA RIVER BASIN

01564997 KISHACOQUILLAS CREEK AT LUMBER CITY, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	363	350	355	---	---	---	---	---	---
2	---	---	---	366	353	360	---	---	---	---	---	---
3	---	---	---	361	348	353	---	---	---	---	---	---
4	---	---	---	367	357	362	---	---	---	---	---	---
5	---	---	---	370	356	364	261	254	257	---	---	---
6	---	---	---	381	362	368	264	245	261	435	399	419
7	---	---	---	390	380	385	253	233	242	433	358	412
8	---	---	---	388	359	372	266	253	258	359	332	345
9	---	---	---	368	358	364	274	264	267	372	354	361
10	---	---	---	364	330	345	276	268	273	381	354	366
11	477	456	468	365	340	355	303	269	291	379	352	367
12	472	451	464	374	362	367	314	296	304	376	339	359
13	478	457	468	374	362	369	321	282	303	397	346	364
14	---	---	---	371	344	355	---	---	---	407	387	398
15	---	---	---	354	315	343	---	---	---	414	402	408
16	480	448	468	356	313	337	---	---	---	417	402	409
17	489	444	470	372	356	364	---	---	---	430	417	425
18	491	446	473	375	363	369	---	---	---	457	430	443
19	495	440	469	379	371	375	---	---	---	456	430	446
20	478	424	450	382	375	379	---	---	---	458	439	447
21	440	298	365	379	366	375	---	---	---	483	440	453
22	302	278	288	366	308	334	---	---	---	565	483	527
23	313	292	300	373	270	340	---	---	---	648	554	615
24	320	312	316	349	276	323	---	---	---	671	606	645
25	327	318	322	300	276	287	---	---	---	683	543	636
26	337	326	330	309	279	293	---	---	---	568	461	524
27	349	335	342	307	229	265	---	---	---	646	472	549
28	355	340	348	254	244	249	---	---	---	725	646	687
29	---	---	---	---	---	---	---	---	---	757	725	742
30	---	---	---	---	---	---	---	---	---	753	722	746
31	---	---	---	---	---	---	---	---	---	723	675	704
MONTH	495	278	396	390	229	347	321	233	273	757	332	492
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	677	625	649	536	524	529	438	422	430	---	---	---
2	626	579	608	527	506	518	---	---	---	---	---	---
3	580	542	564	517	500	509	525	429	496	---	---	---
4	543	503	520	501	493	498	536	488	510	---	---	---
5	568	532	545	508	492	499	560	515	546	---	---	---
6	593	459	557	530	306	482	643	559	600	---	---	---
7	479	423	442	306	179	239	702	643	672	528	481	509
8	476	443	463	333	290	315	703	634	686	531	489	513
9	482	474	478	343	331	334	634	586	608	530	493	513
10	488	472	480	363	339	348	587	564	575	530	496	512
11	496	477	485	407	362	378	566	546	558	543	501	524
12	486	469	480	407	345	376	549	540	545	540	493	521
13	495	481	488	372	337	354	564	547	557	---	---	---
14	502	476	491	405	371	393	561	472	537	547	501	527
15	505	485	497	401	372	390	472	408	425	---	---	---
16	512	313	481	411	381	393	485	436	461	---	---	---
17	468	318	389	424	394	409	506	227	473	---	---	---
18	493	445	478	427	385	409	397	217	337	---	---	---
19	490	408	449	428	403	419	437	393	415	---	---	---
20	501	490	495	---	---	---	---	---	---	---	---	---
21	500	483	490	---	---	---	482	441	461	---	---	---
22	497	486	492	379	332	362	466	341	401	---	---	---
23	503	488	496	407	355	394	471	403	438	---	---	---
24	576	498	535	411	378	399	---	---	---	---	---	---
25	589	557	577	415	328	366	490	462	479	---	---	---
26	608	551	579	400	366	390	480	395	442	---	---	---
27	609	592	602	413	400	409	500	479	486	---	---	---
28	593	571	582	418	406	413	496	466	485	---	---	---
29	588	561	578	425	415	420	489	416	452	---	---	---
30	562	535	556	425	406	418	---	---	---	---	---	---
31	---	---	---	426	407	419	---	---	---	---	---	---
MONTH	677	313	518	536	179	406	703	217	503	547	481	517

JUNIATA RIVER BASIN

01567000 JUNIATA RIVER AT NEWPORT, PA

LOCATION.--Lat 40°28'42", long 77°07'46", Perry County, Hydrologic Unit 02050304, on right bank at downstream side of bridge on State Highway 34 at Newport and 1,000 ft upstream from Little Buffalo Creek.

DRAINAGE AREA.--3,354 mi².

PERIOD OF RECORD.--April 1899 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1902(M). WSP 1302: 1915-17. WSP 1502: 1899-1908, 1914, 1924, 1936. WSP 1722: 1916.

GAGE.--Water-stage recorder. Datum of gage is 363.93 ft above sea level. Prior to July 16, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since October 1972 by Raystown Dam (station 01563100) about 75 mi upstream. Satellite and landline telemetry at station.

Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 35.9 ft, from floodmarks, discharge, 209,000 ft³/s, from rating curve extended above 100,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	1510	22200	2380	e7200	6920	22800	5670	2000	1290	1080	2120
2	1100	1950	15200	2480	e5900	6560	19600	6840	1910	1130	1090	1820
3	1020	2210	8640	2510	e4900	6210	19900	6180	1850	1150	1230	1670
4	915	1760	6010	2430	e4600	6340	20100	5590	1800	1070	1210	1510
5	815	1430	9510	2030	e4400	7200	18700	5260	1680	1030	1290	1390
6	751	1340	17000	1800	e4500	7140	15800	4980	1650	1020	1380	1330
7	710	1230	13700	e1700	e4900	7290	15700	4520	2200	1760	1190	1280
8	689	1210	11500	e1800	e4600	8860	16700	5640	1840	1880	1180	1230
9	666	1220	8610	e1700	e3800	13800	13600	9710	1730	1670	1110	1190
10	662	1130	6840	e1600	e3500	18700	11100	8430	1600	1340	996	1150
11	647	1070	10200	e1500	e3300	23500	10100	6990	1530	1180	917	1110
12	673	1010	11500	e1600	e3400	22700	10200	6250	1590	1070	885	1070
13	827	1010	8690	e1900	e3700	21800	12100	6190	1550	999	883	1040
14	830	1050	7000	e2100	e3800	22100	18300	6280	1470	967	900	1010
15	796	1150	6390	e1800	e3500	24000	19300	5050	1380	967	1240	996
16	757	1560	5960	e1600	e3700	27500	15000	4780	1310	990	1180	1000
17	760	1800	5520	e1700	e3800	28300	13000	4670	1250	1020	1350	1070
18	737	1810	5070	e1600	e4300	21400	11100	4370	1250	982	4850	1350
19	717	2040	4860	e1400	e5100	16200	8980	3520	1320	961	12300	1360
20	779	2720	4860	e1300	e7800	13100	7600	3020	1300	948	7190	1620
21	919	2340	5030	e1300	e13000	12200	6630	2830	1220	960	4340	1300
22	929	2100	5230	e1600	29400	19900	6080	2670	1190	1100	3100	1130
23	1020	1870	4730	e2300	32200	37600	5660	2590	1150	1420	4140	1200
24	1060	1790	3870	e2500	26000	45100	5350	2480	1180	1370	6710	1290
25	975	1660	3570	e3000	17900	52600	5000	2430	1130	1390	5520	1280
26	882	1590	3180	e3100	13400	47000	4360	2570	1080	1390	5770	1370
27	828	1570	2800	e2800	11600	41800	3790	2900	1160	1390	3920	2030
28	801	19000	e2300	e2900	8680	49300	3510	2830	1310	1210	3240	1780
29	778	48500	e2100	e5000	---	43500	3430	2640	1220	1110	2680	1650
30	763	26300	e2100	e7400	---	37600	3640	2330	1300	1050	2630	1450
31	985	---	2220	e8000	---	32600	---	2100	---	1150	2470	---
TOTAL	26191	136930	226390	76830	242880	728620	347130	142310	44150	36964	87971	40796
MEAN	845	4564	7303	2478	8674	23500	11570	4591	1472	1192	2838	1360
MAX	1400	48500	22200	8000	32200	52600	22800	9710	2200	1880	12300	2120
MIN	647	1010	2100	1300	3300	6210	3430	2100	1080	948	883	996
MEAN [‡]	797	5296	6767	2504	8620	23640	11490	4624	1432	1198	2841	1331
CFSM [‡]	.24	1.58	2.02	.75	2.57	7.05	3.43	1.38	.43	.36	.85	.40
IN. [‡]	.28	1.76	2.33	.86	2.68	8.13	3.83	1.59	.48	.42	.98	.45

[‡] Adjusted for change in contents in Raystown Lake.

e Estimated.

JUNIATA RIVER BASIN

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2675	3435	5132	4347	6308	8984	8817	5557	3327	2261	1555	1574
MAX	11610	8494	13770	9801	15070	23500	25780	13940	8510	12080	3637	6282
(WY)	1977	1986	1973	1974	1984	1994	1993	1978	1982	1989	1979	1975
MIN	730	871	1262	495	1779	2576	4138	2363	1084	864	782	586
(WY)	1992	1979	1990	1981	1980	1990	1988	1977	1991	1988	1985	1986

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1973 - 1994

ANNUAL TOTAL	2172455		2137162									
ANNUAL MEAN	5952	‡5931	5855	‡5880					4486	‡4518		
HIGHEST ANNUAL MEAN									6682			1978
LOWEST ANNUAL MEAN									2271			1992
HIGHEST DAILY MEAN	48500	Nov 29	52600	Mar 25					87100		Feb 15	1984
LOWEST DAILY MEAN	647	Oct 11	647	Oct 11					450		Jan 13	1981
ANNUAL SEVEN-DAY MINIMUM	680	Aug 26	685	Oct 6					461		Jan 9	1981
INSTANTANEOUS PEAK FLOW			55700	Nov 29					90500		Feb 15	1984
INSTANTANEOUS PEAK STAGE			17.81	Nov 29					23.21		Feb 15	1984
INSTANTANEOUS LOW FLOW			640	Oct 11								
ANNUAL RUNOFF (CFSM)	1.77	‡1.77	1.75	‡1.75					1.34	‡1.35		
ANNUAL RUNOFF (INCHES)	24.10	‡24.01	23.70	‡23.81					18.17	‡18.29		
10 PERCENT EXCEEDS	19100		16400						10200			
50 PERCENT EXCEEDS	1930		2120						2680			
90 PERCENT EXCEEDS	741		988						832			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1972, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1820	2658	3649	4621	5570	9856	8097	5797	3612	2072	1563	1419
MAX	8108	10880	11310	13300	16160	33600	17160	14870	25050	7865	4605	6890
(WY)	1928	1951	1902	1937	1915	1936	1940	1908	1972	1972	1905	1911
MIN	351	418	471	841	943	2340	2026	1319	890	455	327	370
(WY)	1964	1931	1931	1931	1934	1931	1915	1941	1965	1966	1966	1964

SUMMARY STATISTICS WATER YEARS 1899 - 1972

ANNUAL MEAN	4228											
HIGHEST ANNUAL MEAN	7403											1972
LOWEST ANNUAL MEAN	2166											1969
HIGHEST DAILY MEAN	172000				Mar 19	1936						
LOWEST DAILY MEAN	207				Jul 27	1966						
ANNUAL SEVEN-DAY MINIMUM	269				Aug 3	1966						
INSTANTANEOUS PEAK FLOW	a190000				Mar 19	1936						
INSTANTANEOUS PEAK STAGE	b34.24				Mar 19	1936						
INSTANTANEOUS LOW FLOW	195				Jul 27	1966						
ANNUAL RUNOFF (CFSM)	1.26											
ANNUAL RUNOFF (INCHES)	17.13											
10 PERCENT EXCEEDS	9360											
50 PERCENT EXCEEDS	2300											
90 PERCENT EXCEEDS	680											

‡ Adjusted for change in contents in Raystown Lake.

a From rating curve extended above 100,000 ft³/s.

b From floodmark in gage.

SHERMAN CREEK BASIN

01567500 BIXLER RUN NEAR LOYSVILLE, PA

LOCATION.--Lat 40°22'15", long 77°24'09", Perry County, Hydrologic Unit 02050305, on right bank 400 ft upstream from bridge on State Highway 850 at Bixler, 2.3 mi upstream from mouth, and 3.6 mi west of Loysville.

DRAINAGE AREA.--15.0 mi².

REVISED RECORDS.--WRD PA-90-2: 1989 (M).

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

GAGE.--Water-stage recorder. Datum of gage is 601.22 ft above sea level. Prior to May 14, 1954, nonrecording gage and crest-stage gage 400 ft downstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	11	27	8.7	e21	30	84	23	9.0	6.0	4.9	4.2
2	5.9	7.9	22	9.3	e17	28	72	27	8.7	5.8	6.3	4.0
3	6.1	6.9	19	9.0	e15	32	66	27	8.5	5.7	4.7	4.0
4	5.6	6.0	20	10	e13	32	56	27	8.4	5.7	4.6	3.9
5	5.4	5.6	175	8.7	e12	43	49	25	8.3	5.6	6.5	3.6
6	5.3	5.4	63	e8.2	e11	43	45	23	8.3	15	5.0	3.5
7	5.3	4.9	44	8.9	e10	38	54	27	8.1	16	4.3	3.5
8	5.6	4.6	33	9.2	e9.6	68	38	45	7.9	6.5	4.0	3.5
9	5.7	4.5	28	e8.2	e9.0	63	35	30	7.8	6.2	3.9	3.5
10	5.8	4.5	46	e7.3	e7.8	156	36	27	7.5	6.2	3.7	3.4
11	6.2	4.3	39	e7.6	e8.0	115	33	24	9.1	5.6	3.6	3.4
12	11	4.3	29	e8.1	e8.6	84	32	24	8.7	5.5	3.6	3.4
13	8.4	5.1	26	e8.4	e8.8	81	128	21	7.6	5.4	3.5	3.3
14	7.2	6.4	24	e6.6	e7.0	113	86	19	7.2	5.5	3.7	3.3
15	6.9	5.0	22	e6.2	e6.4	178	63	18	6.9	6.6	3.5	3.5
16	6.8	4.5	20	e5.8	e8.0	173	55	19	7.4	6.3	3.3	3.6
17	7.2	5.3	17	e6.3	e9.0	103	46	17	7.3	5.5	41	3.7
18	7.4	7.0	16	e7.6	e10	81	39	15	6.9	5.8	66	4.7
19	6.8	5.7	17	e7.0	e14	66	35	14	6.7	6.0	17	3.6
20	7.1	5.3	14	e5.4	33	70	31	14	6.7	5.4	9.0	3.6
21	8.8	5.0	20	e4.8	135	97	28	13	6.5	6.9	6.7	3.6
22	7.9	4.7	17	e5.3	160	308	26	12	6.2	11	6.9	4.4
23	7.4	4.4	14	e6.2	106	391	24	12	6.0	13	5.1	8.0
24	7.1	4.3	12	e9.2	75	402	23	11	6.1	6.3	4.3	4.0
25	7.2	4.1	e11	15	56	313	22	12	6.1	5.8	4.9	3.9
26	7.1	4.1	e9.8	18	47	163	21	12	5.9	5.5	15	4.3
27	7.2	39	e9.2	14	37	249	21	11	7.0	5.3	5.4	8.3
28	7.1	557	e8.5	38	32	237	21	10	6.5	5.3	6.1	4.4
29	6.9	64	e8.0	56	---	203	20	9.7	7.0	4.8	6.1	4.7
30	8.5	37	e7.8	37	---	134	20	9.3	6.8	7.0	4.5	4.3
31	13	---	e8.0	e26	---	102	---	9.0	---	4.9	4.3	---
TOTAL	219.6	837.8	826.3	386.0	886.2	4196	1309	587.0	221.1	212.1	271.4	123.1
MEAN	7.08	27.9	26.7	12.5	31.6	135	43.6	18.9	7.37	6.84	8.75	4.10
MAX	13	557	175	56	160	402	128	45	9.1	16	66	8.3
MIN	5.3	4.1	7.8	4.8	6.4	28	20	9.0	5.9	4.8	3.3	3.3
CFSM	.47	1.86	1.78	.83	2.11	9.02	2.91	1.26	.49	.46	.58	.27
IN.	.54	2.08	2.05	.96	2.20	10.41	3.25	1.46	.55	.53	.67	.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1994, BY WATER YEAR (WY)

	MEAN	10.1	14.4	19.0	16.5	27.7	40.4	33.9	23.7	17.6	12.0	6.87	6.64
MAX	48.6	61.9	54.3	49.0	91.0	135	121	81.2	172	112	32.3	37.7	
(WY)	1977	1957	1978	1979	1984	1994	1993	1978	1972	1989	1955	1975	
MIN	2.07	2.96	2.70	3.51	6.67	9.77	10.4	6.79	4.12	2.62	2.28	2.38	
(WY)	1964	1966	1966	1981	1992	1990	1963	1969	1965	1966	1966	1963	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1954 - 1994

ANNUAL TOTAL	11533.4	10075.6	19.1	
ANNUAL MEAN	31.6	27.6	42.6	1972
HIGHEST ANNUAL MEAN			7.59	1969
LOWEST ANNUAL MEAN			2120	Jun 22 1972
HIGHEST DAILY MEAN	557	Nov 28		Sep 1 1966
LOWEST DAILY MEAN	2.2	Jul 28	1.9	Sep 6 1966
ANNUAL SEVEN-DAY MINIMUM	2.6	Jul 30	1.9	Jun 20 1989
INSTANTANEOUS PEAK FLOW			a16000	Jun 20 1989
INSTANTANEOUS PEAK STAGE			b12.90	Jun 20 1989
INSTANTANEOUS LOW FLOW			1.5	Feb 2 1959
ANNUAL RUNOFF (CFSM)	2.11		1.84	
ANNUAL RUNOFF (INCHES)	28.60		17.34	
10 PERCENT EXCEEDS	68		38	
50 PERCENT EXCEEDS	8.9		9.3	
90 PERCENT EXCEEDS	3.7		4.3	

a From rating curve extended above 2,700 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow.

b From outside floodmark; 12.19 ft in gage well.

e Estimated.

SHERMAN CREEK BASIN

01568000 SHERMAN CREEK AT SHERMANS DALE, PA

LOCATION.--Lat 40°19'24", long 77°10'09", Perry County, Hydrologic Unit 02050305, on left bank on downstream side of bridge on State Highway 34 at Shermans Dale, and 1.2 mi upstream from Fishing Run.

DRAINAGE AREA.--200 mi².

PERIOD OF RECORD.--October 1929 to current year. Prior to October 1962, published as "at Shermandle".

REVISED RECORDS.--WSP 1302: 1930(M). WSP 1502: 1933, 1934(M), 1935-36.

GAGE.--Water-stage recorder. Datum of gage is 422.63 ft above sea level. Prior to Jan. 29, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 22, 1927, reached a stage of 20.34 ft, from floodmark, discharge, about 44,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	328	588	e110	777	e400	1320	769	92	70	51	111
2	54	194	475	e120	581	e350	1200	487	86	59	56	94
3	64	137	410	e125	e500	e320	1170	373	82	55	60	84
4	54	113	378	e130	e440	e310	1050	337	81	56	50	77
5	48	102	2280	e130	e420	e330	878	322	79	54	54	73
6	43	95	1380	e120	e430	e380	781	284	78	57	69	68
7	41	87	841	e120	e440	e450	905	269	78	237	57	65
8	39	77	639	e115	e400	758	687	650	75	103	47	61
9	39	70	527	e115	e350	889	589	449	72	70	41	57
10	38	66	582	e110	e320	1740	562	370	69	60	38	55
11	36	64	761	e105	e300	1700	541	324	73	56	35	52
12	49	63	513	e100	e280	1140	474	302	85	52	35	49
13	117	64	440	e110	e260	1030	1060	288	79	48	36	49
14	86	91	403	e100	e260	1230	1540	241	66	46	38	48
15	60	96	375	e90	e240	1680	950	223	60	46	41	47
16	53	80	347	e85	e260	2040	804	216	90	96	40	48
17	50	75	293	e80	e300	1250	665	201	236	50	85	59
18	49	126	263	e100	e500	1010	557	188	83	42	1670	88
19	46	131	267	e96	520	839	500	177	68	43	380	60
20	47	108	254	e88	716	786	449	168	65	51	188	52
21	67	95	329	e76	1870	1000	399	157	60	42	135	47
22	72	86	335	e60	2160	2470	362	146	58	80	147	51
23	67	81	266	e90	1530	3120	332	137	54	126	130	124
24	61	77	e220	e200	1090	3810	309	129	52	92	98	111
25	57	73	e190	355	831	4250	288	128	61	109	100	73
26	55	69	e150	474	e600	2510	266	141	53	61	593	155
27	55	108	e130	499	e500	3230	247	141	103	55	363	373
28	54	6910	e120	528	e450	3210	225	120	104	54	376	182
29	52	1800	e110	1700	---	2800	213	109	88	50	212	128
30	64	840	e100	1350	---	2110	229	103	80	47	155	99
31	203	---	e105	989	---	1580	---	97	---	62	122	---
TOTAL	1882	12306	14071	8470	17325	48722	19552	8046	2410	2129	5502	2640
MEAN	60.7	410	454	273	619	1572	652	260	80.3	68.7	177	88.0
MAX	203	6910	2280	1700	2160	4250	1540	769	236	237	1670	373
MIN	36	63	100	60	240	310	213	97	52	42	35	47
CFSM	.30	2.05	2.27	1.37	3.09	7.86	3.26	1.30	.40	.34	.89	.44
IN.	.35	2.29	2.62	1.58	3.22	9.06	3.64	1.50	.45	.40	1.02	.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1994, BY WATER YEAR (WY)

MEAN	142	242	310	300	397	613	557	399	207	116	102	86.7
MAX	905	924	964	868	1253	1941	1675	1196	1969	1187	777	476
(WY)	1977	1971	1973	1953	1984	1936	1993	1978	1972	1989	1933	1975
MIN	18.5	22.1	22.7	22.0	54.2	133	184	88.8	48.4	18.9	18.1	18.6
(WY)	1964	1931	1931	1981	1931	1931	1971	1941	1965	1966	1930	1930

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1930 - 1994

ANNUAL TOTAL	155963	143055	289
ANNUAL MEAN	427	392	544
HIGHEST ANNUAL MEAN			1972
LOWEST ANNUAL MEAN			1931
HIGHEST DAILY MEAN	6910	Nov 28	18300
LOWEST DAILY MEAN	28	Aug 29, 31a	10
ANNUAL SEVEN-DAY MINIMUM	29	Aug 27	11
INSTANTANEOUS PEAK FLOW		10400	Nov 28
INSTANTANEOUS PEAK STAGE		11.42	Nov 28
INSTANTANEOUS LOW FLOW		35	Oct 11, 12c
ANNUAL RUNOFF (CFSM)	2.14	1.96	3.9
ANNUAL RUNOFF (INCHES)	29.01	26.61	1.44
10 PERCENT EXCEEDS	973	1000	645
50 PERCENT EXCEEDS	120	122	140
90 PERCENT EXCEEDS	39	50	31

a Also Sept. 1, 2.

b From rating curve extended above 18,000 ft³/s.

c Also Aug. 11, 12.

e Estimated.

CLARK CREEK BASIN

01568500 CLARK CREEK NEAR CARSONVILLE, PA

LOCATION.--Lat 40°27'37", long 76°45'06", Dauphin County, Hydrologic Unit 02050305, on right bank 0.3 mi downstream from DeHart Dam, 1.8 mi southeast of Carsonville, and 15.0 mi upstream from mouth.

DRAINAGE AREA.--22.5 mi².

PERIOD OF RECORD.--October 1937 to current year.

REVISED RECORDS.--WSP 1302: 1940(M). WSP 1702: 1942 (monthly mean).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 552.32 ft above sea level. Prior to Jan. 6, 1939, water-stage recorder at site 1,700 ft upstream at datum 9.49 ft higher. Jan. 6, 1939, to July 27, 1940, nonrecording gage at site 100 ft downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since Jan. 28, 1940 by DeHart Dam (station 01568400). Diversion from reservoir to city of Harrisburg. Several measurements of water temperature were made during the year. Satellite telemetry at station.

COOPERATION.--Records of diversion and change in reservoir contents provided by city of Harrisburg.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	5.2	5.6	5.5	5.9	7.1	165	63	7.1	11	12	11
2	5.5	5.1	5.4	5.5	5.9	15	159	64	7.2	11	12	11
3	5.2	5.1	5.3	5.5	5.8	45	166	48	7.1	11	12	11
4	5.1	5.1	5.4	5.5	5.7	43	174	41	7.1	11	12	11
5	5.1	5.1	11	5.5	5.7	27	146	34	7.1	11	12	11
6	5.1	5.1	6.9	5.5	5.7	24	127	32	11	11	12	11
7	5.1	4.9	6.3	5.5	5.7	67	164	33	29	11	12	11
8	5.1	4.8	6.0	5.5	5.7	45	131	70	19	11	12	11
9	5.1	4.7	5.8	5.4	5.6	22	101	61	11	11	12	12
10	5.1	4.7	6.0	5.3	5.5	58	90	46	7.8	11	12	12
11	5.1	4.7	6.2	5.4	5.6	84	83	39	8.3	11	12	12
12	5.2	4.7	5.8	5.5	5.5	98	73	37	7.9	11	12	12
13	5.1	4.8	5.7	5.5	5.6	85	88	30	9.0	11	12	12
14	5.1	4.8	5.7	5.5	5.5	91	122	26	9.3	11	12	12
15	5.1	4.7	5.6	5.5	5.5	102	96	25	9.3	11	12	12
16	5.1	4.7	5.5	5.5	5.6	110	97	24	9.6	11	13	13
17	5.1	5.0	5.5	5.6	5.5	98	91	20	9.7	11	13	12
18	5.1	4.8	5.5	5.5	5.6	90	75	18	9.6	12	12	13
19	5.1	4.7	5.5	5.5	5.8	81	65	16	9.8	12	12	12
20	5.1	4.7	5.5	5.5	6.6	71	56	15	10	11	12	12
21	5.2	4.7	6.9	5.5	9.4	68	48	14	10	12	13	12
22	5.1	4.7	6.2	5.5	8.9	102	41	13	10	12	12	13
23	5.1	4.7	5.9	5.5	7.9	155	36	11	10	12	12	13
24	4.9	4.7	5.7	5.5	7.5	179	32	9.8	10	12	12	13
25	5.1	4.7	5.7	5.5	7.0	310	30	9.6	11	12	12	12
26	5.1	4.7	5.7	5.6	6.8	299	28	9.1	10	12	12	13
27	5.1	6.8	5.5	5.5	6.6	354	25	8.7	11	12	12	13
28	4.9	29	5.5	7.8	6.5	397	27	7.4	11	12	12	13
29	4.9	6.9	5.5	6.4	---	336	26	7.3	11	12	12	12
30	5.2	5.9	5.5	6.0	---	256	26	7.3	11	12	12	14
31	5.3	---	5.5	5.9	---	194	---	7.1	---	12	11	---
TOTAL	159.5	174.2	183.8	174.4	174.6	3913.1	2588	846.3	310.9	354	374	362
MEAN	5.15	5.81	5.93	5.63	6.24	126	86.3	27.3	10.4	11.4	12.1	12.1
MAX	6.1	29	11	7.8	9.4	397	174	70	29	12	13	14
MIN	4.9	4.7	5.3	5.3	5.5	7.1	25	7.1	7.1	11	11	11
(†)	18.0	17.2	16.8	19.8	20.3	20.3	18.4	18.0	19.7	20.5	19.6	11.6
MEAN‡	2.45	50.9	73.8	27.0	34.2	168	102	42.4	21.0	10.6	12.2	8.2
CFSM‡	.10	2.26	3.28	1.20	1.52	7.47	4.53	1.88	.93	.47	.54	.36
IN.‡	.12	2.52	3.78	1.38	1.58	8.61	5.05	2.17	1.04	.54	.62	.40

† Diversion for municipal supply of city of Harrisburg, equivalent in cubic feet per second.

‡ Adjusted for diversion and change in reservoir contents.

e Estimated.

CLARK CREEK BASIN

01568500 CLARK CREEK NEAR CARSONVILLE, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.0	13.2	16.7	19.6	18.5	36.1	43.6	37.8	19.8	10.2	6.39	8.56
MAX	95.5	108	85.6	113	76.1	126	176	106	280	56.3	13.8	102
(WY)	1977	1943	1991	1979	1951	1994	1983	1978	1972	1947	1945	1975
MIN	3.15	3.31	1.60	.84	.86	2.79	2.85	4.35	4.29	3.27	3.09	2.62
(WY)	1986	1992	1992	1992	1992	1981	1989	1955	1965	1986	1986	1986

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1941 - 1994	
ANNUAL TOTAL	12225.2		9614.8			
ANNUAL MEAN	33.5		26.3		20.0	
HIGHEST ANNUAL MEAN	49.6		46.2		40.1	
LOWEST ANNUAL MEAN					53.3	
HIGHEST DAILY MEAN	605		397		4130	
LOWEST DAILY MEAN	4.5 Sep 22,23		4.7 Nov 9		.67 Feb 10 1992	
ANNUAL SEVEN-DAY MINIMUM	4.7 Nov 19		4.7 Nov 19		.68 Feb 8 1992	
INSTANTANEOUS PEAK FLOW			457		a4800	
INSTANTANEOUS PEAK STAGE			3.58 Mar 27		10.98 Jun 22 1972	
INSTANTANEOUS LOW FLOW			4.7 Nov 7-27			
ANNUAL RUNOFF (CFSM)	1.49		1.17		.89	
ANNUAL RUNOFF (INCHES)	20.21		15.90		12.09	
10 PERCENT EXCEEDS	74		74		50	
50 PERCENT EXCEEDS	10		11		6.2	
90 PERCENT EXCEEDS	5.1		5.1		4.1	

‡ Adjusted for diversion and change in reservoir contents.

a From rating curve extended above 2,400 ft³/s on basis of computation of peak discharge at dam.

CONODOGUINET CREEK BASIN

01569800 LETORT SPRING RUN NEAR CARLISLE, PA

LOCATION.--Lat 40°14'05", long 77°08'23", Cumberland County, Hydrologic Unit 02050305, on right bank 320 ft downstream from bridge on U.S. Highway 11, 0.2 mi upstream from mouth, 3.1 mi west of New Kingstown, and 3.7 mi east of Carlisle.

DRAINAGE AREA.--21.6 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 410 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Satellite telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 282-287.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 8.8 ft, discharge not determined, and flood in June 1972 reached a stage of 8.4 ft, from information by local resident, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	33	59	44	44	56	131	86	52	45	37	45
2	35	32	55	43	42	56	125	73	52	45	36	41
3	36	31	51	43	41	56	120	72	51	43	35	41
4	34	31	55	44	41	56	114	72	50	41	36	41
5	34	31	171	42	40	62	110	71	49	40	43	40
6	33	30	112	41	39	63	107	69	61	49	38	39
7	32	30	89	41	39	64	113	78	52	60	37	38
8	32	29	80	41	40	73	102	89	49	43	36	37
9	31	29	74	40	39	77	99	74	48	40	34	37
10	31	28	78	40	38	129	99	72	47	38	35	37
11	30	28	70	39	38	119	95	70	49	38	35	37
12	40	28	66	40	37	112	93	74	48	37	34	36
13	33	32	63	40	37	108	105	68	46	36	33	35
14	32	30	61	39	37	119	97	67	45	37	33	34
15	31	29	60	39	37	131	92	66	44	47	33	34
16	31	29	57	38	38	129	92	65	54	42	32	34
17	30	31	56	40	38	115	88	64	50	39	62	34
18	30	30	55	38	39	109	86	63	48	38	83	36
19	30	29	55	38	40	102	86	63	47	38	47	34
20	30	29	53	37	43	107	84	61	46	36	44	33
21	30	28	59	37	54	134	83	60	48	49	54	32
22	29	28	53	37	60	191	82	59	46	57	78	43
23	29	28	52	37	62	186	81	58	44	56	57	48
24	29	28	50	37	63	193	80	57	43	46	53	38
25	29	28	49	37	62	193	79	59	42	43	54	36
26	28	27	48	38	62	169	77	59	42	41	72	67
27	28	47	47	38	59	196	76	56	64	41	53	65
28	28	173	46	45	57	206	75	55	50	40	50	45
29	28	83	45	48	---	201	75	54	47	39	49	42
30	35	67	45	46	---	168	75	53	45	39	46	40
31	35	---	44	45	---	145	---	53	---	37	45	---
TOTAL	978	1136	1958	1252	1266	3825	2821	2040	1459	1320	1414	1199
MEAN	31.5	37.9	63.2	40.4	45.2	123	94.0	65.8	48.6	42.6	45.6	40.0
MAX	40	173	171	48	63	206	131	89	64	60	83	67
MIN	28	27	44	37	37	56	75	53	42	36	32	32
CFSM	1.46	1.75	2.92	1.87	2.09	5.71	4.35	3.05	2.25	1.97	2.11	1.85
IN.	1.68	1.96	3.37	2.16	2.18	6.59	4.86	3.51	2.51	2.27	2.44	2.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	MEAN	34.5	34.2	40.7	41.0	46.5	58.4	62.4	52.2	43.7	38.4	34.4	32.3
MAX	79.6	54.4	65.9	92.0	84.4	123	126	84.5	66.1	59.3	54.5	57.9	
(WY)	1977	1980	1978	1979	1979	1994	1993	1978	1978	1984	1989	1987	
MIN	20.0	23.0	22.4	24.2	22.3	30.4	29.3	32.9	28.9	23.4	20.7	21.7	
(WY)	1993	1992	1982	1989	1989	1989	1989	1982	1991	1987	1992	1992	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1976 - 1994

ANNUAL TOTAL	20430	20668	43.1	
ANNUAL MEAN	56.0	56.6	61.9	1978
HIGHEST ANNUAL MEAN			28.3	1992
LOWEST ANNUAL MEAN			452	Jan 24 1979
HIGHEST DAILY MEAN	187	Apr 22	27	Nov 26
LOWEST DAILY MEAN	27	Nov 26	28	Nov 20
ANNUAL SEVEN-DAY MINIMUM	28	Nov 20	18	Aug 30 1992
INSTANTANEOUS PEAK FLOW		290	Nov 28	Jan 24 1979
INSTANTANEOUS PEAK STAGE		5.09	Nov 28	Jan 24 1979
INSTANTANEOUS LOW FLOW		24	Oct 28	Aug 15 1976 ^b
ANNUAL RUNOFF (CFSM)	2.59	2.62	2.00	
ANNUAL RUNOFF (INCHES)	35.18	35.59	27.14	
10 PERCENT EXCEEDS	106	98	67	
50 PERCENT EXCEEDS	42	45	37	
90 PERCENT EXCEEDS	31	31	24	

^a From rating curve extended above 680 ft³/s on basis of slope-area measurement at gage height 6.43 ft.

^b Part of day.

CONODOGUINET CREEK BASIN

01570000 CONODOGUINET CREEK NEAR HOGESTOWN, PA

LOCATION.--Lat 40°15'08", long 77°01'17", Cumberland County, Hydrologic Unit 02050305, on left bank 1,000 ft upstream from highway bridge on Township Route 596 (Sample Bridge Road), 0.4 mi downstream from Hogestown Run, and 1.0 mi northeast of Hogestown.

DRAINAGE AREA.--470 mi².

PERIOD OF RECORD.--October 1911 to September 1917, October 1929 to September 1958, July 1967 to current year.

October 1917 to December 1919 (gage heights and discharge measurements only), in reports of Water Supply Commission of Pennsylvania. Published as "at Brysons Bridge" 1912-17.

REVISED RECORDS.--WSP 1722: 1913, 1917.

GAGE.--Water-stage recorder. Datum of gage is 351.00 ft above sea level. Prior to December 1919, nonrecording gage at site 2 mi downstream at different datum. Oct. 1, 1929, to Aug. 3, 1931, nonrecording gage at site 1,000 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since June 1969 the Pennsylvania American Water Co. has diverted water upstream from station for municipal supply. Diversion for the year was equivalent to a mean daily discharge of 8.5 ft³/s. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	584	1400	e390	e1000	977	2680	758	341	255	260	448
2	292	613	1060	e400	e800	885	2200	1030	328	241	239	412
3	286	471	883	e380	e700	780	1890	795	317	230	248	367
4	251	387	811	e360	e600	954	1690	701	311	218	311	340
5	212	340	3200	e340	e540	1050	1480	678	306	215	328	315
6	189	307	4550	e300	e500	1380	1330	645	313	221	321	301
7	173	279	2230	e290	e480	1340	1410	618	365	360	287	291
8	159	244	1540	e280	e470	1650	1340	1030	369	439	251	280
9	157	218	1210	e270	e300	2420	1100	1260	313	317	231	270
10	149	196	1100	e230	e350	3410	1040	902	294	260	230	267
11	142	189	1410	e220	e380	4590	1060	777	293	243	209	256
12	163	181	1180	e230	e400	3160	987	718	312	223	202	241
13	260	177	963	e270	e450	2590	1080	678	315	211	201	235
14	271	223	865	e250	e400	2700	2840	619	318	202	207	231
15	210	279	804	e240	e350	3680	2200	584	287	291	214	224
16	188	253	753	e230	e400	4480	1640	564	274	680	198	261
17	179	236	681	e230	e410	3600	1430	553	365	386	236	282
18	168	282	616	e220	e430	2600	1180	524	367	302	2330	277
19	161	314	604	e210	e450	2130	1050	495	298	309	2000	267
20	157	293	595	e200	567	1960	962	477	275	285	954	239
21	174	272	634	e180	1050	2630	875	467	273	282	677	223
22	204	248	e650	e190	2600	4970	810	444	271	353	829	229
23	206	222	e600	e210	2940	6950	763	428	266	462	1010	320
24	193	207	e560	e300	2280	7110	727	409	250	406	820	355
25	177	199	e520	e350	1810	7150	697	405	240	357	601	319
26	165	191	e450	464	1450	5940	667	415	242	307	2620	328
27	159	227	e400	678	1170	4850	642	430	265	292	1510	667
28	158	3900	e380	776	1020	6430	622	451	420	282	1020	468
29	154	7240	e350	1980	---	6280	597	399	325	262	695	400
30	163	2990	e350	2170	---	5220	600	373	271	247	583	329
31	305	---	e360	1490	---	3490	---	355	---	244	484	---
TOTAL	6187	21762	31709	14328	24297	107356	37589	18982	9184	9382	20306	9442
MEAN	200	725	1023	462	868	3463	1253	612	306	303	655	315
MAX	362	7240	4550	2170	2940	7150	2840	1260	420	680	2620	667
MIN	142	177	350	180	300	780	597	355	240	202	198	223
CFSM	.42	1.54	2.18	.98	1.85	7.37	2.67	1.30	.65	.64	1.39	.67
IN.	.49	1.72	2.51	1.13	1.92	8.50	2.98	1.50	.73	.74	1.61	.75

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

	350	466	641	674	788	1073	948	683	483	322	308	291
MAX	1838	1436	1775	1742	2257	3463	2693	1500	3120	1184	1584	1408
(WY)	1977	1971	1973	1979	1984	1994	1993	1978	1972	1989	1915	1975
MIN	55.1	53.4	57.3	83.5	150	287	268	184	148	98.0	86.5	68.0
(WY)	1931	1931	1931	1931	1931	1931	1915	1941	1991	1930	1932	1932

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL TOTAL	300022	310524	585
ANNUAL MEAN	822	851	1045
HIGHEST ANNUAL MEAN			1972
LOWEST ANNUAL MEAN			1931
HIGHEST DAILY MEAN	7880	Apr 2	24500
LOWEST DAILY MEAN	121	Aug 29-31	26
ANNUAL SEVEN-DAY MINIMUM	125	Aug 27	27
INSTANTANEOUS PEAK FLOW		8310	Nov 29
INSTANTANEOUS PEAK STAGE		9.47	Nov 29
INSTANTANEOUS LOW FLOW		133	Oct 11
ANNUAL RUNOFF (CFSM)	1.75	1.81	1.24
ANNUAL RUNOFF (INCHES)	23.75	24.58	16.91
10 PERCENT EXCEEDS	2020	2180	1240
50 PERCENT EXCEEDS	346	380	340
90 PERCENT EXCEEDS	164	207	118

a From floodmark in gage.

e Estimated.

SUSQUEHANNA RIVER BASIN

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA

(National stream-quality accounting network, radiochemical and tritium program)

LOCATION.--Lat 40°15'17", long 76°53'11", Dauphin County, Hydrologic Unit 02050305, on east bank of City Island, 60 ft downstream from Market Street bridge in Harrisburg, 3,670 ft upstream from sanitary dam, and 1.7 mi upstream from Paxton Creek.

DRAINAGE AREA.--24,100 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1890 to current year.

REVISED RECORDS.--WSP 711: 1929. WSP 1502: 1891-1923, 1926(M), 1928. WSP 1702: 1953 (total runoff in inches), 1958 (1957 calendar year mean discharge).

GAGE.--Water-stage recorder. Concrete control since Aug. 29, 1916. Datum of gage is 290.01 ft above sea level.

Prior to Oct. 1, 1928, nonrecording gage at Walnut Street Bridge 600 ft upstream, and Oct. 1, 1928, to Aug. 31, 1975, water-stage recorder at site 3,170 ft downstream, all gages at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 15 flood-control reservoirs which have a combined capacity of 1,571,000 acre-ft. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known during period 1786 to 1890, 26.8 ft at Walnut Street bridge, June 2, 1889, discharge, 654,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17900	12300	164000	e17000	e59000	e45000	178000	38900	15700	43200	18500	36200
2	15700	17100	119000	e18000	e58000	e39000	158000	50200	15600	37200	17000	29900
3	14500	19700	87000	e20000	e51000	e33000	166000	53000	14700	30500	15300	26300
4	13400	19100	69100	e19000	e46000	e31000	202000	54200	14100	27200	14500	22900
5	12300	18300	70400	e17000	e41000	e32000	234000	50200	14300	24200	13900	20100
6	11500	18300	96500	e16000	e37000	e33000	213000	45200	14500	19300	14000	18000
7	10600	19200	101000	e16000	e35000	e35000	197000	40800	15800	21400	14400	15700
8	9960	24200	92700	e15000	e33000	e37000	218000	40300	15100	22700	14700	15100
9	9440	29900	77900	e14000	e30000	e41000	203000	44700	13500	20900	14200	14000
10	8180	29500	63300	e13000	e27000	e56000	168000	45700	13900	24300	13100	13000
11	7390	26700	63500	e14000	e25000	93000	151000	44000	14100	25200	11700	12300
12	9420	22500	70200	e15000	e24000	108000	153000	41500	13000	21700	10700	11700
13	9020	20500	70400	e16000	e22000	98100	161000	39100	15000	18500	10000	11100
14	7640	18900	64800	e15000	e21000	92700	206000	37100	24700	16100	9250	10500
15	7670	17300	56500	e14000	e20000	96800	215000	33200	26500	15000	9440	10100
16	7030	17200	49300	e13000	e21000	107000	184000	31000	55700	15500	20100	9870
17	6570	20300	44500	e14000	e21000	116000	156000	28500	74300	15400	42600	9650
18	6410	23800	41300	e13000	e20000	108000	144000	28200	49800	15100	46800	10600
19	6220	30400	38100	e12000	e20000	91600	128000	28200	37200	13900	143000	12400
20	6260	56000	35400	e11000	e20000	78900	109000	26500	29900	12900	195000	13200
21	7400	64300	34400	e10000	e29000	70700	93500	25300	22600	12700	133000	12100
22	9620	52300	37000	e12000	e48000	79000	79100	23900	20200	15800	97300	11600
23	12100	41900	41300	e14000	e100000	135000	68000	22200	17500	16500	90500	11500
24	14400	34800	37700	e15000	e130000	208000	59300	20800	15800	21300	87700	11400
25	15700	30100	34200	e18000	e120000	276000	53100	19700	13600	20400	70200	11200
26	14600	26400	30500	e19000	e76000	327000	46400	19400	13600	20300	57500	11400
27	13500	24300	24500	e18000	e62000	302000	41500	19300	26200	22000	50100	18900
28	12500	50300	e22000	e20000	e52000	278000	38700	19900	32100	23200	45200	35300
29	11600	194000	e18000	e27000	---	261000	36300	20500	28200	21900	38300	47300
30	11100	210000	e17000	e35000	---	242000	34900	19800	34200	19800	36900	39300
31	11100	---	e16000	e54000	---	212000	---	18200	---	19200	38800	---
TOTAL	330730	1189600	1787500	544000	1248000	3762800	4094800	1029500	711400	653300	1393690	532620
MEAN	10670	39650	57660	17550	44570	121400	136500	33210	23710	21070	44960	17750
MAX	17900	210000	164000	54000	130000	327000	234000	54200	74300	43200	195000	47300
MIN	6220	12300	16000	10000	20000	31000	34900	18200	13000	12700	9250	9650
CFSM	.44	1.65	2.39	.73	1.85	5.04	5.66	1.38	.98	.87	1.87	.74
IN.	.51	1.84	2.76	.84	1.93	5.81	6.32	1.59	1.10	1.01	2.15	.82

e Estimated.

SUSQUEHANNA RIVER BASIN

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1891 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17220	26330	33990	36040	40640	74850	73360	45020	26320	15400	11840	11470
MAX	75150	83540	95820	92550	153500	216100	217000	103900	166800	71450	44960	69050
(WY)	1977	1927	1973	1937	1891	1936	1993	1894	1972	1902	1994	1975
MIN	2356	2303	3835	3876	9122	27460	20380	12750	7328	3315	2878	2066
(WY)	1931	1931	1931	1931	1931	1960	1946	1941	1962	1965	1930	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1891 - 1994

ANNUAL TOTAL	16138870		17277940									
ANNUAL MEAN	44220		47340							34330		
HIGHEST ANNUAL MEAN										53040		1972
LOWEST ANNUAL MEAN										16940		1965
HIGHEST DAILY MEAN	394000	Apr 2	327000	Mar 26						954000	Jun 24	1972
LOWEST DAILY MEAN	4080	Jul 28	6220	Oct 19						1700	Nov 29	1930
ANNUAL SEVEN-DAY MINIMUM	4290	Jul 24	6790	Oct 15						1790	Sep 17	1964
INSTANTANEOUS PEAK FLOW			334000	Mar 26						1020000	Jun 24	1972
INSTANTANEOUS PEAK STAGE			17.90	Mar 26						a32.57	Jun 24	1972
INSTANTANEOUS LOW FLOW			6080	Oct 19,20						b1600	Nov 29	1930
ANNUAL RUNOFF (CFSM)	1.83		1.96							1.42		
ANNUAL RUNOFF (INCHES)	24.91		26.67							19.35		
10 PERCENT EXCEEDS	142000		119000							79500		
50 PERCENT EXCEEDS	16500		24300							20100		
90 PERCENT EXCEEDS	5360		11600							5450		

a From floodmark.

b Result of freezeup. Minimum daily discharge since construction of sanitary dam and not affected by freezeup, 1,700 ft³/s, Sept. 18, 1964.

SUSQUEHANNA RIVER BASIN

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued
(National stream-quality accounting network, radiochemical and tritium program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-53, 1956 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1974 to August 1979.

pH: May 1974 to June 1979.

WATER TEMPERATURE: May 1974 to August 1979.

DISSOLVED OXYGEN: May 1974 to August 1979.

SUSPENDED SEDIMENT DISCHARGE: March, April, 1962, October 1963 to September 1968, April 1970 to September 1979, March 1980 to March 1981.

INSTRUMENTATION.--Water-quality monitor May 1974 to August 1979.

REMARKS.--Additional water-quality data collected for this station as part of the NAWQA program may be found on pages 271-274.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAM- PLING METHOD, CODES (82398)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
DEC 06...	1445	1028	80020	10	99400	160	7.1	5.0	22	758	12.0
APR 08...	1305	1028	80020	10	222000	124	7.3	7.0	11	774	12.0
14...	1420	1028	80020	10	211000	130	7.6	9.0	25	758	11.2
JUN 17...	1345	1028	80020	10	74000	164	7.4	21.5	7.6	765	7.0
30...	1300	1028	80020	10	35100	170	7.5	26.0	4.9	757	7.0
AUG 19...	1205	1028	80020	10	147000	108	7.5	20.0	80	764	7.8
SEP 07...	1225	1028	80020	10	14700	203	7.7	22.0	1.5	761	10.2

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 μM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
DEC 06...	94	--	--	57	32	16	4.0	4.2	13	0.2
APR 08...	97	--	--	46	28	13	3.3	3.5	14	0.2
14...	97	--	--	48	19	13	3.8	3.8	14	0.2
JUN 17...	79	--	--	57	25	16	4.1	6.3	19	0.4
30...	87	K220	77	72	41	20	5.4	7.6	18	0.4
AUG 19...	86	--	--	48	24	14	3.1	4.1	15	0.3
SEP 07...	117	K 7	K 42	91	50	25	7.0	8.1	16	0.4

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ALKA- LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	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)
DEC 06...	2.5	30	ND	24	26	33	26	9.2	<0.10	5.0
APR 08...	1.0	22	ND	18	19	20	21	6.1	<0.10	4.3
14...	1.1	5	15	29	31	22	23	6.1	<0.10	4.3
JUN 17...	1.7	39	ND	32	33	36	22	9.0	<0.10	3.7
30...	2.0	39	ND	32	33	38	30	13	<0.10	4.4
AUG 19...	1.9	20	4	24	24	28	18	6.1	<0.10	4.4
SEP 07...	1.5	48	1	41	40	49	41	13	<0.10	3.9

SUSQUEHANNA RIVER BASIN

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
DEC 06...	96	87	0.13	25800	<0.010	1.20	0.050	0.30	0.040	<0.010
APR 08...	73	67	0.10	43800	<0.010	0.750	0.030	0.30	0.050	<0.010
14...	79	76	0.11	45000	<0.010	0.860	0.030	0.40	0.080	<0.010
JUN 17...	97	84	0.13	19400	0.020	0.570	0.020	0.40	0.040	0.020
30...	124	106	0.17	11800	0.010	0.990	<0.010	0.50	0.080	0.020
AUG 19...	74	70	0.10	29400	<0.010	0.850	0.030	0.60	0.110	0.010
SEP 07...	140	127	0.19	5560	<0.010	0.600	0.030	0.0	0.030	<0.010
DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (MG/L AS AL) (01106)	BARIUM, DIS- SOLVED (MG/L AS BA) (01005)	COBALT, DIS- SOLVED (MG/L AS CO) (01035)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	LITHIUM DIS- SOLVED (MG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (MG/L AS MO) (01060)	NICKEL, DIS- SOLVED (MG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (MG/L AS SE) (01145)
DEC 06...	<0.010	60	28	<3	84	<4	51	<10	5	<1
APR 08...	<0.010	60	23	3	60	<4	110	<10	5	<1
14...	<0.010	--	--	--	--	--	--	--	--	--
JUN 17...	<0.010	--	--	--	--	--	--	--	--	--
30...	<0.010	90	27	<3	81	<4	13	10	2	<1
AUG 19...	<0.010	--	--	--	--	--	--	--	--	--
SEP 07...	<0.010	30	25	<3	58	<4	6	<10	2	<1
DATE	SILVER, DIS- SOLVED (MG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (MG/L AS V) (01085)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (MG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (MG/L) (75990)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 06...	<1.0	88	<6	--	--	--	--	--	--	--
APR 08...	<1.0	53	<6	--	--	--	--	58	34800	84
14...	--	--	--	--	--	--	--	89	50700	91
JUN 17...	--	--	--	--	--	--	--	124	24800	97
30...	<1.0	100	<6	0.04	0.01	0.09	0.01	44	4170	93
AUG 19...	--	--	--	--	--	--	--	269	107000	92
SEP 07...	<1.0	130	<6	0.03	0.01	0.14	0.02	10	397	97

SUSQUEHANNA RIVER BASIN

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAM- PLING METHOD, CODES (82398)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR											
14...	1135	1028	1028	--	3690	--	--	--	--	--	--
14...	1140	1028	1028	120	3600	120	7.3	10.0	9.5	81	98
14...	1210	1028	1028	120	3400	113	7.4	9.0	9.3	84	96
14...	1215	1028	1028	120	3200	100	7.2	9.0	10.1	65	93
14...	1235	1028	1028	120	3000	92	7.3	8.5	10.3	62	78
14...	1300	1028	1028	120	2800	113	6.6	8.5	11.3	63	76
14...	1315	1028	1028	120	2600	109	6.7	8.5	10.5	81	89
14...	1350	1028	1028	--	2300	--	--	--	--	--	--
14...	1425	1028	1028	--	1360	--	--	--	--	--	--
14...	1430	1028	1028	120	1300	117	6.7	8.5	11.7	100	94
14...	1435	1028	1028	120	1100	114	7.1	8.5	11.6	131	86
14...	1500	1028	1028	120	900	118	6.8	8.0	11.7	125	93
14...	1515	1028	1028	120	700	122	6.7	8.0	12.7	120	89
14...	1540	1028	1028	70	600	--	--	9.0	11.2	--	--
14...	1600	1028	1028	120	500	122	6.9	8.0	11.6	88	94
14...	1610	1028	1028	120	300	127	8.3	7.0	11.0	84	94
14...	1620	1028	1028	120	120	128	6.7	8.5	10.6	84	95
14...	1640	1028	1028	--	1	--	--	--	--	--	--
14...	1735	1028	1028	10	--	130	7.6	--	--	95	89

PAXTON CREEK BASIN

01571000 PAXTON CREEK NEAR PENBROOK, PA

LOCATION.--Lat 40°18'30", long 76°51'00", Dauphin County, Hydrologic Unit 02050305, on right bank 90 ft upstream from bridge on North Progress Avenue, 0.3 mi north of Interstate Highway 81, and 2.0 mi north of Penbrook.

DRAINAGE AREA.--11.2 mi².

PERIOD OF RECORD.--March 1940 to September 1950; October 1984 to December 1988. October 1991 to current year. Annual maximum, water years 1974-84, 1990-91.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 350 ft above sea level, from topographic map. Mar. 1, 1940, to Sept. 30, 1950, water-stage recorder at bridge 100 ft downstream at same datum.

REMARKS.--Records good except those below 1.0 ft³/s and estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Satellite telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 282-284.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972 reached a stage of 13.45 ft, from floodmarks, discharge, 3,300 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	19	22	e4.6	e12	e14	36	33	4.0	1.6	1.8	3.1
2	3.5	6.9	17	5.0	e5.7	e15	28	10	3.8	1.4	1.7	2.5
3	6.0	5.2	14	4.7	e5.8	19	24	7.8	3.6	1.2	1.5	2.1
4	3.0	4.3	24	e4.3	e5.4	20	22	7.7	3.4	1.2	2.6	2.0
5	2.5	5.0	355	e3.6	e5.5	32	17	7.3	3.2	1.2	8.0	1.8
6	2.1	4.5	60	e3.3	e6.0	e26	15	6.5	3.0	2.0	2.6	1.7
7	2.2	3.3	36	e3.3	e7.3	29	38	19	2.3	6.2	1.7	1.6
8	2.1	2.8	26	e3.1	e6.7	67	17	58	2.1	1.6	1.5	1.5
9	2.0	2.6	20	e2.5	e5.5	51	15	15	2.0	1.3	1.2	1.5
10	2.0	2.5	41	e2.6	e3.8	212	19	11	1.9	1.1	1.1	1.4
11	1.9	2.3	30	e2.7	e3.9	88	16	9.6	3.7	.94	1.1	1.1
12	8.7	2.3	19	e3.0	e4.4	67	14	9.0	3.2	.91	1.1	1.1
13	3.3	3.1	16	3.5	6.6	67	57	8.9	2.2	.87	1.1	1.2
14	2.2	5.2	14	e2.9	e5.2	93	35	8.8	2.0	4.1	1.0	1.0
15	2.0	2.9	12	e2.1	e4.8	90	25	8.5	1.7	10	1.1	1.0
16	1.9	2.4	10	e1.9	e5.0	75	34	8.3	1.7	5.2	.86	1.0
17	1.8	16	8.4	e2.0	e5.5	52	21	8.0	1.4	1.6	34	1.2
18	1.9	14	8.0	e1.7	e6.8	43	17	7.3	1.4	1.4	28	10
19	2.0	6.3	12	e1.1	17	40	15	7.0	1.4	1.3	6.7	1.8
20	2.9	5.0	7.8	e1.1	34	50	13	7.0	1.3	1.1	4.2	1.4
21	5.5	3.9	46	e1.1	99	91	11	6.7	1.7	29	25	1.2
22	4.3	3.5	22	e1.4	91	226	9.5	6.4	1.4	15	45	14
23	2.9	3.2	16	e2.0	66	171	8.4	6.3	1.1	10	13	12
24	2.6	3.0	13	e4.5	59	124	7.8	5.9	1.1	3.5	7.3	3.4
25	2.6	2.7	11	10	45	99	7.1	5.7	13	18	22	2.6
26	2.5	2.4	9.0	e8.2	e27	65	6.7	5.5	2.8	3.7	22	9.2
27	2.5	107	7.5	e5.6	e12	211	8.7	5.2	8.4	4.7	7.4	4.6
28	2.4	913	6.5	e13	e13	116	6.4	5.1	10	6.7	5.5	3.1
29	2.4	61	e4.4	49	---	114	7.0	4.7	2.9	3.0	7.2	3.1
30	14	33	e4.4	29	---	65	7.6	4.4	2.1	2.4	4.1	2.4
31	20	---	e4.5	21	---	46	---	4.2	---	2.0	3.3	---
TOTAL	119.1	1248.3	896.5	203.8	568.9	2478	558.2	317.8	93.8	144.22	264.66	95.6
MEAN	3.84	41.6	28.9	6.57	20.3	79.9	18.6	10.3	3.13	4.65	8.54	3.19
MAX	20	913	355	49	99	226	57	58	13	29	45	14
MIN	1.8	2.3	4.4	1.1	3.8	14	6.4	4.2	1.1	.87	.86	1.0
CFSM	.34	3.72	2.58	.59	1.81	7.14	1.66	.92	.28	.42	.76	.28
IN.	.40	4.15	2.98	.68	1.89	8.23	1.85	1.06	.31	.48	.88	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	MEAN	5.68	17.0	17.8	14.9	19.3	30.7	23.9	21.3	8.73	8.66	6.75	7.52
MAX	23.2	41.6	35.2	36.4	41.9	79.9	81.5	46.0	32.2	33.7	32.1	49.6	
(WY)	1943	1994	1949	1949	1950	1994	1993	1946	1946	1945	1942	1987	
MIN	.56	1.50	4.00	5.08	6.78	9.41	7.89	2.21	1.53	1.15	.36	.16	
(WY)	1942	1942	1944	1985	1993	1985	1946	1941	1949	1941	1941	1943	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1940 - 1994

ANNUAL TOTAL	8393.97	6988.88	
ANNUAL MEAN	23.0	19.1	15.1
HIGHEST ANNUAL MEAN			21.8
LOWEST ANNUAL MEAN			7.84
HIGHEST DAILY MEAN	913	Nov 28	913
LOWEST DAILY MEAN	.73	Aug 1	a.86
ANNUAL SEVEN-DAY MINIMUM	.86	Jul 21	1.1
INSTANTANEOUS PEAK FLOW			2600
INSTANTANEOUS PEAK STAGE			8.04
INSTANTANEOUS LOW FLOW			a.74
ANNUAL RUNOFF (CFSM)	2.05		1.71
ANNUAL RUNOFF (INCHES)	27.88		23.21
10 PERCENT EXCEEDS	49		45
50 PERCENT EXCEEDS	6.0		5.5
90 PERCENT EXCEEDS	1.4		1.4

a May have been lower during period of ice effect January 19-21.

b From rating curve extended above 2,800 ft³/s on basis of peak flow through culvert.

e Estimated.

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA
(National water-quality assessment station)

LOCATION.--Lat 40°13'30", long 76°54'24", Cumberland County, Hydrologic Unit 02050305, on right bank at Eberlys Mill, 50 ft downstream from bridge on SR 2031, and 0.5 mi upstream from mouth.
DRAINAGE AREA.--12.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	14	29	16	20	e23	e80	49	14	8.4	10	16
2	8.8	9.7	26	16	19	e24	e70	27	13	7.7	9.6	15
3	8.2	e9.2	23	15	18	e25	e62	24	13	7.6	8.9	15
4	7.5	e9.1	31	16	17	e27	e58	24	13	7.6	8.9	19
5	7.3	e9.0	116	14	16	e28	e48	22	12	7.6	10	18
6	7.1	e8.8	59	14	16	e25	e54	21	23	15	9.3	18
7	6.7	e8.4	45	14	16	e24	e49	32	14	13	8.5	17
8	6.6	e8.0	37	14	16	e30	e44	47	13	9.1	8.3	18
9	6.6	e8.2	32	13	16	e36	e40	28	11	9.8	8.0	30
10	6.6	e8.0	38	12	14	e66	e38	25	11	9.2	7.7	27
11	6.7	e8.8	31	12	14	e68	e40	23	15	8.4	7.6	22
12	12	e9.4	28	12	13	e50	e35	24	13	8.2	7.3	20
13	7.8	9.8	25	12	14	e52	e40	22	11	8.0	9.6	18
14	7.1	8.2	24	11	13	e58	e47	21	10	14	8.4	17
15	6.8	7.4	23	11	13	e62	e39	20	10	18	8.1	16
16	6.6	6.9	22	10	14	e68	e36	20	10	11	8.2	16
17	6.6	12	21	11	15	e54	e34	19	9.8	8.8	32	18
18	6.5	14	20	10	16	e47	e32	19	9.3	8.5	22	28
19	6.3	8.3	22	16	18	e45	e31	18	8.9	8.1	17	21
20	6.8	7.7	20	9.3	23	e44	e30	18	8.7	7.5	14	17
21	7.4	7.2	35	9.1	39	e50	e29	17	8.7	36	19	16
22	7.3	7.0	24	9.4	41	e72	e28	17	8.3	26	21	42
23	7.1	6.8	22	9.5	41	e82	e27	16	8.1	19	16	48
24	7.1	6.7	21	e11	e37	e110	e26	16	8.0	15	14	23
25	6.9	6.4	21	12	e27	e130	e25	17	12	14	16	18
26	7.0	6.3	20	14	e26	e135	e25	20	8.3	13	36	43
27	6.8	37	20	13	e23	e140	24	17	10	13	59	26
28	6.4	140	18	24	e22	e170	23	16	8.5	13	38	21
29	6.5	49	17	27	---	e140	26	15	8.0	12	24	18
30	18	36	17	24	---	e110	27	15	7.8	11	20	14
31	16	---	16	22	---	e90	---	14	---	11	18	---
TOTAL	242.7	487.3	903	433.3	577	2085	1167	683	330.4	378.5	504.4	655
MEAN	7.83	16.2	29.1	14.0	20.6	67.3	38.9	22.0	11.0	12.2	16.3	21.8
MAX	18	140	116	27	41	170	80	49	23	36	59	48
MIN	6.3	6.3	16	9.1	13	23	23	14	7.8	7.5	7.3	14
CFSM	.62	1.29	2.31	1.11	1.64	5.34	3.09	1.75	.87	.97	1.29	1.73
IN.	.72	1.44	2.67	1.28	1.70	6.16	3.45	2.02	.98	1.12	1.49	1.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	7.83	16.2	29.1	14.0	20.6	67.3	47.8	22.3	12.2	11.5	13.7	16.2
MEAN	7.83	16.2	29.1	14.0	20.6	67.3	56.7	22.6	13.5	12.2	16.3	21.8
MAX	1994	1994	1994	1994	1994	1994	1993	1993	1993	1994	1994	1994
MIN	7.83	16.2	29.1	14.0	20.6	67.3	38.9	22.0	11.0	10.9	11.1	10.5
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1993	1993	1993

SUMMARY STATISTICS

FOR 1994 WATER YEAR

WATER YEARS 1993 - 1994

ANNUAL TOTAL	8446.6											
ANNUAL MEAN	23.1									23.1		
HIGHEST ANNUAL MEAN										23.1		1994
LOWEST ANNUAL MEAN										23.1		1994
HIGHEST DAILY MEAN	170	Mar 28								170	Mar 28	1994
LOWEST DAILY MEAN	6.3	Oct 19 ^a								6.3	Oct 19	1993 ^a
ANNUAL SEVEN-DAY MINIMUM	6.7	Oct 14								6.7	Oct 14	1993
INSTANTANEOUS PEAK FLOW	266	Nov 28								266	Nov 28	1993
INSTANTANEOUS PEAK STAGE	5.84	Nov 28								5.84	Nov 28	1993
INSTANTANEOUS LOW FLOW	6.1	Oct 19 ^b								6.1	Oct 19	1993
ANNUAL RUNOFF (CFSM)	1.84									1.84		
ANNUAL RUNOFF (INCHES)	24.94									24.95		
10 PERCENT EXCEEDS	46									45		
50 PERCENT EXCEEDS	16									15		
90 PERCENT EXCEEDS	7.6									8.0		

^a Also Nov. 26, 1993.

^b Also Oct. 20, 28, 29, and Nov. 26, 27.

^e Estimated.

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1993 to current year.

TEMPERATURE: April 1993 to current year.

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the fixed-station network are shown in figure 10, page 111. For a complete list of pesticides and volatile organic compounds analyzed and their corresponding reporting levels, see table 2, page 116 and table 3, pages 171-172.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 800 microsiemens, June 8, 9, 1994; minimum, 138 microsiemens, July 21, 1994.

WATER TEMPERATURE: Maximum, 25.5°C, July 11, 1993; minimum, 0.0°C, January 19, 1994.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 800 microsiemens, June 8, 9; minimum 138 microsiemens, July 21.

WATER TEMPERATURE: Maximum, 25.0°C, July 6; minimum, 0.0°C, January 19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM- PLING METHOD, CODES (82398)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT											
12...	1515	1028	80020	15	3045	10	19	417	8.1	12.0	750
26...	1430	1028	80020	15	3045	10	7.1	679	8.1	12.5	758
NOV											
08...	1415	1028	80020	15	3045	10	8.6	676	8.4	10.0	765
22...	1340	1028	80020	15	3045	10	6.9	669	8.2	10.5	763
DEC											
05...	1130	1028	80020	15	8010	70	133	353	7.6	--	--
14...	1240	1028	80020	15	3045	10	24	653	8.2	10.5	751
JAN											
10...	1350	1028	80020	15	3045	10	12	610	8.3	6.0	773
FEB											
15...	1415	1028	80020	15	3045	10	13	724	8.3	8.0	755
21...	1500	1028	80020	15	8010	30	47	685	7.4	8.5	756
MAR											
23...	1215	1028	80020	15	3045	10	133	620	7.6	11.0	753
APR											
05...	1400	1028	80020	15	3045	10	35	635	8.3	14.0	753
19...	1410	1028	80020	15	3045	10	27	657	8.3	17.0	753
MAY											
03...	1310	1028	80020	15	3045	10	24	670	8.2	14.0	765
17...	1410	1028	80020	15	3045	10	19	677	8.2	12.5	755
26...	1635	1028	80020	15	3045	30	33	617	8.0	16.0	743
JUN											
06...	1410	1028	80020	15	3045	10	14	636	7.9	19.5	753
06...	1720	1028	80020	15	3045	30	97	285	7.6	22.0	751
28...	1330	1028	80020	15	3045	10	8.3	655	8.0	18.0	755
JUL											
11...	1300	1028	80020	15	3045	10	8.3	663	8.1	19.5	760
14...	1535	1028	80020	15	3045	10	24	502	8.0	20.5	756
27...	0810	1028	80020	15	3045	10	12	663	8.0	15.5	752
AUG											
10...	1230	1028	80020	15	3045	10	7.7	658	8.1	19.5	761
22...	1445	1028	80020	15	3045	10	23	522	7.9	17.0	753
SEP											
07...	1245	1028	80020	15	3045	10	19	665	8.3	17.0	757

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)
OCT												
12...	8.5	80	180	40	58	7.7	14	14	0.5	2.6	--	170
26...	10.4	98	290	52	94	13	23	15	0.6	2.1	--	290
NOV												
08...	11.9	105	290	51	94	13	23	15	0.6	2.3	--	290
22...	12.5	112	290	48	94	13	22	14	0.6	2.3	--	290
DEC												
05...	--	--	150	18	49	6.6	11	14	0.4	2.1	--	160
14...	11.4	104	270	14	88	13	20	14	0.5	2.4	--	320
JAN												
10...	12.9	102	280	47	93	12	23	15	0.6	2.3	--	290
FEB												
15...	13.8	118	290	62	96	13	31	19	0.8	2.4	--	280
21...	--	--	240	75	79	11	41	27	1.1	2.7	--	210
MAR												
23...	10.4	96	240	55	77	11	24	18	0.7	2.6	--	220
APR												
05...	13.7	135	260	63	84	11	23	16	0.6	2.2	--	230
19...	11.6	122	280	74	94	12	25	16	0.6	2.2	--	260
MAY												
03...	11.1	107	280	61	92	12	24	16	0.6	2.0	--	270
17...	10.7	101	270	69	88	12	24	16	0.6	2.3	--	240
26...	8.5	89	250	2	82	11	21	15	0.6	2.2	0.040	300
JUN												
06...	9.1	100	280	70	92	11	23	15	0.6	2.1	0.020	250
06...	7.4	86	110	20	36	3.8	12	19	0.5	2.8	--	100
28...	9.8	104	290	77	96	13	25	16	0.6	2.1	0.040	260
JUL												
11...	9.6	105	280	54	89	13	24	16	0.6	2.2	0.050	270
14...	5.3	60	200	42	66	9.1	18	16	0.6	2.4	0.010	200
27...	--	37	270	51	88	13	24	16	0.6	2.4	0.050	270
AUG												
10...	9.7	106	280	66	92	13	26	17	0.7	2.1	0.050	270
22...	8.0	84	230	32	75	9.8	19	15	0.5	2.1	0.040	240
SEP												
07...	11.1	116	290	63	96	13	26	16	0.7	2.3	0.050	270

YELLOW BRANCHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CAR- BONATE WAT DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT											
12...	0	140	18	27	0.1	5.0	236	224	0.32	12.2	2.28
26...	0	240	30	39	0.2	8.0	387	370	0.53	7.42	4.28
NOV											
08...	1	240	29	46	0.2	8.0	392	376	0.53	9.10	4.09
22...	0	240	30	41	0.1	7.7	370	371	0.50	6.89	3.49
DEC											
05...	0	130	16	17	0.1	4.8	194	195	0.26	69.7	--
14...	0	260	29	35	0.1	7.6	370	370	0.50	24.0	4.27
JAN											
10...	0	240	29	45	<0.1	7.7	389	375	0.53	12.6	--
FEB											
15...	0	230	29	66	<0.1	7.3	407	403	0.55	14.6	4.38
21...	0	170	26	81	0.1	5.9	379	363	0.52	48.1	3.24
MAR											
23...	0	180	28	56	0.1	6.6	351	336	0.48	126	4.68
APR											
05...	0	190	29	53	<0.1	4.6	362	343	0.49	34.3	4.59
19...	0	210	30	56	0.1	5.7	392	370	0.53	28.8	4.09
MAY											
03...	0	220	30	55	0.1	6.9	359	371	0.49	23.3	3.99
17...	0	200	30	55	0.1	7.1	376	359	0.51	19.3	4.49
26...	0	250	27	49	0.1	7.1	346	365	0.47	30.8	3.66
JUN											
06...	0	210	28	50	<0.1	7.5	358	357	0.49	13.5	4.38
06...	0	85	15	21	<0.1	3.1	165	155	0.22	43.1	2.06
28...	0	220	29	53	0.1	8.4	368	374	0.50	8.25	3.89
JUL											
11...	0	220	29	52	0.1	7.8	389	367	0.53	8.72	3.59
14...	0	160	22	36	0.1	5.7	299	269	0.41	19.4	2.88
27...	0	220	28	49	0.1	7.8	385	364	0.52	12.9	4.09
AUG											
10...	0	220	28	48	0.1	7.9	375	367	0.51	7.83	4.19
22...	0	200	7.7	33	0.1	7.2	306	285	0.42	19.0	2.79
SEP											
07...	5	230	28	51	0.1	7.9	357	381	0.49	18.3	3.99

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT											
12...	10	0.020	0.07	2.30	0.050	0.06	--	0.40	<0.20	--	0.100
26...	19	0.020	0.07	4.30	<0.010	--	--	<0.20	<0.20	--	0.010
NOV											
08...	18	0.010	0.03	4.10	0.030	0.04	--	<0.20	<0.20	--	<0.010
22...	15	0.010	0.03	3.50	0.020	0.03	--	0.40	<0.20	--	0.020
DEC											
05...	--	<0.010	--	2.10	0.040	0.05	--	0.40	<0.20	--	0.120
14...	19	0.030	0.10	4.30	0.030	0.04	--	<0.20	<0.20	--	<0.010
JAN											
10...	--	<0.010	--	4.80	0.020	0.03	--	<0.20	<0.20	--	<0.010
FEB											
15...	19	0.020	0.07	4.40	0.020	0.03	--	<0.20	<0.20	--	0.030
21...	14	0.060	0.20	3.30	0.090	0.12	0.21	1.7	0.30	3.6	0.080
MAR											
23...	21	0.020	0.07	4.70	0.050	0.06	--	0.40	<0.20	--	0.040
APR											
05...	20	0.010	0.03	4.60	<0.010	--	--	<0.20	<0.20	--	0.010
19...	18	0.010	0.03	4.10	<0.010	--	--	<0.20	<0.20	--	<0.010
MAY											
03...	18	0.010	0.03	4.00	0.030	0.04	--	<0.20	<0.20	--	0.010
17...	20	0.010	0.03	4.50	0.030	0.04	--	<0.20	<0.20	--	0.030
26...	16	0.040	0.13	3.70	0.140	0.18	0.16	0.90	0.30	4.0	0.130
JUN											
06...	19	0.020	0.07	4.40	0.060	0.08	0.34	0.40	0.40	4.8	0.040
06...	9.1	0.040	0.13	2.10	0.370	0.48	0.43	1.3	0.80	2.9	0.210
28...	17	0.010	0.03	3.90	0.040	0.05	--	0.30	<0.20	--	0.030
JUL											
11...	16	0.010	0.03	3.60	0.030	0.04	--	0.30	<0.20	--	0.030
14...	13	0.020	0.07	2.90	0.130	0.17	0.17	1.6	0.30	3.2	0.300
27...	18	0.010	0.03	4.10	0.030	0.04	--	<0.20	<0.20	--	0.010
AUG											
10...	19	0.010	0.03	4.20	0.030	0.04	--	<0.20	<0.20	--	0.040
22...	12	0.010	0.03	2.80	0.030	0.04	0.17	0.20	0.20	3.0	0.040
SEP											
07...	18	0.010	0.03	4.00	0.040	0.05	--	<0.20	<0.20	--	0.020

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (µG/L AS SR) (01080)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
12...	0.030	0.040	0.12	26	11	--	4.6	0.8	25	1.3	93
26...	<0.010	0.020	0.06	6	7	--	1.0	0.3	87	1.7	43
NOV											
08...	0.010	<0.010	--	9	4	370	1.0	0.2	6	0.14	39
22...	<0.010	<0.010	--	10	5	350	2.0	0.2	2	0.04	90
DEC											
05...	0.030	0.040	0.12	23	9	190	2.1	1.4	48	17	92
14...	<0.010	<0.010	--	<3	5	350	0.9	0.2	41	2.7	21
JAN											
10...	0.010	<0.010	--	<3	4	380	0.8	0.3	87	2.8	62
FEB											
15...	<0.010	<0.010	--	5	8	390	0.8	0.2	121	4.3	90
21...	<0.010	<0.010	--	8	17	260	3.0	1.8	121	15	51
MAR											
23...	0.020	0.020	0.06	6	12	310	1.3	1.1	58	21	41
APR											
05...	<0.010	<0.010	--	4	10	300	1.5	0.4	86	8.2	10
19...	<0.010	<0.010	--	<3	10	340	1.0	0.4	86	6.3	24
MAY											
03...	<0.010	<0.010	--	3	10	350	0.8	0.8	92	6.0	95
17...	<0.010	<0.010	--	4	8	360	1.0	0.3	141	7.2	13
26...	0.010	0.020	0.06	6	10	310	--	--	187	17	57
JUN											
06...	0.050	<0.010	--	6	13	360	2.6	0.6	115	4.3	24
06...	0.070	0.040	0.12	34	9	150	7.5	>4.0	667	174	93
28...	<0.010	0.010	0.03	<3	9	370	1.0	0.7	40	0.90	64
JUL											
11...	0.020	<0.010	--	<3	7	350	1.3	0.7	--	--	--
14...	0.030	<0.010	--	10	6	260	2.6	>4.0	273	18	89
27...	0.010	<0.010	--	<3	9	330	1.1	0.4	131	4.4	25
AUG											
10...	0.020	<0.010	--	<3	9	360	1.0	0.4	105	2.2	15
22...	0.030	0.010	0.03	9	8	270	1.7	0.7	29	1.8	44
SEP											
07...	<0.010	0.010	0.03	6	7	380	0.8	0.3	169	8.7	37

REMARKS.--The following table contains data from the fixed-site ecological survey. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional targeted habitat (DTH). This site was sampled approximately 70 feet upstream from the bridge on SR 2031. The fixed-station sites are shown in figure 18, page 300. Data from all sites sampled for the ecological fixed-station survey can be found on pages 301-303.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	STREAM VELOC-ITY, MEAN (F/S) (00055)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)
EFS02 -RTH	01571490	06-02-94	1100	1028	80020	1.53	680	--	16.0	--
-DTH		06-02-94	1115	1028	80020	.266	680	--	16.0	--
EFS02		06-02-94	0900	1028	1028	--	670	7.8	13.5	756

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HCO3) (00440)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3) (00445)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS DRY WEIGHT (G/SQM) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM) ()
EFS02 -RTH	06-02-94	--	--	--	--	--	44	5.1	370	380	10
-DTH	06-02-94	--	--	--	--	--	61	10	1900	2100	200
EFS02	06-02-94	9.5	91	277	0	227	--	--	--	--	--

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, ($\mu\text{G/L}$) (46342)	ATRA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (39632)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82680)	CHLOR- PYRIFOS DIS- SOLVED ($\mu\text{G/L}$) (38933)	CYANA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (04041)	DESETHYL ATRA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (04040)
OCT								
12...	1515	19	<0.009	0.071	<0.046	0.013	<0.027	e 0.028
26...	1430	8.0	<0.009	0.110	<0.046	<0.008	<0.027	e 0.057
NOV								
08...	1415	8.6	<0.009	0.110	<0.046	<0.008	<0.027	e 0.054
22...	1340	8.0	<0.009	0.092	<0.046	<0.008	<0.027	e 0.051
DEC								
05...	1130	100	<0.009	0.058	<0.046	<0.008	<0.027	e 0.027
14...	1240	22	<0.009	0.120	<0.046	<0.008	<0.027	e 0.074
JAN								
10...	1350	13	<0.009	0.110	<0.046	<0.008	<0.027	e 0.060
FEB								
15...	1415	13	<0.009	0.076	<0.046	<0.008	<0.027	e 0.110
21...	1500	32	--	--	--	--	--	--
MAR								
23...	1215	133	<0.009	0.092	<0.046	<0.008	<0.027	e 0.100
APR								
05...	1400	35	<0.009	0.100	<0.046	<0.008	<0.027	e 0.170
19...	1410	27	<0.009	0.100	<0.046	<0.008	<0.027	e 0.073
MAY								
03...	1310	22	<0.009	0.095	<0.046	<0.008	<0.027	e 0.170
17...	1410	17	<0.009	0.100	<0.046	<0.008	<0.027	e 0.086
26...	1635	28	0.032	0.210	<0.046	<0.008	<0.027	e 0.075
JUN								
06...	1410	13	0.009	0.130	<0.046	<0.008	<0.027	e 0.092
06...	1720	97	0.071	0.360	0.150	0.010	0.058	e 0.068
28...	1330	9.6	<0.009	0.120	<0.046	<0.008	<0.027	e 0.140
JUL								
11...	1300	16	<0.009	0.120	<0.046	<0.008	<0.027	e 0.120
14...	1535	22	<0.009	0.085	<0.046	0.019	<0.027	e 0.065
27...	0810	12	<0.009	0.130	<0.046	<0.008	<0.027	e 0.100
AUG								
10...	1230	3.6	<0.009	0.150	<0.046	<0.008	<0.027	e 0.140
22...	1445	25	<0.009	0.083	<0.046	<0.008	<0.027	e 0.056
SEP								
07...	1245	27	<0.009	0.120	<0.046	<0.008	<0.027	e 0.100

e Estimated.

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	DI- AZINON, DIS- SOLVED ($\mu\text{G/L}$) (39572)	MALA- THION, DIS- SOLVED ($\mu\text{G/L}$) (39532)	METHYL PARA- THION WAT FLT 0.7 μ GF, REC ($\mu\text{G/L}$) (82667)	METO- LACHLOR WATER DISSOLV ($\mu\text{G/L}$) (39415)	METRI- BUZIN SENCOR WATER DISSOLV ($\mu\text{G/L}$) (82630)	PRO- METON, WATER, DISS, REC ($\mu\text{G/L}$) (04037)	SI- MAZINE, WATER, DISS, REC ($\mu\text{G/L}$) (04035)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82670)
OCT								
12...	<0.008	<0.014	<0.035	0.011	<0.012	0.150	0.027	0.037
26...	<0.008	<0.014	<0.035	0.011	<0.012	0.180	0.033	0.031
NOV								
08...	<0.008	<0.014	<0.035	0.012	<0.012	0.200	0.034	<0.015
22...	<0.008	<0.014	<0.035	0.009	<0.012	0.160	0.020	<0.015
DEC								
05...	<0.008	<0.014	<0.035	0.052	<0.012	0.110	0.016	0.048
14...	<0.008	<0.014	<0.035	0.019	<0.012	0.210	0.041	0.074
JAN								
10...	<0.008	<0.014	<0.035	0.011	<0.012	0.130	0.029	0.018
FEB								
15...	<0.008	<0.014	<0.035	<0.009	<0.012	0.100	0.026	0.025
21...	--	--	--	--	--	--	--	--
MAR								
23...	<0.008	<0.014	<0.035	0.037	<0.012	0.120	0.027	<0.015
APR								
05...	<0.008	<0.014	<0.035	0.020	<0.012	0.120	0.028	0.028
19...	<0.008	<0.014	<0.035	0.015	<0.012	0.130	0.032	<0.015
MAY								
03...	<0.008	<0.014	<0.035	0.014	<0.012	0.120	0.036	<0.015
17...	<0.008	<0.014	<0.035	0.024	<0.012	0.095	0.029	<0.015
26...	<0.008	<0.014	<0.035	0.320	<0.012	0.130	0.095	0.016
JUN								
06...	<0.008	<0.014	<0.035	0.046	0.032	0.110	0.034	<0.015
06...	0.060	0.019	0.041	0.480	0.140	0.062	0.044	0.021
28...	<0.008	<0.014	<0.035	0.026	<0.012	0.140	0.038	0.017
JUL								
11...	<0.008	<0.014	<0.035	0.026	<0.012	0.130	0.039	0.024
14...	<0.008	<0.014	<0.035	0.029	<0.012	0.083	0.030	0.022
27...	<0.008	<0.014	<0.035	0.040	0.027	0.170	0.048	0.059
AUG								
10...	<0.008	<0.014	<0.035	0.022	<0.012	0.130	0.040	0.036
22...	0.013	<0.014	<0.035	0.020	<0.012	0.150	0.043	0.030
SEP								
07...	<0.008	<0.014	<0.035	0.014	<0.012	0.120	0.041	0.020

VOLATILE ORGANIC COMPOUNDS ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BENZENE, DIMETHYL- (XYLENE) REC ($\mu\text{G/L}$) (81551)	METHANE, CHLORO- (METHYL CHLO- RIDE) ($\mu\text{G/L}$) (34418)	METHANE, DI- CHLORO- DI- FLUORO- ($\mu\text{G/L}$) (34668)	METHANE, TRI- CHLORO- (CHLORO- FORM) ($\mu\text{G/L}$) (32106)	NAPHTH- ALENE ($\mu\text{G/L}$) (34696)	PROPENE 2-METHOXY- 2-METHYL (METHYL ETHER TERT-BUTYL) ($\mu\text{G/L}$) (78032)
JAN								
10...	1350	12	<0.2	0.3	<0.2	0.5	<0.2	<0.2
FEB								
15...	1415	13	<0.2	<0.2	<0.2	0.5	<0.2	0.3
21...	1500	47	0.2	<0.2	<0.2	1.0	0.3	0.9
MAR								
23...	1215	133	<0.2	<0.2	0.5	0.8	<0.2	0.4
APR								
19...	1410	27	<0.2	<0.2	0.5	0.4	<0.2	<0.2
MAY								
03...	1310	24	<0.2	<0.2	0.2	0.7	<0.2	<0.2
17...	1410	19	<0.2	<0.2	0.5	0.6	<0.2	<0.2

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM (NAWQA)

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE

REMARKS.--Selected water samples from Cedar Run were analyzed for 60 volatile organic compounds. The table below lists the compounds on the Volatile Organic Compound schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. Users of these data should use the parameter code as a cross-reference to the water-quality table. Only compounds measured at or above the reporting level for one or more samples are listed in the water-quality table preceding this schedule.

BENZENE ($\mu\text{G/L}$) (34030)	BENZENE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77613)	BENZENE, 1,2,4,- TRICHLORO- ($\mu\text{G/L}$) (34551)	BENZENE, 1,2,4- TRIMETHYL- (PSEUDOCUMENE) ($\mu\text{G/L}$) (77222)	BENZENE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34536)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1,3,5- TRIMETHYL- (MESITYLENE) ($\mu\text{G/L}$) (77226)	BENZENE, 1,3- DICHLORO- ($\mu\text{G/L}$) (34586)	BENZENE, 1,4- DICHLORO- ($\mu\text{G/L}$) (34571)	BENZENE, 1-CHLORO- 2-METHYL- (O-CHLORO -TOLUENE) ($\mu\text{G/L}$) (77275)	BENZENE, 1-CHLORO- 4-METHYL- (TOLUENE, P-CHLOR) ($\mu\text{G/L}$) (77277)
0.2	0.2	0.2	0.2	0.2
BENZENE, ISOPROPYL ($\mu\text{G/L}$) (77223)	BENZENE, BROMO- ($\mu\text{G/L}$) (81555)	BENZENE, CHLORO- ($\mu\text{G/L}$) (34301)	BENZENE, DIMETHYL- (XYLENE) ($\mu\text{G/L}$) (81551)	BENZENE, ETHYL- ($\mu\text{G/L}$) (34371)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1-METHYL- 4-ISOPROPYL (ISOPROPYL TOLUENE) ($\mu\text{G/L}$) (77356)	BENZENE, METHYL- (TOLUENE) ($\mu\text{G/L}$) (34010)	BENZENE, n-BUTYL- ($\mu\text{G/L}$) (77342)	BENZENE, n-PROPYL- ($\mu\text{G/L}$) (77224)	BENZENE, sec-BUTYL- ($\mu\text{G/L}$) (77350)
0.2	0.2	0.2	0.2	0.2
BENZENE, tert-BUTYL- ($\mu\text{G/L}$) (77353)	ETHANE, 1,1,1,2- TETRACHLORO- ($\mu\text{G/L}$) (77562)	ETHANE, 1,1,1- TRICHLORO- ($\mu\text{G/L}$) (34506)	ETHANE, 1,1,2,2- TETRACHLORO- ($\mu\text{G/L}$) (34516)	ETHANE, 1,1,2- TRICHLORO- ($\mu\text{G/L}$) (34511)
0.2	0.2	0.2	0.2	0.2
ETHANE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34496)	ETHANE, 1,2- DIBROMO-(EDB) ($\mu\text{G/L}$) (77651)	ETHANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (32103)	ETHANE, CHLORO- ($\mu\text{G/L}$) (34311)	ETHANE, TRICHLOROTRIFLUORO- (FREON-113) ($\mu\text{G/L}$) (77652)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34501)	ETHYLENE, CHLORO- (VINYL CHLORIDE) ($\mu\text{G/L}$) (39175)	ETHYLENE, cis-1,2- DICHLORO- ($\mu\text{G/L}$) (77093)	ETHYLENE, TETRACHLORO- ($\mu\text{G/L}$) (34475)	ETHYLENE, trans-1,2 DICHLORO- ($\mu\text{G/L}$) (34546)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, TRICHLORO- ($\mu\text{G/L}$) (39180)	HEXACHLORO- BUTADIENE ($\mu\text{G/L}$) (39702)	METHANE, BROMO- ($\mu\text{G/L}$) (34413)	METHANE, BROMOCHLORO- ($\mu\text{G/L}$) (77297)	METHANE, CHLORO- (METHYL CHLORIDE) ($\mu\text{G/L}$) (34418)
0.2	0.2	0.2	0.2	0.2
METHANE, DIBROMO- ($\mu\text{G/L}$) (30217)	METHANE, DIBROMOCHLORO- ($\mu\text{G/L}$) (32105)	METHANE, DICHLORO- (METHYLENE CHLORIDE) ($\mu\text{G/L}$) (34423)	METHANE, DICHLOROBROMO- ($\mu\text{G/L}$) (32101)	METHANE DICHLORODIFLUORO- ($\mu\text{G/L}$) (34668)
0.2	0.2	0.2	0.2	0.2

WATER RESOURCES DATA - PENNSYLVANIA, 1994
NATIONAL WATER-QUALITY ASSESSMENT PROGRAM (NAWQA)

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE--Continued

METHANE, TETRACHLORO- (CARBON TETRACHLORIDE) ($\mu\text{G/L}$) (32102)	METHANE, TRIBROMO- (BROMOFORM) ($\mu\text{G/L}$) (32104)	METHANE, TRICHLORO- (CHLOROFORM) ($\mu\text{G/L}$) (32106)	METHANE, TRICHLOROFLUORO- ($\mu\text{G/L}$) (34888)	PROPENE 2-METHOXY-2-METHYL (METHYL ETHER tert-BUTYL) ($\mu\text{G/L}$) (78032)
0.2	0.2	0.2	0.2	0.2
NAPTHELENE ($\mu\text{G/L}$) (34696)	PROPANE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77443)	PROPANE, 1,2- DIBROMO-3- CHLORO-(DBCP) ($\mu\text{G/L}$) (82625)	PROPANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34541)	PROPANE, 1,3- DICHLORO- ($\mu\text{G/L}$) (77173)
0.2	0.2	1.0	0.2	0.2
PROPANE, 2,2- DICHLORO- ($\mu\text{G/L}$) (77170)	PROPENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (77168)	PROPENE, cis-1,3- DICHLORO- ($\mu\text{G/L}$) (34704)	PROPENE, trans-1,3- DICHLORO- ($\mu\text{G/L}$) (34699)	STYRENE ($\mu\text{G/L}$) (77128)
0.2	0.2	0.2	0.2	0.2

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	639	618	630	647	533	598	508	497	502	655	623	641
2	638	480	602	683	633	647	516	505	511	656	637	647
3	625	526	590	683	639	665	524	513	519	655	633	643
4	643	556	618	688	676	681	529	428	504	653	627	640
5	645	601	617	686	642	667	480	281	382	674	623	641
6	634	603	618	689	666	677	520	480	508	664	617	639
7	634	607	620	685	678	681	526	514	519	694	621	646
8	639	611	618	689	677	682	548	518	530	699	612	653
9	643	609	620	687	675	681	566	536	550	691	620	653
10	626	604	618	689	671	680	568	490	540	658	623	645
11	642	613	622	687	663	676	581	540	563	665	611	640
12	632	373	521	690	627	663	602	576	587	703	631	660
13	617	497	573	670	425	606	617	595	607	672	637	657
14	642	606	622	614	509	569	653	615	639	681	647	667
15	648	624	634	624	610	618	655	638	645	683	675	679
16	664	629	639	624	610	617	662	647	654	676	655	665
17	656	630	641	642	382	589	660	639	652	665	635	653
18	661	624	642	619	427	541	652	640	647	655	638	647
19	661	641	648	668	616	643	649	627	642	657	646	652
20	666	641	650	668	635	656	654	640	647	655	644	650
21	663	644	652	---	---	---	648	556	595	657	644	650
22	668	644	656	---	---	---	648	624	636	648	633	642
23	686	653	670	682	642	664	650	630	639	645	639	642
24	683	659	672	689	662	683	652	637	644	661	642	646
25	691	647	674	698	683	693	648	632	641	681	661	675
26	683	648	674	708	688	696	659	625	646	677	670	672
27	681	658	674	710	226	575	656	620	640	681	670	676
28	684	641	668	458	198	333	654	635	647	---	---	---
29	680	628	665	487	458	477	655	623	644	---	---	---
30	682	434	585	499	486	493	653	618	639	700	669	683
31	605	449	540	---	---	---	662	619	640	669	659	663
MONTH	691	373	628	710	198	623	662	281	592	703	611	654

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	661	652	657	719	681	694	676	652	660	739	504	624
2	661	650	655	741	713	723	693	667	680	672	642	659
3	685	652	670	743	715	725	744	686	712	687	660	677
4	686	671	680	731	717	722	---	---	---	705	685	696
5	684	664	673	735	718	730	---	---	---	688	666	677
6	678	653	669	735	714	724	641	631	636	684	667	677
7	678	658	669	731	680	712	749	521	686	686	431	633
8	689	657	672	---	---	---	757	733	744	605	284	494
9	663	631	645	---	---	---	761	717	745	618	603	613
10	657	628	649	---	---	---	760	704	741	622	604	617
11	660	619	637	---	---	---	765	723	741	626	608	617
12	662	614	631	---	---	---	758	723	741	621	585	609
13	702	660	673	---	---	---	745	424	619	636	616	628
14	706	668	687	---	---	---	700	653	687	642	633	637
15	700	658	682	---	---	---	703	681	691	669	630	636
16	719	687	702	---	---	---	690	492	634	728	668	711
17	735	712	724	---	---	---	678	655	666	717	686	694
18	733	710	722	---	---	---	674	651	661	698	681	688
19	735	708	721	730	699	708	671	635	657	693	679	685
20	735	697	718	708	674	695	653	629	642	688	679	683
21	726	678	702	680	526	643	653	634	644	---	---	---
22	725	696	714	632	530	577	660	613	631	696	686	692
23	735	689	711	637	482	594	661	626	648	697	686	694
24	---	---	---	555	433	501	668	629	653	698	686	692
25	762	711	727	466	395	438	---	---	---	698	651	679
26	721	700	710	432	417	425	---	---	---	695	542	655
27	707	688	697	594	319	468	---	---	---	707	621	676
28	697	679	688	593	500	533	---	---	---	---	---	---
29	---	---	---	584	481	520	738	668	702	---	---	---
30	---	---	---	600	578	588	773	678	719	---	---	---
31	---	---	---	659	592	631	---	---	---	---	---	---
MONTH	762	614	685	743	319	618	773	424	681	739	284	655

YELLOW BREECHES CREEK BASIN

01571490 CEDAR RUN AT EBERLYS MILL, PA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	672	660	666	707	662	694	681	671	676
2	---	---	---	667	638	651	705	668	694	675	668	672
3	730	712	721	674	643	665	702	685	695	673	667	670
4	727	711	718	684	657	671	703	599	683	673	668	670
5	730	711	717	685	649	667	706	546	659	674	666	669
6	---	---	---	657	218	596	703	639	679	671	665	668
7	717	519	659	639	242	471	712	693	706	672	662	667
8	800	717	761	---	---	---	706	686	697	677	662	669
9	800	714	744	---	---	---	702	688	695	673	662	621
10	788	757	766	---	---	---	704	687	696	657	590	638
11	791	664	755	---	---	---	704	683	697	661	650	656
12	709	652	676	702	668	683	712	679	698	662	649	656
13	731	705	718	716	690	704	729	157	635	674	656	666
14	733	711	720	733	388	624	702	629	691	690	661	671
15	730	709	718	685	245	528	708	669	685	689	666	672
16	732	711	720	645	372	555	716	692	703	680	667	674
17	712	689	700	---	---	---	707	222	479	677	650	669
18	725	702	710	702	682	690	677	385	569	665	635	653
19	754	709	726	697	687	693	700	677	687	671	653	664
20	757	745	753	---	---	---	703	688	696	671	661	667
21	748	726	733	714	138	560	698	289	604	670	660	665
22	736	724	731	701	196	534	634	454	551	669	327	596
23	729	714	720	707	423	623	687	634	671	628	352	508
24	738	719	730	716	695	705	696	678	691	676	628	661
25	721	618	658	706	606	688	697	494	672	681	674	678
26	697	647	672	702	661	695	653	508	587	678	403	582
27	699	664	685	699	633	688	668	351	637	664	603	640
28	678	658	668	697	617	670	676	502	605	678	662	669
29	680	661	670	704	688	698	683	675	679	675	658	666
30	672	662	667	700	690	695	686	677	681	672	653	663
31	---	---	---	700	682	694	685	680	683	---	---	---
MONTH	800	519	712	733	138	645	729	157	661	690	327	653
YEAR	800	138	650									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	10.0	12.0	9.5	8.5	9.5	10.5	8.0	9.5	8.0	6.0	7.5
2	16.5	12.0	14.0	11.0	7.5	9.0	11.5	9.5	10.5	10.0	8.0	9.0
3	16.0	13.5	14.5	10.5	9.0	10.0	12.5	10.0	11.0	9.0	7.0	8.0
4	16.0	11.5	13.5	12.5	8.5	10.5	11.0	10.5	10.5	7.0	3.0	5.0
5	15.0	12.5	13.5	13.0	11.5	12.0	11.0	10.0	10.0	6.0	4.5	5.5
6	15.0	11.0	13.0	12.5	9.0	11.0	11.5	9.5	10.5	6.0	4.5	5.5
7	16.5	12.0	14.0	10.0	8.0	8.5	11.5	10.5	11.0	6.5	5.5	6.0
8	16.5	13.5	15.0	10.0	6.5	8.0	12.0	9.5	11.0	7.5	4.0	5.5
9	17.0	13.0	15.0	10.0	6.5	8.0	11.0	9.0	10.0	4.5	2.5	3.5
10	15.0	11.0	13.0	10.5	7.0	8.5	11.0	9.5	10.0	5.5	3.0	4.5
11	13.0	9.0	11.0	10.5	7.0	8.5	11.0	6.0	9.0	6.5	4.5	5.5
12	12.0	11.0	11.5	12.0	8.5	10.0	8.0	5.5	7.0	7.0	5.0	6.0
13	13.5	11.0	12.0	10.5	9.0	9.5	10.0	7.0	8.5	8.0	6.5	7.5
14	11.5	10.5	11.0	14.0	9.5	12.0	11.0	8.5	9.5	8.5	4.0	7.5
15	13.5	11.0	12.0	16.5	13.0	14.5	11.0	9.5	10.5	4.0	1.0	2.5
16	14.0	11.5	12.5	13.5	11.0	12.5	10.5	8.5	10.0	3.5	.5	1.5
17	14.5	13.0	14.0	12.5	10.5	11.5	10.0	7.5	8.5	3.0	.0	1.5
18	16.5	13.0	14.5	12.0	10.0	11.5	10.0	8.5	9.0	3.0	1.0	2.0
19	14.0	12.5	13.0	10.5	9.5	10.0	10.0	9.0	9.5	2.0	.0	1.0
20	13.0	12.5	13.0	10.5	7.0	9.0	10.0	9.0	9.5	4.5	2.0	3.0
21	14.5	13.0	13.5	9.5	6.0	7.5	9.5	7.0	8.0	4.5	1.0	2.5
22	13.5	10.5	12.0	10.5	7.0	8.5	8.5	7.0	7.5	5.5	3.5	4.0
23	13.5	10.0	11.5	10.5	7.5	8.5	9.5	8.0	9.0	6.0	4.0	5.0
24	13.5	9.5	11.5	11.0	8.0	9.5	8.5	7.5	8.0	9.0	5.5	7.5
25	14.5	10.0	12.0	10.0	7.5	9.0	8.5	7.0	8.0	8.5	6.5	8.0
26	13.0	11.5	12.0	8.5	5.5	7.0	7.5	4.0	5.0	6.5	5.5	6.0
27	14.0	12.0	13.0	11.0	7.5	8.5	6.5	5.0	5.5	5.5	3.0	4.0
28	13.0	10.0	11.5	13.0	10.5	12.0	7.0	6.0	6.5	7.0	3.0	5.0
29	13.5	9.5	11.0	11.5	10.0	10.5	6.0	5.5	6.0	9.0	7.0	8.0
30	11.5	10.0	11.0	11.0	9.0	10.0	6.0	3.5	5.0	9.0	7.0	8.0
31	10.5	9.5	10.0	---	---	---	7.0	4.5	6.0	8.5	5.5	7.0
MONTH	17.0	9.0	12.6	16.5	5.5	9.8	12.5	3.5	8.7	10.0	.0	5.3

YELLOW BREECHES CREEK BASIN

01571500 YELLOW BREECHES CREEK NEAR CAMP HILL, PA

LOCATION.--Lat 40°13'29", long 76°53'54", Cumberland County, Hydrologic Unit 02050305, on left bank 50 ft downstream from single-span highway bridge on Green Lane Drive, 150 ft downstream from Olmsted Mill dam, 1.0 mi southeast of Camp Hill, and 3.1 mi upstream from mouth.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--April 1909 to December 1919, July 1954 to current year. Prior to January 1910 monthly discharge only, published in WSP 1302. Prior to June 1954, published as "at Olmsted's Mill".

REVISED RECORDS.--WSP 1302: 1910, 1912-13, 1914(M), 1916.

GAGE.--Water-stage recorder. Datum of gage is 307.49 ft above sea level. March 1909 to December 1919, nonrecording gage at site 50 ft upstream at same datum.

REMARKS.--Records good. The Mechanicsburg Water Co. diverts water about 4 mi upstream from station for municipal supply. Diversion for the year was equivalent to a mean daily discharge of 2.2 ft³/s. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 22, 1953, reached a stage of 9.4 ft, from floodmarks, discharge, 3,940 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	268	459	351	471	572	1590	914	322	236	210	200
2	161	204	392	348	449	542	1370	728	314	229	201	197
3	165	175	370	345	426	540	1230	580	309	219	197	190
4	153	172	360	345	407	569	1130	550	305	212	197	186
5	145	168	1750	348	394	599	982	554	300	206	205	183
6	141	166	1570	343	385	628	897	521	300	205	206	179
7	139	159	956	337	381	567	1040	514	321	218	193	177
8	139	152	779	327	382	724	870	954	322	229	186	173
9	137	150	666	323	387	798	734	704	307	226	182	173
10	133	148	626	310	382	1200	707	590	290	220	178	174
11	129	145	650	306	381	1250	732	548	280	213	176	169
12	156	146	548	310	363	977	661	538	288	206	177	164
13	216	149	496	318	368	911	771	521	283	200	179	160
14	171	167	485	324	362	1040	903	485	272	199	179	158
15	153	167	485	313	356	1240	703	467	261	270	174	157
16	148	153	477	287	351	1290	682	463	251	394	172	159
17	144	154	460	276	357	1050	655	446	256	308	280	161
18	143	168	445	268	369	932	611	438	268	266	669	163
19	143	162	440	276	395	842	590	437	255	270	382	159
20	145	155	433	280	453	827	568	429	243	262	243	152
21	159	148	515	280	755	967	540	417	234	346	261	151
22	162	146	504	281	993	1530	521	404	231	661	533	168
23	153	144	483	287	953	1790	509	390	223	382	350	274
24	149	143	465	301	894	2070	499	376	220	291	252	227
25	145	142	444	315	861	2410	487	368	220	273	229	181
26	142	139	427	337	739	2350	473	371	218	244	431	191
27	141	190	407	351	644	2450	466	438	215	230	354	261
28	141	2420	391	388	584	3180	461	409	229	235	269	262
29	138	1440	380	616	---	3080	447	373	241	224	240	197
30	155	625	369	520	---	2550	465	352	238	213	225	180
31	243	---	359	485	---	1900	---	338	---	204	214	---
TOTAL	4747	8865	17591	10496	14242	41375	22294	15617	8016	8091	7944	5526
MEAN	153	295	567	339	509	1335	743	504	267	261	256	184
MAX	243	2420	1750	616	993	3180	1590	954	322	661	669	274
MIN	129	139	359	268	351	540	447	338	215	199	172	151
CFSM	.71	1.37	2.63	1.57	2.35	6.18	3.44	2.33	1.24	1.21	1.19	.85
IN.	.82	1.53	3.03	1.81	2.45	7.13	3.84	2.69	1.38	1.39	1.37	.95

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

	MEAN	186	207	264	288	376	495	476	368	290	203	187	183
MAX	620	407	569	741	824	1335	1353	777	1639	486	573	1012	
(WY)	1977	1976	1984	1979	1984	1994	1993	1989	1972	1989	1915	1975	
MIN	98.6	98.4	97.2	92.4	153	221	216	167	122	81.2	80.6	94.7	
(WY)	1964	1966	1966	1981	1989	1911	1966	1969	1966	1966	1966	1965	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL TOTAL	155755	164804	
ANNUAL MEAN	427	452	294
HIGHEST ANNUAL MEAN			500
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	3440	Apr 2	12400
LOWEST DAILY MEAN	125	Sep 1, 2	67
ANNUAL SEVEN-DAY MINIMUM	128	Aug 28	70
INSTANTANEOUS PEAK FLOW		3370	Mar 28
INSTANTANEOUS PEAK STAGE		8.61	Mar 28
INSTANTANEOUS LOW FLOW		128	Oct 11, 12
ANNUAL RUNOFF (CFSM)	1.98	2.09	1.36
ANNUAL RUNOFF (INCHES)	26.82	28.38	18.47
10 PERCENT EXCEEDS	956	899	520
50 PERCENT EXCEEDS	224	321	212
90 PERCENT EXCEEDS	145	154	117

a From floodmark.

e Estimated.

SWATARA CREEK BASIN

01572025 SWATARA CREEK NEAR PINE GROVE, PA

LOCATION.--Lat 40°31'57", long 76°24'09", Schuylkill County, Hydrologic Unit 02050305, on right bank 1.0 mi downstream from Lower Little Swatara Creek, 1.3 mi southwest of Pine Grove, and 1.6 mi upstream from bridge on Interstate Highway 81.

DRAINAGE AREA.--116 mi².

PERIOD OF RECORD.--October 1988 to January 1991, October 1991 to current year.

REVISED RECORDS.--WDR PA-90-2: 1989.

GAGE.--Water-stage recorder. Elevation of gage is 490 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	296	495	e130	e270	293	905	329	77	89	87	98
2	61	201	383	e140	e245	272	871	254	72	67	81	87
3	79	153	318	e131	e212	276	858	221	69	61	75	78
4	61	126	309	e125	e190	275	825	213	66	57	68	73
5	53	112	2150	e110	e188	268	690	205	63	55	75	71
6	49	99	1370	e103	e165	262	617	200	300	57	73	67
7	47	84	764	e101	e150	249	822	207	407	71	60	65
8	45	76	546	e99	e137	408	597	549	161	55	57	61
9	43	70	428	e97	e130	438	521	363	119	51	55	64
10	41	66	405	e95	e128	1190	499	305	98	47	52	70
11	41	63	419	e95	e125	1020	463	268	140	45	48	55
12	90	60	312	e99	e121	722	440	265	316	44	51	54
13	93	59	277	e96	e118	636	735	239	188	42	48	53
14	71	67	259	e93	e115	698	860	211	177	46	51	51
15	64	62	247	e80	e115	846	661	197	130	56	54	51
16	57	58	226	e68	e114	786	707	214	111	124	46	51
17	54	78	199	e66	e113	629	589	183	106	60	125	68
18	53	136	187	e64	e113	548	498	169	97	55	344	523
19	50	111	196	e59	e113	478	440	159	93	52	178	193
20	57	103	187	e54	e113	444	388	150	81	46	120	126
21	73	89	541	e44	e450	510	347	138	77	48	188	99
22	78	82	570	e43	789	1200	314	128	76	184	846	108
23	65	77	403	e46	670	1480	287	123	75	330	576	245
24	61	73	317	e52	574	1560	267	129	91	466	330	175
25	60	68	e275	e58	477	1720	252	117	67	302	244	139
26	56	63	e240	e52	409	1470	236	119	94	208	202	384
27	55	77	e182	e49	347	1750	238	111	67	164	164	416
28	52	4130	e156	e420	316	1790	228	96	94	177	142	306
29	50	1680	e147	e1100	---	1650	221	88	114	134	145	261
30	66	760	e141	e440	---	1330	224	84	108	108	120	210
31	145	---	e135	e320	---	1040	---	82	---	93	105	---
TOTAL	1934	9179	12784	4529	7007	26238	15600	6116	3734	3394	4810	4302
MEAN	62.4	306	412	146	250	846	520	197	124	109	155	143
MAX	145	4130	2150	1100	789	1790	905	549	407	466	846	523
MIN	41	58	135	43	113	249	221	82	63	42	46	51
CFSM	.54	2.64	3.56	1.26	2.16	7.30	4.48	1.70	1.07	.94	1.34	1.24
IN.	.62	2.94	4.10	1.45	2.25	8.41	5.00	1.96	1.20	1.09	1.54	1.38

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

MEAN	130	238	250	212	184	455	417	348	180	141	88.8	88.4
MAX	269	396	529	326	328	846	874	756	317	378	155	143
(WY)	1991	1993	1991	1991	1990	1994	1993	1989	1989	1989	1994	1994
MIN	42.1	102	77.8	91.9	104	185	149	197	81.4	58.7	34.7	59.0
(WY)	1989	1992	1990	1992	1993	1990	1989	1994	1993	1993	1993	1993

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL TOTAL	95045	99627	
ANNUAL MEAN	260	273	219
HIGHEST ANNUAL MEAN			273
LOWEST ANNUAL MEAN			157
HIGHEST DAILY MEAN	4130	Nov 28	4130
LOWEST DAILY MEAN	23	Sep 2	e18
ANNUAL SEVEN-DAY MINIMUM	24	Aug 27	46
INSTANTANEOUS PEAK FLOW			a5880
INSTANTANEOUS PEAK STAGE			14.17
INSTANTANEOUS LOW FLOW			40
ANNUAL RUNOFF (CFSM)	2.24	2.35	1.89
ANNUAL RUNOFF (INCHES)	30.48	31.95	25.67
10 PERCENT EXCEEDS	608	646	489
50 PERCENT EXCEEDS	100	129	135
90 PERCENT EXCEEDS	35	54	45

a From rating curve extended above 3,300 ft³/s on basis of step-backwater analysis.

e Estimated.

SWATARA CREEK BASIN

01572190 SWATARA CREEK NEAR INWOOD, PA

LOCATION.--Lat 40°28'45", long 76°31'52", Lebanon County, Hydrologic Unit 02050305, on right bank 20 ft downstream from single-span steel-truss bridge on Appalachian Trail, 0.4 mi upstream from steel-truss bridge at Inwood, 0.5 mi downstream from Trout Run, and 2.0 mi north of Lickdale.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--October 1988 to January 1991, October 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 430 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. The Pennsylvania American Water Co. diverts water upstream from station for municipal supply of city of Lebanon. Diversion for the year was equivalent to a mean daily discharge of 8.2 ft³/s. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	332	776	e183	e390	406	1380	475	100	125	101	119
2	75	253	596	e197	e340	374	1330	397	92	89	96	105
3	94	191	507	186	e300	373	1300	305	88	80	89	96
4	79	160	494	186	e270	374	1270	288	85	75	81	89
5	67	141	2620	172	e250	353	1090	278	83	71	83	85
6	60	127	2090	156	e230	352	982	268	317	71	91	81
7	57	109	1220	e147	e212	320	1210	261	840	88	74	80
8	55	97	913	e141	e198	573	948	830	289	74	68	75
9	53	89	711	e138	e188	700	810	609	189	66	66	72
10	50	83	647	e135	e180	1630	765	484	149	60	63	88
11	48	79	726	e136	e177	1590	731	410	158	56	59	70
12	77	76	496	e140	e171	1160	667	389	463	55	59	65
13	126	73	413	e137	e168	1020	1000	341	270	53	59	65
14	88	84	375	e130	e163	1060	1330	291	236	53	60	63
15	78	79	363	e113	e161	1270	1050	264	177	65	66	61
16	71	73	334	e99	e160	1230	1050	284	150	123	57	62
17	67	87	291	e94	e159	1030	923	242	138	78	93	68
18	64	176	270	e90	e159	907	770	218	126	66	445	716
19	62	146	280	e77	e160	787	679	203	119	63	224	256
20	67	136	267	e66	e160	699	596	191	105	57	146	161
21	83	120	678	e63	e670	776	520	176	99	56	178	129
22	97	109	923	e61	1180	1650	463	162	98	181	1010	124
23	84	100	659	e66	1060	2130	415	153	89	289	861	323
24	76	95	491	e74	927	2310	376	158	86	600	465	267
25	74	88	416	e82	787	2550	344	148	108	350	305	215
26	71	81	358	e71	649	2270	311	150	98	230	240	469
27	68	92	e261	e70	515	2550	310	146	84	185	195	635
28	65	6000	e220	e500	443	2670	318	125	114	196	172	435
29	62	3130	e205	e1520	---	2420	281	115	118	158	163	346
30	68	1130	e198	e820	---	2010	310	109	130	129	147	261
31	157	---	e191	e460	---	1620	---	105	---	110	125	---
TOTAL	2326	13536	18989	6510	10427	39164	23529	8575	5198	3952	5941	5681
MEAN	75.0	451	613	210	372	1263	784	277	173	127	192	189
MAX	157	6000	2620	1520	1180	2670	1380	830	840	600	1010	716
MIN	48	73	191	61	159	320	281	105	83	53	57	61
CFSM	.45	2.70	3.67	1.26	2.23	7.56	4.70	1.66	1.04	.76	1.15	1.13
IN.	.52	3.02	4.23	1.45	2.32	8.72	5.24	1.91	1.16	.88	1.32	1.27

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

MEAN	183	357	363	309	271	689	643	525	262	198	116	117
MAX	383	662	780	485	485	1263	1325	1184	471	576	192	189
(WY)	1991	1993	1991	1991	1990	1994	1993	1989	1989	1989	1994	1994
MIN	61.1	135	114	108	149	271	237	277	97.2	77.6	42.5	72.3
(WY)	1989	1992	1989	1992	1992	1990	1989	1994	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL TOTAL	140806	143828	
ANNUAL MEAN	386	394	323
HIGHEST ANNUAL MEAN			394
LOWEST ANNUAL MEAN			225
HIGHEST DAILY MEAN	6000	Nov 28	6000
LOWEST DAILY MEAN	26	Sep 1, 2	26
ANNUAL SEVEN-DAY MINIMUM	28	Aug 28	28
INSTANTANEOUS PEAK FLOW		b9510	b9510
INSTANTANEOUS PEAK FLOW		16.20	16.20
INSTANTANEOUS LOW FLOW		48	25
ANNUAL RUNOFF (CFSM)	2.31	2.36	1.94
ANNUAL RUNOFF (INCHES)	31.37	32.04	26.31
10 PERCENT EXCEEDS	982	1010	768
50 PERCENT EXCEEDS	140	172	184
90 PERCENT EXCEEDS	44	66	57

a Also Sept. 1, 2, 1993.

b From rating curve extended above 4,500 ft³/s.

c Estimated.

SWATARA CREEK BASIN

01573095 BACHEMAN RUN AT ANNVILLE, PA
(National water-quality assessment station)

LOCATION.--Lat 40°18'59", long 76°30'58", Lebanon County, Hydrologic Unit 02050305, on left bank 5 ft downstream from bridge on Township Route 429 (Louser Road), 0.6 mi upstream from Quittapahilla Creek, and 0.9 mi south-east of Annville.

DRAINAGE AREA.--7.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1993 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 395 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	8.7	14	13	12	e12	58	29	12	e13	13	13
2	6.7	6.3	13	13	8.3	e10	54	22	12	e12	13	e11
3	6.7	6.3	13	12	8.9	e10	52	21	11	e11	12	e10
4	6.5	6.1	13	13	8.6	e10	48	21	11	e11	12	e9.5
5	6.5	6.1	68	12	11	e11	44	e19	11	e11	13	e9.5
6	6.3	6.0	28	12	10	e12	42	e17	17	e10	12	e9.5
7	6.3	6.0	23	12	10	e12	48	e15	14	e10	11	e9.0
8	6.3	5.7	21	12	10	e16	38	e21	12	10	11	e9.0
9	6.4	5.7	21	12	10	e20	36	e20	12	9.9	11	e9.0
10	6.2	5.7	21	11	9.5	e26	37	e19	12	9.6	11	e9.2
11	6.0	5.6	20	11	9.7	e27	34	e19	11	9.5	10	e9.3
12	7.6	5.5	18	12	9.4	22	33	e18	12	9.3	10	e9.2
13	6.9	5.5	18	11	9.4	22	40	e18	11	9.3	10	e9.3
14	6.8	5.7	17	11	9.3	27	35	e18	e11	25	10	e10
15	6.0	5.5	17	10	8.3	30	32	e17	e11	15	10	11
16	6.1	5.5	16	10	9.0	30	33	e17	e11	12	9.8	11
17	6.0	5.8	15	10	9.1	27	30	e16	e11	11	14	12
18	6.0	6.8	15	10	e8.8	25	29	e16	e10	11	13	13
19	6.1	5.9	15	6.2	e8.5	25	28	e16	e10	11	11	12
20	6.0	5.8	14	6.8	e8.9	24	27	e15	e10	10	10	11
21	5.8	6.1	20	6.4	e14	28	26	e15	e10	13	10	11
22	6.0	5.3	16	9.0	e16	51	25	e15	e9.8	24	35	12
23	5.6	5.2	15	9.7	e16	60	25	14	e9.8	16	16	11
24	5.6	5.2	15	9.7	e14	68	25	14	e9.8	13	14	9.7
25	5.4	5.1	14	10	e13	75	24	15	e9.6	13	14	9.5
26	5.6	5.1	14	11	e12	64	23	15	e9.6	13	13	11
27	5.8	5.5	14	10	e12	92	24	14	e9.4	20	13	10
28	5.5	70	13	16	e12	82	22	14	e13	22	13	9.9
29	5.4	19	13	15	---	84	22	13	e12	16	13	9.7
30	6.1	16	13	14	---	68	22	13	e11	14	12	e9.5
31	7.2	---	13	12	---	63	---	13	---	13	12	---
TOTAL	192.2	262.7	560	342.8	297.7	1133	1016	529	336.0	407.6	391.8	309.8
MEAN	6.20	8.76	18.1	11.1	10.6	36.5	33.9	17.1	11.2	13.1	12.6	10.3
MAX	7.6	70	68	16	16	92	58	29	17	25	35	13
MIN	5.4	5.1	13	6.2	8.3	10	22	13	9.4	9.3	9.8	9.0
CFSM	.85	1.20	2.47	1.51	1.46	5.01	4.64	2.34	1.53	1.80	1.73	1.41
IN.	.98	1.34	2.85	1.75	1.52	5.77	5.18	2.70	1.71	2.08	2.00	1.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	6.20	8.76	18.1	11.1	10.6	36.5	33.7	17.5	10.7	11.1	10.1	8.84
MEAN	6.20	8.76	18.1	11.1	10.6	36.5	33.9	18.0	11.2	13.1	12.6	10.3
MAX	6.20	8.76	18.1	11.1	10.6	36.5	33.9	18.0	11.2	13.1	12.6	10.3
(WY)	1994	1994	1994	1994	1994	1994	1994	1993	1994	1994	1994	1994
MIN	6.20	8.76	18.1	11.1	10.6	36.5	33.5	17.1	10.2	9.10	7.50	7.35
(WY)	1994	1994	1994	1994	1994	1994	1993	1994	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1994 WATER YEAR

WATER YEARS 1993 - 1994

ANNUAL TOTAL	5778.6	
ANNUAL MEAN	15.8	15.8
HIGHEST ANNUAL MEAN		15.8 1994
LOWEST ANNUAL MEAN		15.8 1994
HIGHEST DAILY MEAN	92	Mar 27 1994
LOWEST DAILY MEAN	5.1	Nov 25,26 1993
ANNUAL SEVEN-DAY MINIMUM	5.4	Nov 21 1993
INSTANTANEOUS PEAK FLOW	a210	Nov 28 1993
INSTANTANEOUS PEAK STAGE	2.87	Nov 28 1993
INSTANTANEOUS LOW FLOW	2.4	Jan 21 1994
ANNUAL RUNOFF (CFSM)	2.17	
ANNUAL RUNOFF (INCHES)	29.45	29.47
10 PERCENT EXCEEDS	28	28
50 PERCENT EXCEEDS	12	11
90 PERCENT EXCEEDS	6.1	6.6

a From rating curve extended above 84 ft³/s on basis of slope-conveyance computation.

e Estimated.

SWATARA CREEK BASIN

01573095 BACHMAN RUN AT ANNVILLE, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1994 to current year.

WATER TEMPERATURE: May 1994 to current year.

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Due to the short period and interruption in the record, the daily record for specific conductance and water temperature are not presented this year. Additional sites in the fixed-station network are shown in figure 10, page 111. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 2, page 116.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)
OCT											
21...	1410	1028	80020	15	3045	10	6.2	608	8.1	13.5	751
NOV											
02...	1330	1028	80020	15	3045	10	6.4	595	8.2	10.5	764
DEC											
13...	1345	1028	80020	15	3045	10	18	616	8.1	9.0	755
JAN											
12...	1000	1028	80020	15	3045	10	9.7	604	7.9	6.5	758
FEB											
17...	1415	1028	80020	15	3045	10	9.0	589	8.4	10.0	763
MAR											
31...	1100	1028	80020	15	3045	10	63	547	8.0	9.0	761
APR											
13...	1120	1028	80020	15	3045	10	50	548	7.8	9.5	750
MAY											
04...	1330	1028	80020	15	3045	10	20	565	8.0	11.0	760
07...	2310	1028	80020	15	3045	10	15	524	7.9	11.0	747
10...	1030	1028	80020	15	3045	10	18	582	8.2	12.5	755
JUN											
14...	0830	1028	80020	15	3045	10	11	592	8.1	14.0	757
JUL											
06...	1300	1028	80020	15	3045	10	10	579	8.3	18.0	755
AUG											
23...	1135	1028	80020	15	3045	10	17	560	8.2	15.0	760

DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	BICAR-BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)
OCT												
21...	9.6	94	280	63	81	18	6.9	5	0.2	3.5	--	260
NOV												
02...	13.0	116	290	85	85	19	7.4	5	0.2	3.0	--	250
DEC												
13...	10.9	95	280	73	81	18	7.6	6	0.2	3.2	--	250
JAN												
12...	11.2	92	290	79	85	18	6.9	5	0.2	2.4	--	250
FEB												
17...	14.1	125	270	74	79	18	7.8	6	0.2	3.0	--	230
MAR												
31...	11.5	100	250	70	73	16	7.7	6	0.2	4.4	--	220
APR												
13...	11.1	99	250	70	72	16	7.0	6	0.2	4.2	--	220
MAY												
04...	11.2	102	280	75	81	19	7.2	5	0.2	3.0	--	250
07...	8.8	82	240	79	71	16	7.2	6	0.2	1.2	--	200
10...	10.8	102	270	72	79	18	7.4	6	0.2	3.2	--	240
JUN												
14...	10.5	103	290	85	85	19	6.9	5	0.2	2.7	0.030	250
JUL												
06...	11.2	120	270	56	79	17	6.3	5	0.2	2.7	0.030	250
AUG												
23...	9.8	98	280	85	83	17	7.7	6	0.2	3.3	0.030	240

SWATARA CREEK BASIN

01573095 BACHMAN RUN AT ANNVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT.DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT 21...	0	210	29	21	0.2	12	375	353	0.51	6.28	12.0
NOV 02...	0	210	30	23	0.2	13	355	353	0.48	6.14	11.0
DEC 13...	0	200	33	17	0.1	12	379	352	0.52	18.8	13.0
JAN 12...	0	210	29	19	0.1	11	350	349	0.48	9.17	12.0
FEB 17...	4	200	31	20	<0.1	11	347	342	0.47	8.43	12.0
MAR 31...	0	180	28	18	0.1	10	337	314	0.46	57.7	11.0
APR 13...	0	180	26	17	0.1	9.1	329	306	0.45	44.4	11.0
MAY 04...	0	210	30	19	0.1	11	345	347	0.47	18.6	12.0
07...	0	160	26	18	0.1	10	318	288	0.43	12.9	8.76
10...	0	200	32	18	0.1	12	338	338	0.46	16.8	11.0
JUN 14...	0	210	26	19	0.1	12	344	343	0.47	10.2	11.0
JUL 06...	5	210	27	18	0.2	9.5	343	340	0.47	9.26	12.0
AUG 23...	0	190	29	19	0.1	15	348	334	0.47	16.0	9.78

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 21...	53	0.030	0.10	12.0	0.040	0.05	--	<0.20	<0.20	--	0.050
NOV 02...	49	0.020	0.07	11.0	0.030	0.04	--	0.30	<0.20	--	0.040
DEC 13...	57	0.030	0.10	13.0	0.040	0.05	--	<0.20	<0.20	--	0.020
JAN 12...	53	0.020	0.07	12.0	0.040	0.05	--	0.30	<0.20	--	0.050
FEB 17...	53	0.040	0.13	12.0	0.050	0.06	--	<0.20	<0.20	--	0.030
MAR 31...	49	0.020	0.07	11.0	0.030	0.04	0.17	<0.20	0.20	11	0.060
APR 13...	49	0.040	0.13	11.0	0.060	0.08	0.24	0.50	0.30	11	0.100
MAY 04...	53	0.030	0.10	12.0	0.040	0.05	--	0.30	<0.20	--	0.040
07...	39	0.040	0.13	8.80	0.180	0.23	0.52	1.4	0.70	9.5	0.250
10...	49	0.020	0.07	11.0	0.040	0.05	--	0.30	<0.20	--	0.040
JUN 14...	49	0.030	0.10	11.0	0.030	0.04	--	0.20	<0.20	--	0.030
JUL 06...	53	0.040	0.13	12.0	0.020	0.03	--	<0.20	<0.20	--	0.050
AUG 23...	43	0.020	0.07	9.80	0.040	0.05	0.16	0.40	0.20	10	0.100

SWATARA CREEK BASIN

01573095 BACHMAN RUN AT ANNVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (µG/L AS SR) (01080)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 21...	0.020	0.030	0.09	5	5	--	1.3	0.3	9	0.14	75
NOV 02...	0.020	0.030	0.09	6	11	270	1.1	0.6	13	0.22	93
DEC 13...	<0.010	0.020	0.06	<3	9	300	0.7	0.5	34	1.7	63
JAN 12...	0.020	<0.010	--	<3	13	280	0.6	1.3	75	2.4	61
FEB 17...	<0.010	<0.010	--	<3	9	260	0.7	0.4	73	1.8	85
MAR 31...	0.060	0.060	0.18	3	8	210	1.8	0.4	33	5.6	42
APR 13...	0.040	0.050	0.15	5	13	230	1.6	1.1	94	13	38
MAY 04...	0.030	0.020	0.06	3	11	270	0.8	0.5	106	5.7	33
07...	0.100	0.080	0.25	7	18	220	2.8	2.1	74	3.0	94
10...	0.020	0.020	0.06	<3	12	290	0.8	0.4	103	5.1	30
JUN 14...	0.020	0.010	0.03	4	5	300	1.8	0.4	73	2.2	--
JUL 06...	0.030	0.010	0.03	16	2	270	0.9	0.3	76	2.1	50
AUG 23...	0.060	0.050	0.15	3	16	250	1.5	0.9	25	1.1	99

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (µG/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (µG/L) (39632)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (µG/L) (04040)	FONOFOS WATER, DISS, REC, (µG/L) (04095)	METO- LACHLOR WATER, DISSOLV (µG/L) (39415)	PRO- METON, WATER, DISS, REC, (µG/L) (04037)	SI- MAZINE, WATER, DISS, REC, (µG/L) (04035)
MAY 07...	2310	15	0.160	0.410	e 0.120	0.015	0.270	0.021	0.030
AUG 23...	1135	17	0.013	0.280	e 0.150	<0.008	0.140	0.020	0.200

SWATARA CREEK BASIN

01573095 RACEMAN RUN AT ANNVILLE, PA--Continued

REMARKS.--The following table contains data from the fixed-site ecological survey. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional targeted habitat (DTH). This site was sampled approximately 5 feet downstream from the bridge on Township Route 429. The fixed-station sites are shown in figure 18, page 300. Data from all sites sampled for the fixed-station ecological survey can be found on pages 301-303.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM VELOC-ITY, MEAN (F/S)	SPE-CIFIC CON-DUCT-ANCE (µS/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)
EFS04 -RTH	01573095	05-31-94	1200	1028	80020	1.86	530	--	17.5	--
EFS04 -DTH		05-31-94	1215	1028	80020	.554	525	--	17.5	--
EFS04		05-31-94	1925	1028	1028	--	588	7.5	13.0	763

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HCO3) (00440)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3) (00445)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS ASH DRY WEIGHT (G/SQM) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM) ()
EFS04 -RTH	05-31-94	--	--	--	--	--	38	14	370	400	30
EFS04 -DTH	05-31-94	--	--	--	--	--	44	3.5	1800	1900	100
EFS04	05-31-94	10.5	99	205	0	168	--	--	--	--	--

SNATARA CREEK BASIN

01573160 QUITTAPAHILLA CREEK NEAR BELLEGROVE, PA

LOCATION.--Lat 40°20'34", long 76°33'46", Lebanon County, Hydrologic Unit 02050305, on right bank 210 ft downstream from bridge on SR 4008, 0.7 mi downstream from Killinger Creek, and 1.8 mi south of Bellegrove.

DRAINAGE AREA.--74.2 mi².

PERIOD OF RECORD.--October 1975 to September 1994 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 361.88 ft above sea level (levels by Susquehanna River Basin Commission).

REMARKS.--No estimated daily discharges. Records poor. Slight regulation from Millard limestone quarry 0.7 mi upstream. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	88	239	145	100	134	606	340	84	88	151	128
2	90	69	205	137	106	138	558	197	85	85	152	117
3	91	71	205	123	102	140	523	153	85	83	129	112
4	76	66	223	127	100	161	477	147	85	84	141	111
5	76	64	746	130	99	108	434	142	85	84	159	111
6	71	66	566	127	105	125	409	134	270	85	132	114
7	67	64	342	127	89	125	473	172	137	159	123	95
8	68	56	286	132	88	139	383	288	107	84	119	95
9	54	54	251	117	98	148	361	163	97	84	115	104
10	52	56	273	108	96	295	360	146	104	84	118	110
11	62	52	257	117	92	319	335	140	106	83	108	89
12	102	56	207	116	88	287	325	147	176	83	116	90
13	89	54	194	111	97	297	388	125	102	83	117	95
14	72	56	186	103	97	281	348	123	98	155	121	99
15	70	48	181	109	93	317	330	169	87	466	100	89
16	72	43	177	100	88	330	342	133	89	199	85	87
17	71	53	169	96	90	331	321	93	89	130	169	95
18	66	63	169	104	91	289	266	101	88	115	165	132
19	62	50	169	93	117	262	254	111	87	110	134	105
20	64	51	157	86	119	273	240	110	87	104	125	92
21	67	51	208	86	135	279	223	127	86	133	123	84
22	65	43	174	81	147	524	165	98	85	360	456	88
23	65	45	162	85	154	735	213	90	83	208	272	113
24	52	46	168	91	165	830	241	84	83	191	206	82
25	55	44	160	89	161	861	196	118	84	117	179	80
26	57	43	164	81	149	786	165	124	83	141	172	116
27	60	47	152	89	140	876	174	103	85	282	197	110
28	56	721	145	137	134	948	156	95	89	271	156	98
29	60	350	142	146	---	954	152	89	84	178	143	93
30	72	258	127	125	---	833	199	87	88	158	131	74
31	88	---	146	103	---	693	---	85	---	148	127	---
TOTAL	2154	2828	6950	3421	3140	12818	9617	4234	2998	4635	4741	3008
MEAN	69.5	94.3	224	110	112	413	321	137	99.9	150	153	100
MAX	102	721	746	146	165	954	606	340	270	466	456	132
MIN	52	43	127	81	88	108	152	84	83	83	85	74
CFSM	.94	1.27	3.02	1.49	1.51	5.57	4.32	1.84	1.35	2.02	2.06	1.35
IN.	1.08	1.42	3.48	1.72	1.57	6.43	4.82	2.12	1.50	2.32	2.38	1.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	MEAN	81.3	83.7	105	114	118	146	150	118	110	102	84.7	75.9
MAX	209	167	224	411	327	413	349	208	262	201	164	132	
(WY)	1977	1976	1994	1979	1979	1994	1993	1989	1982	1984	1976	1979	
MIN	41.7	32.9	29.7	30.7	56.6	54.1	52.9	52.5	46.0	28.3	44.5	41.1	
(WY)	1982	1981	1981	1981	1983	1981	1981	1991	1991	1991	1991	1981	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1976 - 1994

ANNUAL TOTAL	48005	60544	
ANNUAL MEAN	132	166	106
HIGHEST ANNUAL MEAN			166
LOWEST ANNUAL MEAN			53.2
HIGHEST DAILY MEAN	746	Dec 5	954
LOWEST DAILY MEAN	34	Jul 31, Aug 10	43
ANNUAL SEVEN-DAY MINIMUM	43	Jul 27	46
INSTANTANEOUS PEAK FLOW			1220
INSTANTANEOUS PEAK STAGE			7.83
ANNUAL RUNOFF (CFSM)	1.77		2.24
ANNUAL RUNOFF (INCHES)	24.07		30.35
10 PERCENT EXCEEDS	287		327
50 PERCENT EXCEEDS	79		117
90 PERCENT EXCEEDS	52		66

a From rating curve extended above 1,900 ft³/s.

SWATARA CREEK BASIN

01573560 SWATARA CREEK NEAR HERSHEY, PA

LOCATION.--Lat 40°17'54", long 76°40'05", Dauphin County, Hydrologic Unit 02050305, on left bank, 0.4 mi downstream from Manada Creek, 0.5 mi upstream from State Highway 39, and 1.5 mi northwest of Hershey.

DRAINAGE AREA.--483 mi².

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

GAGE.--Water-stage recorder and gated concrete control. Datum of gage is 325.94 ft above sea level (levels by Susquehanna River Basin Commission).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Daily discharges adjusted for occasional periods of diversion by Hershey Chocolate U.S.A. Satellite and landline telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268, 305.

COOPERATION.--Records of daily diversion furnished by Hershey Chocolate U.S.A., a division of Hershey Foods Corporation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	780	2070	e455	1320	1270	3480	1130	231	516	371	412
2	318	702	1620	e500	1170	1120	3110	1140	209	437	353	372
3	343	528	1360	e460	1020	1660	2870	783	192	353	321	333
4	337	456	1330	e450	835	1330	2730	705	192	329	302	306
5	283	414	6640	424	732	1220	2360	679	192	311	346	298
6	255	390	8280	369	676	1260	2080	643	925	318	356	298
7	242	359	3470	e350	612	1120	2620	646	4020	424	305	281
8	233	319	2430	e320	e540	1600	2210	2100	1120	367	267	266
9	218	294	1930	e300	e500	2000	1790	1530	721	322	257	264
10	205	281	1790	286	e450	4260	1660	1150	527	305	243	247
11	196	268	2120	e300	e410	5280	1700	986	437	277	233	257
12	250	254	1520	e310	e400	3670	1460	924	977	271	230	222
13	476	253	1260	326	e380	3170	2110	886	888	259	246	217
14	359	286	1160	334	e360	3350	3330	755	655	286	243	209
15	297	288	1100	301	e350	4140	2400	690	572	526	237	208
16	282	262	1020	217	e345	3930	2200	703	409	357	210	215
17	272	262	879	e170	e340	3080	2180	631	427	335	292	227
18	258	555	788	e160	e330	2630	1740	541	442	253	987	940
19	240	483	838	e155	e325	2240	1540	511	401	231	805	767
20	240	401	792	e150	e320	2120	1390	476	369	218	480	465
21	269	361	1370	e145	1350	2490	1230	468	348	253	486	354
22	307	330	2200	e140	2800	5960	1100	413	327	913	2630	319
23	299	308	1570	e160	2810	7480	1010	373	299	654	2570	692
24	260	295	e1150	e200	2430	7310	968	336	263	903	1390	695
25	232	291	e1000	e170	2330	7080	902	336	248	814	1010	516
26	234	272	e800	e180	1900	6500	810	381	281	592	826	587
27	226	291	e700	404	1490	6530	764	398	267	677	719	1450
28	221	8020	e580	867	1320	8200	756	330	356	762	633	956
29	214	14400	e510	4010	---	7140	700	290	350	626	555	784
30	233	3350	480	2920	---	5870	757	266	395	479	530	643
31	463	---	456	1700	---	4290	---	249	---	406	436	---
TOTAL	8591	35753	53213	17233	27845	119300	53957	21449	17040	13774	18869	13800
MEAN	277	1192	1717	556	994	3848	1799	692	568	444	609	460
MAX	476	14400	8280	4010	2810	8200	3480	2100	4020	913	2630	1450
MIN	196	253	456	140	320	1120	700	249	192	218	210	208
CFSM	.57	2.47	3.55	1.15	2.06	7.97	3.72	1.43	1.18	.92	1.26	.95
IN.	.66	2.75	4.10	1.33	2.14	9.19	4.16	1.65	1.31	1.06	1.45	1.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	MEAN	583	741	981	860	940	1437	1303	958	579	427	328	348
MAX	2632	1427	2606	3370	1653	3848	3207	2708	1959	1536	1036	1320	
(WY)	1977	1993	1984	1979	1986	1994	1993	1989	1982	1989	1978	1987	
MIN	85.3	152	111	79.9	226	459	424	457	166	143	106	73.0	
(WY)	1981	1982	1981	1981	1980	1985	1988	1976	1991	1987	1987	1980	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1976 - 1994

ANNUAL TOTAL	372098		400824									
ANNUAL MEAN	1019		1098							790		
HIGHEST ANNUAL MEAN										1225		1978
LOWEST ANNUAL MEAN										380		1981
HIGHEST DAILY MEAN	14400	Nov 29	14400	Nov 29						23800	Jan 25	1979
LOWEST DAILY MEAN	86	Sep 3	e140	Jan 22						59	Sep 21, 24	1985
ANNUAL SEVEN-DAY MINIMUM	97	Aug 28	a154	Jan 17						63	Sep 18	1985
INSTANTANEOUS PEAK FLOW			16500	Nov 29						29400	Sep 27	1975
INSTANTANEOUS PEAK STAGE			10.33	Nov 29						15.36	Sep 27	1975
INSTANTANEOUS LOW FLOW			172	Jul 27						59	Sep 21	1985
ANNUAL RUNOFF (CFSM)	2.11		2.27							1.63		
ANNUAL RUNOFF (INCHES)	28.66		30.87							22.21		
10 PERCENT EXCEEDS	2620		2620							1760		
50 PERCENT EXCEEDS	390		479							436		
90 PERCENT EXCEEDS	161		234							135		

a Computed using estimated daily discharges.

e Estimated.

WEST CONEWAGO CREEK BASIN

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA

LOCATION.--Lat 40°04'56", long 76°43'13", York County, Hydrologic Unit 02050306, on left bank 500 ft upstream from bridge on State Highway 181, 0.6 mi of Manchester.

DRAINAGE AREA.--510 mi².

PERIOD OF RECORD.--October 1928 to current year. Prior to October 1931, published as Conewago Creek near Manchester.

REVISED RECORDS.--WSP 741: Drainage area. WSP 1502: 1930, 1936.

GAGE.--Water-stage recorder. Datum of gage is 263.68 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional slight regulation since October 1959 by Conewago Lake about 13 miles upstream, capacity, 3,570 acre-ft. Gage height record affected at times by backwater from the Susquehanna River. Satellite telemetry at station. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	1360	1190	e280	e990	e1230	2240	1480	177	130	124	183
2	159	856	1020	e267	e820	e1080	1810	1400	155	124	181	157
3	160	535	924	e253	e660	e980	1550	742	144	95	154	140
4	195	495	836	e241	e570	e938	1450	571	133	81	138	124
5	180	468	13000	e234	e535	e1040	1300	541	126	93	117	114
6	131	483	10000	e226	e490	e1300	1150	519	124	111	109	108
7	111	540	2250	e218	e470	e1520	1690	455	128	128	103	102
8	101	479	1590	e208	e445	2110	1530	2000	131	254	101	94
9	94	300	1310	e185	e425	2950	1090	1490	131	158	89	89
10	92	285	1170	e185	e402	5180	998	905	115	102	78	82
11	86	226	1620	e172	e372	6700	1150	680	109	78	73	85
12	106	201	1180	e159	e357	3580	1030	586	111	66	70	79
13	734	197	887	e148	e341	2990	1150	534	120	59	66	73
14	499	215	810	e137	e322	3970	2720	455	161	61	65	70
15	267	274	766	e128	e317	5630	1440	399	127	152	61	70
16	201	263	754	e119	e307	5880	1220	412	103	326	59	69
17	169	261	681	e111	e299	3250	1230	411	106	226	179	66
18	154	349	580	e107	e291	2560	971	352	201	134	753	120
19	151	379	569	e112	e287	2090	857	317	141	126	1010	154
20	160	321	591	e124	e410	2440	777	300	109	95	375	124
21	322	279	1110	e135	e1490	4330	684	284	107	183	249	89
22	462	249	1670	e126	7110	7720	618	264	102	2580	759	81
23	396	230	972	e118	5630	9820	562	242	87	1370	782	170
24	259	218	765	e133	4110	9370	524	227	80	936	415	400
25	211	212	e600	e200	4790	8490	501	208	79	418	257	231
26	184	200	e450	e370	2720	5990	473	351	111	252	1380	157
27	164	203	e395	e600	1850	8300	436	621	115	192	1100	306
28	152	11600	e350	e860	e1450	10400	412	440	103	202	533	384
29	145	7890	e320	e1700	---	9200	417	263	124	185	340	238
30	154	1630	e298	e1620	---	5750	386	213	143	164	263	169
31	938	---	e298	e1280	---	3030	---	194	---	132	222	---
TOTAL	7330	31198	48956	10766	38260	139818	32366	17856	3703	9213	10205	4328
MEAN	236	1040	1579	347	1366	4510	1079	576	123	297	329	144
MAX	938	11600	13000	1700	7110	10400	2720	2000	201	2580	1380	400
MIN	86	197	298	107	287	938	386	194	79	59	59	66
CFSM	.46	2.04	3.10	.68	2.68	8.84	2.12	1.13	.24	.58	.65	.28
IN.	.53	2.28	3.57	.79	2.79	10.20	2.36	1.30	.27	.67	.74	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1994, BY WATER YEAR (WY)

	MEAN	269	452	659	732	961	1273	1002	659	426	252	227	256
MAX	1783	1534	2314	2428	2521	4510	3273	2874	4445	1419	2423	3862	
(WY)	1977	1933	1978	1978	1971	1994	1993	1989	1972	1969	1933	1975	
MIN	9.71	14.7	43.3	37.7	86.2	345	276	135	52.7	12.2	13.3	12.0	
(WY)	1942	1932	1966	1981	1934	1931	1963	1941	1965	1966	1930	1964	

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1929 - 1994

ANNUAL TOTAL	372972	353999	595	1972
ANNUAL MEAN	1022	970	1117	1931
HIGHEST ANNUAL MEAN			154	1931
LOWEST ANNUAL MEAN			64000	Sep 26 1975
HIGHEST DAILY MEAN	13000	Mar 24	2.0	Aug 8 1930
LOWEST DAILY MEAN	35	Aug 30	3.9	Aug 3 1966
ANNUAL SEVEN-DAY MINIMUM	45	Aug 24	67	Aug 10
INSTANTANEOUS PEAK FLOW			20900	Dec 5
INSTANTANEOUS PEAK STAGE			17.62	Dec 5
INSTANTANEOUS LOW FLOW			53	Jul 14
ANNUAL RUNOFF (CFSM)	2.00	1.90	a96200	Sep 26 1975
ANNUAL RUNOFF (INCHES)	27.21	25.82	b32.11	Sep 26 1975
10 PERCENT EXCEEDS	2290	2100	1.9	Oct 13 1941
50 PERCENT EXCEEDS	349	300	1.17	
90 PERCENT EXCEEDS	71	102	15.86	

a From rating curve extended above 45,000 ft³/s on basis of slope-area computation at gage height 30.26 ft.

b From floodmarks.

e Estimated.

CODORUS CREEK BASIN

01574500 CODORUS CREEK AT SPRING GROVE, PA

LOCATION.--Lat 39°52'43", long 76°51'13", York County, Hydrologic Unit 02050306, on right bank 15 ft downstream from abutments of dismantled county highway bridge on Township Route 452, 0.1 mi downstream from small left-bank tributary, 0.3 mi downstream from east boundary of Spring Grove, and 7.0 mi southwest of York.

DRAINAGE AREA.--75.5 mi².

PERIOD OF RECORD.--May 1929 to September 1964, November 1965 to current year. October 1962 to September 1968, published as West Branch Codorus Creek at Spring Grove.

REVISED RECORDS.--WSP 1302: 1929-30. WSP 1502: 1932(M), 1933, 1935(M), 1940, 1942(M), 1943, 1944-46(M), 1951(M), 1955(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 430.86 ft above sea level. Prior to Jan. 18, 1930, nonrecording gage, Jan. 18, 1930, to Sept. 9, 1941, water-stage recorder at site 0.9 mi upstream, and Sept. 10, 1941, to Sept. 30, 1964, water-stage recorder at site 0.8 mi upstream, all at datum 5.64 ft higher. Nov. 1 to Dec. 20, 1965, nonrecording gage about 40 ft downstream at unknown datum, Dec. 21, 1965, to Mar. 31, 1966, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Daily discharges include water diverted around station by waste treatment plant of P.H. Glatfelter Company. Flow regulated by dam on Lake Marburg (station 01574390) about 20 miles upstream. Several measurements of water temperature were made during the year. Satellite telemetry at station.

COOPERATION.--Records of change in lake contents and daily diversion furnished by P.H. Glatfelter Company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	94	90	69	109	200	412	135	66	60	53	62
2	57	65	80	70	99	193	351	95	64	58	56	e60
3	66	64	73	72	96	220	312	86	64	56	63	59
4	58	52	88	77	89	203	291	87	61	61	61	58
5	58	56	1550	71	89	214	255	88	62	58	63	58
6	53	62	388	68	89	215	235	85	62	75	65	59
7	52	51	218	72	91	215	288	89	63	113	60	60
8	53	53	162	82	93	332	213	206	63	65	60	57
9	51	54	133	67	92	305	195	108	62	63	58	e57
10	51	54	130	63	87	770	219	90	65	60	57	60
11	55	53	130	65	78	610	219	82	66	52	60	60
12	100	52	97	69	94	439	189	88	81	39	61	e61
13	70	52	89	71	91	441	266	79	87	34	58	e60
14	61	56	92	71	91	612	265	71	69	52	75	60
15	59	56	91	65	90	711	214	70	67	e84	76	61
16	53	55	89	70	90	646	235	82	69	e66	60	62
17	51	54	75	71	93	445	205	74	71	e65	102	64
18	51	60	71	72	98	381	180	70	68	66	95	86
19	51	47	78	78	123	356	172	68	65	61	65	59
20	69	50	69	78	285	418	157	66	64	53	62	56
21	64	47	182	75	611	468	139	62	64	57	69	57
22	63	47	128	74	478	809	122	60	67	90	135	71
23	57	52	108	73	368	735	118	59	63	152	70	130
24	56	53	97	82	477	635	111	59	66	68	61	64
25	54	52	94	95	352	558	107	90	70	54	e67	62
26	55	52	87	155	266	433	104	115	62	55	141	72
27	54	56	78	110	231	855	115	99	70	57	60	62
28	55	1130	75	200	208	788	106	67	83	76	60	64
29	49	197	75	233	---	949	96	64	e75	53	63	63
30	73	116	73	143	---	616	94	62	e76	52	e61	60
31	110	---	69	119	---	481	---	65	---	51	61	---
TOTAL	1863	2942	4859	2780	5058	15253	5985	2621	2035	2006	2158	1924
MEAN	60.1	98.1	157	89.7	181	492	199	84.5	67.8	64.7	69.6	64.1
MAX	110	1130	1550	233	611	949	412	206	87	152	141	130
MIN	49	47	69	63	78	193	94	59	61	34	53	56
MEAN‡	39.8	107	217	101	218	492	197	84.5	32.8	39.8	43.6	29.5
CFSM‡	.53	1.42	2.87	1.34	2.89	6.52	2.61	1.12	.43	.53	.58	.39
IN.‡	.61	1.58	3.31	1.54	3.01	7.52	2.91	1.29	.48	.61	.67	.44

‡ Adjusted for change in contents in Lake Marburg.

e Estimated.

CODORUS CREEK BASIN

01574500 CODORUS CREEK AT SPRING GROVE, PA--Continued

REMARKS.--Daily and monthly discharge figures (and those data determined from them) include water diverted around station by P.H. Gladfelter Co. Instantaneous data reflect actual streamflow past gage.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.2	59.2	74.4	82.5	103	124	124	90.2	88.9	62.2	54.5	65.2
MAX	269	136	170	255	269	492	372	171	699	185	77.7	360
(WY)	1980	1976	1973	1976	1971	1994	1993	1975	1972	1970	1990	1975
MIN	18.1	15.8	16.9	18.5	25.7	33.0	31.2	28.8	21.4	17.4	17.1	19.2
(WY)	1967	1966	1966	1966	1969	1969	1969	1969	1966	1966	1966	1966

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1966 - 1994

ANNUAL TOTAL	43544		49484									
ANNUAL MEAN	119	‡129	136	‡133								
HIGHEST ANNUAL MEAN										84.1	a‡86.0	1972
LOWEST ANNUAL MEAN										163		1969
HIGHEST DAILY MEAN	1550	Dec 5	1550	Dec 5					11000	.60	Jun 22	1972
LOWEST DAILY MEAN	32	Jul 16	34	Jul 13							Sep 4	1966
ANNUAL SEVEN-DAY MINIMUM	42	Jul 13	50	Nov 19						10	Sep 1	1966
INSTANTANEOUS PEAK FLOW			2660	Dec 5					b 19400		Jun 22	1972
INSTANTANEOUS PEAK STAGE			8.68	Dec. 5					c 15.57		Jun 22	1972
ANNUAL RUNOFF (CFSM)	1.58	‡1.71	1.80	‡1.76						1.11	a‡1.14	
ANNUAL RUNOFF (INCHES)	21.45	‡23.23	24.38	‡23.96						15.14	a‡15.47	
10 PERCENT EXCEEDS	284		289						150			
50 PERCENT EXCEEDS	58		71						54			
90 PERCENT EXCEEDS	45		54						31			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1964, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.4	52.7	64.4	87.4	114	144	125	86.1	55.6	38.7	44.0	41.7
MAX	151	148	164	223	244	360	326	206	165	157	321	424
(WY)	1943	1938	1951	1949	1951	1936	1952	1952	1946	1945	1933	1934
MIN	8.76	11.9	18.1	19.5	27.3	50.1	41.3	26.6	19.6	9.09	11.9	8.93
(WY)	1942	1937	1959	1942	1932	1959	1947	1963	1959	1954	1935	1941

SUMMARY STATISTICS

WATER YEARS 1929 - 1964

ANNUAL MEAN	d74.1											
HIGHEST ANNUAL MEAN	127				1933							
LOWEST ANNUAL MEAN	31.4				1959							
HIGHEST DAILY MEAN	3920			Sep 16	1934							
LOWEST DAILY MEAN	.80			Oct 26	1947							
ANNUAL SEVEN-DAY MINIMUM	5.0			Jul 9	1959							
INSTANTANEOUS PEAK FLOW	b11200			Aug 23	1933							
INSTANTANEOUS PEAK STAGE	f11.84			Aug 23	1933							
INSTANTANEOUS LOW FLOW	.00			Oct 26	1947							
ANNUAL RUNOFF (CFSM)	.98											
ANNUAL RUNOFF (INCHES)	13.34											
10 PERCENT EXCEEDS	151											
50 PERCENT EXCEEDS	42											
90 PERCENT EXCEEDS	14											

‡ Adjusted for change in contents in Lake Marburg.

a Adjusted for diversion and storage since 1966.

b From rating curve extended above 1,400 ft³/s on basis of computation of peak discharge at dam at gage height 6.80 ft and at peak flow.

c From floodmark in gage.

d Adjusted for diversion since March 1961.

f Site and datum then in use.

CODORUS CREEK BASIN

01575000 SOUTH BRANCH CODORUS CREEK NEAR YORK, PA

LOCATION.--Lat 39°55'14", long 76°44'57", York County, Hydrologic Unit 02050306, on right bank 100 ft downstream from dam at pumping station of York Water Co., 200 ft upstream from Conrail bridge, 0.5 mi upstream from mouth, and 3.0 mi southwest of York.

DRAINAGE AREA.--117 mi².

PERIOD OF RECORD.--October 1927 to current year. May 1925 to September 1927 (gage heights and discharge measurements only), in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1302: 1931. WSP 1502: 1932-33, 1941, 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 373.03 ft above sea level. Prior to Aug. 21, 1928, nonrecording gage at site 180 ft upstream at datum 5.00 ft higher. June 22, 1972, to Jan. 12, 1973, nonrecording gage at present site.

REMARKS.--No estimated daily discharges. Records good. Regulation at low flow by pumping station upstream which diverts water for municipal supply of city of York. Some regulation during entire period of record by reservoirs of York Water Co., combined capacity, 8,092 acre-ft. Several measurements of water temperature were made during the year.

COOPERATION.--Records of diversion provided by York Water Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	83	179	87	170	273	720	184	57	35	35	45
2	23	37	151	86	145	267	596	141	51	27	31	42
3	40	30	145	86	132	303	501	127	51	24	41	38
4	24	33	135	109	131	253	447	132	49	27	29	41
5	15	40	3690	90	113	269	357	140	53	19	28	40
6	12	30	2120	80	111	281	350	124	49	17	35	32
7	15	29	571	87	109	268	436	127	48	118	28	26
8	15	22	379	120	124	508	306	348	43	37	23	23
9	15	20	309	86	121	490	276	162	42	22	17	26
10	19	20	276	80	97	1930	305	127	44	29	14	24
11	12	22	264	71	87	1270	311	116	43	18	14	25
12	73	21	202	83	111	725	260	117	53	10	28	23
13	76	21	145	99	100	710	380	106	51	8.5	17	17
14	33	30	161	88	88	1210	443	99	39	11	31	20
15	28	22	158	68	83	1500	332	100	30	57	62	19
16	25	16	160	61	78	1350	331	121	31	27	21	23
17	28	18	130	79	83	723	291	95	35	25	78	25
18	23	26	124	168	90	594	259	92	35	38	132	74
19	19	19	134	151	135	478	245	90	32	94	52	35
20	40	12	113	140	664	595	231	89	28	31	35	19
21	49	11	255	139	1860	770	216	81	19	57	43	17
22	48	12	201	138	1220	1820	204	82	22	184	819	23
23	33	21	153	138	783	1620	189	73	16	238	152	188
24	29	16	138	93	976	1430	189	66	18	93	93	58
25	24	18	133	87	727	1180	177	102	20	46	70	36
26	20	19	123	207	460	830	167	179	22	35	192	52
27	17	19	104	137	366	1570	170	129	19	44	80	60
28	15	3490	100	528	305	1690	165	83	76	185	68	36
29	26	634	96	696	---	1980	136	78	37	67	63	34
30	32	238	93	283	---	1420	151	71	82	46	54	29
31	126	---	85	206	---	940	---	60	---	39	47	---
TOTAL	978	5029	11027	4571	9469	29247	9141	3641	1195	1708.5	2432	1150
MEAN	31.5	168	356	147	338	943	305	117	39.8	55.1	78.5	38.3
MAX	126	3490	3690	696	1860	1980	720	348	82	238	819	188
MIN	12	11	85	61	78	253	136	60	16	8.5	14	17
(†)	30.2	30.8	29.4	29.5	29.9	29.9	30.0	31.2	34.0	31.3	30.9	31.2
MEAN‡	65.1	210	385	176	368	973	335	148	73.8	86.4	109	69.5
CFSM‡	.56	1.79	3.29	1.50	3.15	8.32	2.86	1.26	.63	.74	.93	.59
IN.‡	.64	2.00	3.79	1.73	3.28	9.59	3.19	1.46	.70	.85	1.07	.66

† Diversion for municipal supply of city of York, equivalent in cubic feet per second.

‡ Adjusted for diversion and change in reservoir contents.

CODORUS CREEK BASIN

01575000 SOUTH BRANCH CODORUS CREEK NEAR YORK, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	57.8	73.8	109	130	170	211	195	139	99.8	60.4	56.4	61.8
MAX	489	195	356	486	440	943	552	461	1097	291	686	921
(WY)	1980	1938	1994	1978	1971	1994	1983	1989	1972	1970	1933	1975
MIN	.37	6.94	7.79	4.52	41.7	67.9	50.6	20.6	8.48	1.00	.016	2.79
(WY)	1964	1965	1981	1981	1932	1931	1967	1969	1966	1966	1966	1964

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL	70333.2		79588.5			
ANNUAL MEAN	193		218		113	
HIGHEST ANNUAL MEAN	#223		#249		#136	
LOWEST ANNUAL MEAN					234	
HIGHEST DAILY MEAN	3690		3690		16000	
LOWEST DAILY MEAN	8.0		8.5		.00	
ANNUAL SEVEN-DAY MINIMUM	9.0		15		.00	
INSTANTANEOUS PEAK FLOW			a7030		a26700	
INSTANTANEOUS PEAK STAGE			9.91		b22.62	
INSTANTANEOUS LOW FLOW			7.4		No flow at times	
ANNUAL RUNOFF (CFSM)	1.65		1.86		.97	
ANNUAL RUNOFF (INCHES)	22.36		25.31		13.16	
10 PERCENT EXCEEDS	458		545		236	
50 PERCENT EXCEEDS	84		83		68	
90 PERCENT EXCEEDS	13		19		11	

Adjusted for diversion and change in reservoir contents.

a From rating curve extended above 6,300 ft³/s on basis of contracted-opening measurement at gage height 17.97 ft, and contracted-opening and flow-over-road measurement at peak flow.

b From floodmark.

CODORUS CREEK BASIN

01575500 CODORUS CREEK NEAR YORK, PA

LOCATION.--Lat 39°56'46", long 76°45'20", York County, Hydrologic Unit 02050306, on left bank 0.5 mi upstream from bridge on Richland Avenue (SR 3054), 2.0 mi downstream from South Branch Codorus Creek, and 2.0 mi southwest of York.

DRAINAGE AREA.--222 mi².

PERIOD OF RECORD.--August 1940 to current year. October 1915 to August 1923, and August 1926 to September 1932 (gage heights and discharge measurements only), in reports of Pennsylvania Department of Forests and Waters. Published as "at York" 1915-32.

REVISED RECORDS.--WDR PA-83-2: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 356.39 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Sept. 30, 1932, nonrecording gage at site 1.6 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flows by mills and pumping station of York Water Co. Diversion upstream for municipal supply of city of York. Flood flows regulated by Indian Rock Dam (station 01574700) and by 3 reservoirs, combined capacity, 65,650 acre-ft. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by York Water Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	240	335	193	314	539	1280	e400	134	102	95	120
2	88	147	292	191	279	516	1090	e320	127	85	86	115
3	118	118	273	191	258	588	942	e270	125	80	124	109
4	95	107	256	220	239	518	854	e310	119	86	93	110
5	82	114	3840	202	238	544	717	e350	122	76	90	107
6	74	113	3460	183	234	581	671	e300	119	85	109	95
7	76	102	1080	e190	232	533	822	e340	119	248	91	90
8	74	89	648	e280	251	946	613	e800	112	110	80	85
9	74	87	517	186	248	951	542	e400	109	87	73	87
10	77	88	462	157	213	2420	559	e160	112	95	70	85
11	72	87	464	168	201	2070	630	233	109	73	71	89
12	159	85	352	181	229	1320	508	231	129	56	89	85
13	212	83	286	205	224	1250	658	228	156	46	79	80
14	109	95	298	193	212	1810	855	206	113	63	104	82
15	100	88	300	161	196	2180	627	199	94	157	173	80
16	90	80	296	137	198	2140	624	222	96	e80	82	87
17	91	78	252	392	206	1330	568	208	107	e70	e150	90
18	86	93	240	969	216	1130	495	192	103	e90	e350	189
19	80	83	252	523	268	948	459	188	98	e250	151	103
20	118	70	226	621	823	1080	428	187	91	94	115	78
21	145	68	479	573	2340	1360	e420	172	81	117	126	75
22	134	65	400	404	1930	2500	e390	169	86	302	989	88
23	107	74	314	186	1330	2440	e360	155	78	433	280	356
24	100	72	287	178	1540	2260	e340	144	80	233	185	156
25	92	76	273	239	1330	1940	e320	200	88	127	157	111
26	88	74	258	378	873	1460	e290	339	85	104	370	131
27	83	81	225	294	702	2170	e300	282	83	119	184	150
28	79	3780	215	665	591	2560	e280	183	175	279	156	106
29	86	1400	209	1090	---	2790	e260	167	108	148	150	103
30	97	457	205	491	---	2230	e300	154	190	111	140	94
31	282	---	188	363	---	1570	---	140	---	97	124	---
TOTAL	3255	8194	17182	10404	15915	46674	17202	7849	3348	4103	5136	3336
MEAN	105	273	554	336	568	1506	573	253	112	132	166	111
MAX	282	3780	3840	1090	2340	2790	1280	800	190	433	989	356
MIN	72	65	188	137	196	516	260	140	78	46	70	75
(†)	30.2	30.8	29.4	29.5	29.9	29.9	30.0	31.2	34.0	31.3	30.9	31.2
MEAN‡	121	324	641	377	635	1540	597	284	111	138	171	108
CFSM‡	.54	1.46	2.90	1.70	2.86	6.94	2.70	1.28	.50	.62	.77	.49
IN.§	.62	1.63	3.34	1.96	2.98	8.00	3.01	1.48	.56	.71	.89	.55

† Diversion for municipal supply of city of York, equivalent in cubic feet per second.

‡ Adjusted for diversion and change in reservoir contents.

§ Estimated.

CODORUS CREEK BASIN

01575500 CODORUS CREEK NEAR YORK, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	150	215	262	330	407	362	264	201	129	108	117
MAX	837	392	584	781	849	1506	1006	643	2047	604	457	1172
(WY)	1980	1944	1973	1979	1971	1994	1993	1989	1972	1970	1955	1975
MIN	19.2	28.0	27.8	38.4	84.3	143	102	58.3	31.5	18.1	17.9	21.1
(WY)	1964	1965	1966	1966	1969	1981	1969	1969	1966	1966	1966	1941

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1940 - 1994

ANNUAL TOTAL	126015		142598									
ANNUAL MEAN	345	‡375	391	‡421						221	‡247	
HIGHEST ANNUAL MEAN										466		1972
LOWEST ANNUAL MEAN										84.3		1966
HIGHEST DAILY MEAN	3840	Dec 5	3840	Dec 5					16000		Jun 22	1972
LOWEST DAILY MEAN	57	Jul 17	46	Jul 13					3.6		Sep 18	1966
ANNUAL SEVEN-DAY MINIMUM	65	Jul 13	71	Nov 20					9.5		Sep 5	1966
INSTANTANEOUS PEAK FLOW			a6660	Nov 28					a30000		Jun 22	1972
INSTANTANEOUS PEAK STAGE			12.14	Nov 28					b26.36		Jun 22	1972
INSTANTANEOUS LOW FLOW			39	Jul 14					c3.0		Oct 25	1966
ANNUAL RUNOFF (CFSM)	1.56	‡1.69	1.76	‡1.90					1.00		‡1.11	
ANNUAL RUNOFF (INCHES)	21.12	‡22.97	23.89	‡25.77					13.52		‡15.11	
10 PERCENT EXCEEDS	804		958						452			
50 PERCENT EXCEEDS	170		187						130			
90 PERCENT EXCEEDS	72		81						40			

‡ Adjusted for diversion and change in reservoir contents.

a From rating curve extended above 6,600 ft³/s on basis of slope-area measurement at gage height 20.11 ft.

b From floodmark in gage.

c Result of upstream shutoff.

CODORUS CREEK BASIN

RESERVOIRS IN CODORUS CREEK BASIN

01574390 LAKE MARBURG.--Lat 39°48'26", long 76°52'58", York County, Hydrologic Unit 02050306, at dam on West Branch Codorus Creek, 0.7 mi upstream from Codorus Creek, and 4.5 mi south of Spring Grove. DRAINAGE AREA, 23.2 mi². PERIOD OF RECORD, survey: July 1972 to September 1974 in files of P. H. Glatfelter Co., Spring Grove. Records for period December 1966 to June 1972 were lost in the flood of June 1972. GAGE, Nonrecording. Datum of gage is given in feet above sea level.

REMARKS.--Lake is formed by earthfill dam with two bascule spillway gates. Each is 7 ft high and 106.50 ft long. Storage began in December 1966. Elevation of top of gates is 623.00 ft (capacity, 47,680 acre-ft). Top of dam is at elevation 627.00 ft (capacity, 53,210 acre-ft). At the spillway crest, an elevation of 616.00 ft, the capacity is 39,430 acre-ft. The lake is used for water supply and recreation. An average of about 3,380 acre-ft is diverted from Codorus Creek into the lake each year.

COOPERATION.--Records provided by P.H. Glatfelter Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 47,680 acre-ft many days most years, elevation, 623.00 ft; minimum, 32,190 acre-ft, Feb. 13, 14 15, 1989, elevation, 608.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 47,680 acre-ft, May 8-13, 16-17, 26-29, elevation, 623.00 ft; minimum, 39,960 acre-ft, Nov. 27, elevation, 616.50 ft.

01574700 INDIAN ROCK DAM.--Lat 39°55'22", long 76°45'14", York County, Hydrologic Unit 02050306, at dam on Codorus Creek, 0.1 mi upstream from mouth of South Branch Codorus Creek, 0.3 mi west of York Water Co. pumping station, and 3.0 mi southwest of York. DRAINAGE AREA, 93.7 mi². PERIOD OF RECORD, September 1962 to current year in reports of Geological Survey, September 1942 to August 1962 in files of Baltimore District, U.S. Army Corps of Engineers. GAGE, water-stage recorder. Datum of gage is given in feet above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 435.00 ft (capacity, 28,000 acre-ft). Reservoir completed in June 1942; storage began in June 1946. No dead storage. Reservoir is used for flood control. Figures given herein represent total contents. Flood storage is regulated by three vertical-lift tractor gates. Water is stored only during high flows and released when downstream conditions warrant. Satellite telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 30,200 acre-ft, June 23, 1972, elevation, 436.44 ft; minimum, no storage many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4040 acre-ft, Dec. 5, elevation, 405.35 ft; minimum, 24 acre-ft, July 14, elevation, 375.07 ft.

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
01574390 LAKE MARBURG				01574700 INDIAN ROCK DAM		
Sept. 30.....	618.37	41,960	--	376.49	37.2	--
Oct. 31.....	617.20	40,710	- 20.3	382.64	206	+ 2.75
Nov. 30.....	617.68	41,230	+ 8.7	382.54	200	- 0.10
Dec. 31.....	620.93	44,940	+ 60.3	377.45	45.3	- 2.52
CAL YR 1993.....	--	--	+ 9.9	--	--	0
Jan. 31.....	621.46	45,640	+ 11.4	378.82	70.5	+ 0.41
Feb. 28.....	623.00	47,680	+ 36.7	380.13	104	+ 0.60
Mar. 31.....	623.00	47,680	0	383.77	274	+ 2.76
Apr. 30.....	622.90	47,550	- 2.2	378.00	50.0	- 3.76
May 31.....	622.90	47,550	0	377.21	43.3	- 0.11
June 30.....	621.33	45,470	- 35.0	378.09	52.2	+ 0.15
July 31.....	620.18	43,940	- 24.9	376.03	33.3	- 0.31
Aug. 31.....	618.73	42,340	- 26.0	376.53	37.5	+ 0.07
Sept. 30.....	616.79	40,280	- 34.6	376.45	36.8	- 0.01
WTR YR 1994.....	--	--	- 2.3	--	--	0

SUSQUEHANNA RIVER BASIN

01576000 SUSQUEHANNA RIVER AT MARIETTA, PA

LOCATION.--Lat 40°03'16", long 76°31'52", Lancaster County, Hydrologic Unit 02050306, on left bank 420 ft upstream from Chickies Creek, and 1.0 mi downstream from Marietta. Records include flow of Chickies Creek.

DRAINAGE AREA.--25,990 mi², approximately, includes that of Chickies Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 781: 1933(M). WSP 1502: 1937.

GAGE.--Water-stage recorder. Datum of gage is 200.56 ft above sea level.

REMARKS.--Records fair. Flow slightly regulated by 16 flood-control reservoirs which have a combined capacity of 1,599,000 acre-ft. Some diurnal fluctuation below 8,000 ft³/s caused by hydroelectric plant 9.7 mi upstream. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 58.2 ft, from floodmark, discharge, about 630,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19000	13800	177000	15700	65600	63200	199000	42700	18300	44600	19900	39900
2	18100	15700	133000	17100	63800	55400	172000	54700	16300	41800	19100	33900
3	16800	20500	99100	19700	58300	50400	176000	58400	16100	34000	17200	29500
4	15400	21800	78400	20400	51100	45300	210000	59900	15200	29600	15800	25700
5	15400	20900	102000	18200	44000	46100	248000	57100	14800	26700	15400	22500
6	13700	20500	127000	17200	39800	46700	231000	51200	15500	22400	15100	19900
7	11800	19900	116000	e14400	37500	49400	210000	46000	19300	21200	14900	17900
8	11000	22100	105000	e14200	36300	52100	230000	48300	18900	25000	15200	16100
9	10400	29200	90100	e14000	34300	58500	219000	50900	15800	22100	15500	15500
10	9790	32800	74400	e13000	30000	78200	182000	51900	14500	23200	14400	14200
11	8470	31100	70800	e12000	26300	113000	161000	49300	15400	26900	12800	13100
12	7850	27700	77100	e12000	24700	121000	161000	47100	14900	24400	11500	12500
13	11800	24900	77100	e13000	22700	116000	167000	43700	15000	20400	10800	11800
14	10400	22200	73000	e14000	22200	111000	215000	41500	21700	18500	10200	11300
15	8860	20200	64600	e14500	22600	118000	231000	37900	28400	18200	9520	10700
16	8290	18300	56500	e14000	22200	126000	201000	34800	43400	16800	11600	10200
17	7990	19400	50400	e13000	22000	132000	169000	31900	81800	16800	40000	10100
18	7510	24100	46300	e11000	22000	125000	154000	30900	59100	16000	48100	10900
19	7630	28000	42700	e10800	21900	107000	139000	31400	42600	15700	121000	12800
20	7080	50100	39600	e10500	23300	94200	120000	29500	34000	13900	199000	14200
21	7730	70000	39700	e10200	30600	87600	105000	28000	26500	13100	144000	13300
22	9070	59700	42500	e10000	56600	101000	89500	26800	22500	21200	112000	12600
23	11200	48600	46300	e14000	124000	158000	77400	24900	19500	20400	98700	13300
24	13000	40300	43600	e15000	176000	233000	67900	23100	17400	22300	94400	12700
25	15600	35100	39200	e16000	140000	303000	60900	21800	15700	23900	78800	12400
26	16300	30700	34200	e16000	112000	357000	53400	21500	13800	22200	65900	12000
27	15100	27400	28400	e17000	90200	342000	47100	21600	18900	24300	57500	15500
28	14200	64800	21200	e20000	74800	320000	43400	21300	34700	26000	50900	32300
29	13000	202000	19500	e25000	---	300000	40700	21900	31300	25100	43200	47900
30	12000	230000	16100	e35000	---	275000	38800	21800	31600	22200	39600	45200
31	12600	---	14700	e60000	---	238000	---	20200	---	20400	40600	---
TOTAL	367070	1291800	2045500	526900	1494800	4423100	4419100	1152000	752900	719300	1462620	569900
MEAN	11840	43060	65980	17000	53390	142700	147300	37160	25100	23200	47180	19000
MAX	19000	230000	177000	60000	176000	357000	248000	59900	81800	44600	199000	47900
MIN	7080	13800	14700	10000	21900	45300	38800	20200	13800	13100	9520	10100
CFSM	.46	1.66	2.54	.65	2.05	5.49	5.67	1.43	.97	.89	1.82	.73
IN.	.53	1.85	2.93	.75	2.14	6.33	6.33	1.65	1.08	1.03	2.09	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1994, BY WATER YEAR (WY)

	MEAN	17430	29410	39040	38580	44780	76900	81100	49010	28620	15880	12280	12500
MAX	81330	71930	106800	99470	109300	229100	235100	103400	190700	61480	47180	78650	
(WY)	1977	1978	1973	1937	1984	1936	1993	1989	1972	1972	1994	1975	
MIN	2699	3041	8147	6635	10730	28120	22450	14240	7993	3957	3627	2296	
(WY)	1964	1965	1961	1981	1934	1960	1946	1941	1991	1965	1966	1964	

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1932 - 1994
ANNUAL TOTAL	17976940	19224990	
ANNUAL MEAN	49250	52670	37060
HIGHEST ANNUAL MEAN			59900
LOWEST ANNUAL MEAN			19060
HIGHEST DAILY MEAN	431000	Apr 3	1040000
LOWEST DAILY MEAN	4700	Jul 28	1380
ANNUAL SEVEN-DAY MINIMUM	4770	Jul 25	1720
INSTANTANEOUS PEAK FLOW			365000
INSTANTANEOUS PEAK STAGE			51.01
INSTANTANEOUS LOW FLOW			6720
ANNUAL RUNOFF (CFSM)	1.90	2.03	1.43
ANNUAL RUNOFF (INCHES)	25.73	27.52	19.37
10 PERCENT EXCEEDS	151000	132000	84800
50 PERCENT EXCEEDS	18300	26500	21800
90 PERCENT EXCEEDS	5940	12000	6020

a From floodmarks.

b York Haven powerplant shut down to obtain current-meter measurements of low flow.

c Estimated.

SUSQUEHANNA RIVER BASIN**01576000 SUSQUEHANNA RIVER AT MARIETTA, PA--Continued****WATER-QUALITY RECORDS****PERIOD OF RECORD.**--Water years 1961-74, 1976, 1987 to 1993 (discontinued).**REMARKS.**--Water-quality sampling continued by the Susquehanna River Basin Commission, but since September 1993 the data are not stored in the USGS data base or published in this report. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

CONESTOGA RIVER BASIN

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA

LOCATION.--Lat 40°08'41", long 75°59'20", Lancaster County, Hydrologic Unit 02050306, on left bank 40 ft upstream from bridge on Smoketown Road (Township Route 773), 0.2 mi upstream from small right-bank tributary, and 1.6 mi northwest of Churchtown.

DRAINAGE AREA.--5.82 mi², excluding unnamed right-bank spring tributary 25 ft downstream.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1982 to current year.

REVISED RECORDS.--WDR PA-83-2: 1982(P).

GAGE.--Water-stage recorder and wooden control. Elevation of gage is 410 ft above sea level, from topographic map.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 16, 1982, reached a stage of 8.25 ft, from floodmarks, discharge, 1,210 ft³/s, from rating curve extended as explained on next page. Flood of June 1972 reached a stage of about 9.8 ft, discharge not determined, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	13	7.0	e4.0	7.1	28	24	9.2	3.3	2.4	3.0	2.4
2	1.1	5.3	6.3	e4.5	5.8	57	21	7.5	3.3	1.8	2.7	2.1
3	1.2	4.2	5.6	5.0	4.8	63	18	7.1	3.3	1.6	2.6	2.0
4	1.1	3.5	11	5.2	e4.4	54	17	7.1	3.1	1.6	2.4	2.0
5	.86	3.3	301	4.1	e4.2	57	15	7.2	2.7	1.5	2.8	1.9
6	.59	2.9	32	3.6	4.9	59	14	6.6	14	5.0	2.6	1.7
7	.49	2.5	18	e3.2	6.2	56	22	8.0	5.2	4.4	2.0	1.7
8	.48	2.3	13	e2.9	4.4	92	14	16	3.7	1.6	2.0	1.7
9	.48	2.0	11	e2.7	4.9	90	13	7.6	3.2	1.4	2.0	1.5
10	.46	2.0	11	e2.5	4.7	384	14	6.8	2.9	1.3	1.9	1.5
11	.40	1.9	11	e2.3	4.7	228	14	6.4	2.9	1.3	1.7	1.5
12	41	1.7	8.3	e2.1	4.5	124	12	6.8	3.5	1.3	3.0	1.5
13	5.5	1.6	7.9	e2.3	4.4	121	51	6.0	3.1	1.2	3.6	1.5
14	2.3	1.8	7.7	e2.2	4.4	214	28	5.1	2.7	12	3.4	1.4
15	1.5	1.6	7.4	e1.7	3.9	272	19	5.0	2.4	3.9	2.3	1.4
16	1.3	1.4	6.7	e1.6	3.8	243	23	5.1	2.4	1.7	1.7	1.4
17	1.2	1.6	6.3	e1.5	3.8	66	17	5.0	2.4	1.5	34	40
18	1.1	2.8	6.0	e1.4	3.8	16	15	4.9	2.2	1.8	6.9	22
19	1.0	1.7	5.9	e1.3	5.3	14	14	4.7	2.5	1.5	4.3	3.3
20	1.9	1.7	5.7	e1.2	43	27	14	4.7	2.5	1.3	3.5	2.4
21	1.7	1.5	51	e1.1	142	65	12	4.6	1.8	1.3	3.5	2.1
22	1.7	1.4	15	e1.0	62	71	11	4.1	1.9	1.7	43	4.8
23	1.1	1.4	12	e1.6	22	43	11	3.9	1.8	7.8	8.3	5.3
24	.99	1.3	9.8	e2.5	16	35	10	4.2	1.7	2.0	5.6	3.0
25	.99	1.3	9.1	3.9	14	32	9.5	17	1.7	20	4.5	2.6
26	.99	1.3	7.3	5.5	11	22	9.2	7.5	1.6	5.6	4.1	25
27	.99	1.3	6.2	4.4	8.0	51	8.8	5.4	68	3.9	3.7	6.8
28	.99	100	e5.5	211	7.9	53	8.2	4.3	8.9	20	3.2	4.6
29	.99	13	e5.1	61	---	70	7.9	4.1	2.9	4.8	3.0	4.0
30	4.1	8.7	e4.7	15	---	36	7.9	3.8	3.0	3.7	2.8	3.4
31	16	---	e4.3	8.8	---	28	---	3.6	---	3.3	2.4	---
TOTAL	95.80	190.0	618.8	371.1	415.9	2771	474.5	199.3	164.6	124.2	172.5	156.5
MEAN	3.09	6.33	20.0	12.0	14.9	89.4	15.8	6.43	5.49	4.01	5.56	5.22
MAX	41	100	301	211	142	384	51	17	68	20	43	40
MIN	.40	1.3	4.3	1.0	3.8	14	7.9	3.6	1.6	1.2	1.7	1.4
CFSM	.53	1.09	3.43	2.06	2.55	15.4	2.72	1.10	.94	.69	.96	.90
IN.	.61	1.21	3.96	2.37	2.66	17.71	3.03	1.27	1.05	.79	1.10	1.00

e Estimated.

CONESTOGA RIVER BASIN

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.76	5.74	9.27	6.98	10.1	17.4	10.7	8.96	5.44	6.06	2.97	4.12
MAX	6.54	10.1	27.4	12.1	19.8	89.4	27.7	23.6	20.8	21.0	5.56	20.3
(WY)	1990	1984	1984	1990	1984	1994	1983	1989	1989	1984	1994	1987
MIN	1.07	2.22	2.69	2.56	3.10	3.15	2.12	4.09	1.94	.98	1.46	1.16
(WY)	1987	1983	1990	1985	1992	1985	1985	1991	1985	1993	1993	1986

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1982 - 1994

ANNUAL TOTAL	3355.20	5754.20	
ANNUAL MEAN	9.19	15.8	7.56
HIGHEST ANNUAL MEAN			15.8
LOWEST ANNUAL MEAN			3.33
HIGHEST DAILY MEAN	301	Dec 5	384
LOWEST DAILY MEAN	.37	Aug 5	.40
ANNUAL SEVEN-DAY MINIMUM	.46	Jul 30	.54
INSTANTANEOUS PEAK FLOW			b873
INSTANTANEOUS PEAK STAGE			7.11
INSTANTANEOUS LOW FLOW			.26
ANNUAL RUNOFF (CFSM)	1.58		2.71
ANNUAL RUNOFF (INCHES)	21.45		36.78
10 PERCENT EXCEEDS	20		35
50 PERCENT EXCEEDS	3.3		4.3
90 PERCENT EXCEEDS	.73		1.4
			1.1

a Also Aug. 5, 1993.

b From rating curve extended above 230 ft³/s on basis of slope-conveyance computation and contracted-opening measurement at gage height 8.25 ft.

c Result of freezeup.

CONESTOGA RIVER BASIN

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: August 1982 to September 1983 (discontinued).

INSTRUMENTATION.--Automatic sediment pumping sampler August 1982 to September 1991.

COOPERATION.--Suspended-sediment samples analyzed by the U.S. Geological Survey.

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	ALA- CHLOR TOTAL RECOVER (μ G/L) (77825)	ALDRIN, TOTAL (μ G/L) (39330)	ATRA- ZINE WATER UNFLTRD REC (μ G/L) (39630)
FEB										
17...	1200	1028	9813	3.8	471	8.0	2.0	<0.08	<0.005	<0.2
MAY										
08...	0313	1028	9813	41	--	--	--	<0.08	0.011	0.4
08...	0343	1028	9813	44	--	--	--	--	--	--
08...	0413	1028	9813	39	--	--	--	--	--	--
08...	0458	1028	9813	33	--	--	--	<0.08	0.010	2.7
08...	1245	1028	9813	11	--	--	13.0	<0.08	<0.005	0.3
18...	1840	1028	9813	5.0	--	--	--	<0.08	<0.005	<0.2
25...	2103	1028	9813	41	--	--	--	2.6	<0.005	10
26...	1520	1028	9813	6.0	--	--	--	0.98	<0.005	3.6
JUN										
06...	1735	1028	9813	12	--	--	--	--	--	--
06...	1805	1028	9813	25	--	--	--	0.19	<0.005	4.3
06...	1855	1028	9813	104	--	--	21.5	0.19	<0.005	8.0
06...	1856	1028	9813	105	--	--	21.5	0.15	0.006	7.5
06...	1958	1028	9813	63	--	--	--	--	--	--
06...	2043	1028	9813	45	--	--	--	2.2	<0.005	12
06...	2148	1028	9813	24	--	--	--	--	--	--
06...	2313	1028	9813	13	--	--	--	--	--	--
22...	1500	1028	9813	2.0	--	--	--	0.15	<0.005	0.3
27...	1824	1028	9813	10	270	8.0	--	--	--	--
27...	1854	1028	9813	80	255	7.7	--	--	--	--
27...	1924	1028	9813	86	--	--	--	<0.08	<0.005	<0.2
27...	2009	1028	9813	385	165	7.9	--	--	--	--
27...	2109	1028	9813	758	--	--	--	0.20	0.20	2.8
27...	2225	1028	9813	180	155	8.1	--	0.39	<0.005	1.7
27...	2311	1028	9813	87	160	8.2	--	--	--	--
28...	0041	1028	9813	38	160	8.1	--	--	--	--
28...	0241	1028	9813	16	200	8.0	--	--	--	--
JUL										
06...	2027	1028	9813	7.0	--	--	--	--	--	--
06...	2057	1028	9813	11	--	--	--	<0.08	<0.005	0.5
06...	2127	1028	9813	8.0	--	--	--	--	--	--
06...	2212	1028	9813	35	--	--	--	<0.08	<0.005	1
06...	2312	1028	9813	34	--	--	--	--	--	--
07...	0212	1028	9813	10	--	--	--	--	--	<0.2
07...	0412	1028	9813	6.0	--	--	--	--	--	--
07...	1545	1028	9813	2.4	--	--	--	--	--	--
14...	1826	1028	9813	12	320	7.3	--	0.08	<0.005	0.5
14...	1856	1028	9813	70	320	7.3	--	--	--	--
14...	1926	1028	9813	73	--	--	--	<0.08	<0.005	<0.2
14...	2011	1028	9813	69	230	7.3	--	--	--	--
14...	2241	1028	9813	22	--	--	--	0.13	<0.005	0.3
15...	0011	1028	9813	13	220	7.4	--	--	--	--
AUG										
08...	1320	1028	9813	2.0	430	7.7	24.0	0.08	0.007	0.2
SEP										
08...	1420	1028	9813	1.6	--	--	--	<0.08	<0.005	<0.2

CONESTOGA RIVER BASIN

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CHLOR- DANE, TOTAL (μ G/L) (39350)	CYAN- AZINE TOTAL (μ G/L) (81757)	DI- ELDRIN TOTAL (μ G/L) (39380)	MALA- THION, TOTAL (μ G/L) (39530)	METOLA- CHLOR WATER WHOLE TOT.REC (μ G/L) (82612)	PRO- PAZINE TOTAL (μ G/L) (39024)	SIMA- ZINE TOTAL (μ G/L) (39055)	TOX- APHENE, TOTAL (μ G/L) (39400)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
FEB										
17...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	--	--
MAY										
08...	<0.1	<0.40	<0.010	<0.16	0.93	<0.20	0.36	<1	--	--
08...	--	--	--	--	--	--	--	--	808	96
08...	--	--	--	--	--	--	--	--	591	62
08...	<0.1	<0.40	<0.010	<0.16	1.2	<0.20	0.38	<1	--	--
08...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	0.72	<1	90	2.7
18...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	45	0.61
25...	<0.1	5.3	0.013	<0.16	10	<0.20	<0.20	<1	--	--
26...	<0.1	13	<0.010	<0.16	3.3	<0.20	<0.20	<1	--	--
JUN										
06...	--	--	--	--	--	--	--	--	4520	146
06...	<0.1	0.99	0.010	<0.16	6.8	<0.20	<0.20	<1	--	--
06...	<0.1	1.2	0.010	<0.16	22	<0.20	<0.20	<1	8160	2290
06...	<0.1	0.97	0.010	<0.16	19	<0.20	<0.20	<1	9090	2580
06...	--	--	--	--	--	--	--	--	5460	929
06...	<0.1	8.2	0.025	<0.16	20	<0.20	0.20	<1	1350	164
06...	--	--	--	--	--	--	--	--	2710	176
06...	--	--	--	--	--	--	--	--	2220	78
22...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	121	0.65
27...	--	--	--	--	--	--	--	--	1710	46
27...	--	--	--	--	--	--	--	--	3320	717
27...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	--	--
27...	--	--	--	--	--	--	--	--	10200	10600
27...	<0.1	<0.40	0.010	<0.16	<0.20	<0.20	<0.20	<1	--	--
27...	<0.1	5.4	<0.010	<0.16	0.90	<0.20	0.20	<1	2280	1110
27...	--	--	--	--	--	--	--	--	2190	514
28...	--	--	--	--	--	--	--	--	1490	153
28...	--	--	--	--	--	--	--	--	805	35
JUL										
06...	--	--	--	--	--	--	--	--	1470	28
06...	<0.1	1.4	<0.010	<0.16	1.1	<0.20	<0.20	<1	1470	44
06...	--	--	--	--	--	--	--	--	520	11
06...	<0.1	2.3	<0.010	<0.16	2.0	<0.20	<0.20	<1	--	--
06...	--	--	--	--	--	--	--	--	2130	196
07...	--	<0.40	--	<0.16	2.3	<0.20	<0.20	--	--	--
07...	--	--	--	--	--	--	--	--	490	7.9
07...	--	--	--	--	--	--	--	--	168	1.1
14...	<0.1	0.86	<0.010	<0.16	0.65	<0.20	0.33	<1	1180	38
14...	--	--	--	--	--	--	--	--	1180	223
14...	<0.1	0.40	<0.010	<0.16	0.20	<0.20	<0.20	<1	--	--
14...	--	--	--	--	--	--	--	--	1410	263
14...	<0.1	2.2	0.013	<0.16	2.1	<0.20	<0.20	<1	--	--
15...	--	--	--	--	--	--	--	--	744	26
AUG										
08...	<0.1	0.45	0.010	<0.16	<0.20	<0.20	<0.20	<1	24	0.13
SEP										
08...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	--	--

CONESTOGA RIVER BASIN

01576500 CONESTOGA RIVER AT LANCASTER, PA

LOCATION.--Lat 40°03'00", long 76°16'39", Lancaster County, Hydrologic Unit 02050306, on left bank at Penn Central Railroad bridge, 50 ft downstream from small right-bank tributary, 500 ft downstream from diversion dam at city water plant, and 0.7 mi east of Lancaster.

DRAINAGE AREA.--324 mi².

PERIOD OF RECORD.--October 1928 to March 1932; August, September 1932; April 1933 to current year. Prior to October 1973, published as Conestoga Creek at Lancaster.

REVISED RECORDS.--WSP 1202: Drainage area. WSP 1502: 1943(P). WDR PA-87-2: 1985-86(P) (monthly and yearly summaries) WDR PA-90-2: 1972(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 245.63 ft above sea level. Prior to May 1, 1933, at site 600 ft upstream at different datum, excluding small tributary.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flow by water plant and mill above station. Diversion upstream for municipal supply of city of Lancaster. Several measurements of water temperature were made during the year. Satellite telemeter at station.

COOPERATION.--Records of diversion provided by city of Lancaster.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	791	691	e360	658	e580	1820	600	246	397	236	256
2	205	376	586	e390	e440	e470	1570	569	236	214	221	247
3	229	268	528	e380	e410	e480	1400	465	220	186	211	224
4	216	248	518	e360	e400	e520	1300	451	214	172	201	216
5	184	236	6810	e300	e400	576	1150	464	209	161	221	209
6	166	233	4930	e280	e370	688	1070	430	264	185	257	203
7	152	217	1740	e290	e360	602	1380	426	826	281	201	199
8	149	195	1290	e280	e350	1070	1090	1150	313	195	184	190
9	148	182	1070	e260	e290	1210	926	698	260	158	177	185
10	141	178	978	e210	e280	2280	893	514	236	157	171	181
11	141	175	1120	e220	e270	3160	1040	457	222	146	163	176
12	557	166	850	e230	e270	2000	864	446	303	138	163	169
13	659	166	731	355	e280	1840	1120	434	276	134	175	164
14	277	195	680	350	e290	2500	1810	393	227	846	215	161
15	221	194	660	295	e240	2850	1070	369	209	2150	195	156
16	198	175	648	e230	e250	2390	1140	381	200	499	160	157
17	177	168	571	e240	e270	1640	1060	355	195	309	515	174
18	171	319	529	e230	e300	1460	890	341	188	290	920	568
19	163	252	556	e160	336	1250	827	331	184	281	333	254
20	187	209	534	e160	465	1280	792	323	183	222	246	192
21	221	184	1580	e150	1840	1680	729	313	178	200	223	173
22	216	168	1210	e160	2340	4160	687	296	170	209	2560	178
23	194	164	783	e160	1620	4070	650	283	162	470	1140	312
24	169	159	678	e200	1160	3530	625	285	157	568	570	241
25	155	155	e550	e210	1230	3210	606	362	154	281	445	192
26	149	151	e510	e240	909	2510	576	776	151	502	392	1140
27	146	152	e430	e250	749	3330	550	480	158	376	359	690
28	144	4320	e380	e370	e610	3870	541	334	457	775	328	334
29	139	2270	e370	2660	---	4380	505	290	280	400	307	270
30	153	913	e360	1270	---	3020	504	271	309	296	282	238
31	458	---	e350	819	---	2140	---	258	---	256	261	---
TOTAL	6715	13579	33221	12069	17387	64746	29185	13545	7387	11454	12032	8049
MEAN	217	453	1072	389	621	2089	973	437	246	369	388	268
MAX	659	4320	6810	2660	2340	4380	1820	1150	826	2150	2560	1140
MIN	139	151	350	150	240	470	504	258	151	134	160	156
(†)	7.8	8.7	9.4	11.4	14.2	11.4	12.0	9.5	10.4	9.1	10.2	9.4
MEAN‡	225	462	1081	400	635	2100	985	446	256	378	398	277
CFSM‡	.69	1.43	3.34	1.23	1.96	6.48	3.04	1.38	.79	1.17	1.23	.85
IN.‡	.80	1.60	3.85	1.42	2.04	7.47	3.39	1.59	.88	1.35	1.42	.95

† Diversion for municipal supply of city of Lancaster, equivalent in cubic feet per second.

‡ Adjusted for diversion.

e Estimated.

CONESTOGA RIVER BASIN

01576500 CONESTOGA RIVER AT LANCASTER, PA--Continued

REMARKS.--All figures unadjusted unless otherwise indicated.

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	199	271	383	458	549	677	631	461	380	307	243	217
MAX	930	648	1300	1699	1191	2089	1720	1529	3286	944	1427	908
(WY)	1980	1976	1984	1979	1979	1994	1993	1989	1972	1984	1933	1987
MIN	33.2	41.1	71.0	61.3	166	159	166	148	92.0	63.4	30.3	40.9
(WY)	1931	1931	1931	1981	1931	1981	1985	1965	1965	1963	1957	1957

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL TOTAL	210911		229369									
ANNUAL MEAN	578	‡590	628	‡639					396	‡408		
HIGHEST ANNUAL MEAN									753			1972
LOWEST ANNUAL MEAN									143			1981
HIGHEST DAILY MEAN	6810	Dec 5	6810	Dec 5					47600		Jun 23	1972
LOWEST DAILY MEAN	67	Sep 2	134	Jul 13					7.0		Aug 11	1930
ANNUAL SEVEN-DAY MINIMUM	70	Aug 28	151	Oct 24					20		Aug 9	1930
INSTANTANEOUS PEAK FLOW			12600	Dec 5					a50300		Jun 23	1972
INSTANTANEOUS PEAK STAGE			13.95	Dec 5					b27.90		Jun 23	1972
ANNUAL RUNOFF (CFSM)	1.78	‡1.82	1.94	‡1.97					1.22	‡1.26		
ANNUAL RUNOFF (INCHES)	24.22	‡24.74	26.33	‡26.76					16.60	‡17.10		
10 PERCENT EXCEEDS	1300		1390						802			
50 PERCENT EXCEEDS	283		309						255			
90 PERCENT EXCEEDS	105		163						84			

‡ Adjusted for diversion.

a From rating curve extended above 13,000 ft³/s on basis of slope-area measurement at gage height 17.50 ft and contracted-opening measurement of peak flow.

b From floodmark.

CONESTOGA RIVER BASIN

01576520 MUDDY RUN AT WEAVERTOWN, PA

LOCATION.--Lat 40°02'51", long 76°09'43", Lancaster County, Hydrologic Unit 02050306, on left bank 200 feet upstream from bridge on North Harvest Road (Township Route 692), 0.9 mi northeast of Weavertown, 1.3 mi south of Mascot, 2.0 mi west of Intercourse, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--6.68 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1992 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 350 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	8.6	8.1	e8.1	12	11	21	12	8.5	8.1	6.3	5.1
2	5.2	6.1	8.3	e8.9	e8.1	10	19	11	8.2	7.1	6.2	4.8
3	5.5	5.8	7.7	e8.1	e7.1	10	18	11	8.0	6.8	6.1	4.8
4	5.0	5.7	8.4	e7.5	e7.0	10	17	11	7.8	6.6	5.9	4.8
5	4.9	5.5	129	e8.0	e6.9	11	16	11	7.8	6.6	6.3	4.6
6	4.7	5.4	21	e7.1	e6.6	12	16	11	12	7.2	5.8	4.6
7	4.3	5.2	18	e6.6	e6.4	19	23	13	9.3	7.8	5.7	4.5
8	4.3	5.1	17	e7.8	e6.2	48	16	17	8.4	6.5	5.5	4.5
9	4.3	4.9	15	e6.4	e6.3	24	16	11	8.0	6.3	5.4	4.5
10	4.2	4.9	15	e5.7	e6.8	177	17	11	7.8	6.2	5.4	4.4
11	4.0	4.9	14	e5.4	e16	78	16	10	8.0	6.2	5.1	4.3
12	23	4.8	12	e5.2	e29	61	15	11	10	6.1	5.6	4.2
13	6.9	5.2	12	e6.0	e6.9	78	25	10	8.8	5.9	6.9	4.3
14	5.7	5.1	12	e5.0	e5.5	94	18	10	7.9	26	7.9	4.3
15	5.4	4.8	12	e4.6	e5.2	62	16	9.9	7.6	11	5.9	4.3
16	5.1	4.7	11	e5.0	e5.5	32	17	9.8	7.5	7.7	5.6	4.3
17	5.0	4.8	10	e6.3	e5.7	23	15	9.5	7.3	7.6	18	4.6
18	4.7	4.8	10	e8.1	e5.7	20	14	9.5	7.2	7.6	8.2	7.5
19	4.6	4.7	11	e7.4	e6.2	20	14	9.5	7.1	7.3	6.6	4.2
20	8.9	4.6	10	e6.4	19	34	13	9.4	6.8	7.1	6.3	4.1
21	6.1	4.4	27	e5.9	91	70	12	10	6.7	6.5	6.9	4.1
22	5.5	4.4	14	e5.4	66	72	12	11	6.5	6.5	17	5.8
23	5.3	4.3	12	e4.9	30	31	12	11	6.4	8.4	7.7	5.4
24	4.8	4.4	11	e4.7	38	24	12	11	6.5	6.6	6.5	4.4
25	4.4	4.2	e10	e4.3	29	22	12	13	6.6	7.3	5.8	4.3
26	4.4	4.3	e9.1	e4.7	16	19	12	13	6.4	7.4	5.8	19
27	4.3	5.2	e8.9	e4.3	13	37	12	11	9.7	7.6	5.8	5.9
28	4.2	46	e8.5	236	12	40	11	11	9.4	9.2	5.7	5.2
29	4.2	10	e8.2	57	---	52	11	9.6	7.1	7.0	5.5	4.8
30	7.2	8.8	e8.0	19	---	26	12	8.8	13	6.5	5.3	4.6
31	9.8	---	e7.9	14	---	22	---	8.6	---	6.5	5.2	---
TOTAL	181.1	201.6	486.1	493.8	473.1	1249	460	335.6	242.3	241.2	211.9	156.2
MEAN	5.84	6.72	15.7	15.9	16.9	40.3	15.3	10.8	8.08	7.78	6.84	5.21
MAX	23	46	129	236	91	177	25	17	13	26	18	19
MIN	4.0	4.2	7.7	4.3	5.2	10	11	8.6	6.4	5.9	5.1	4.1
CFSM	.87	1.01	2.35	2.38	2.53	6.03	2.30	1.62	1.21	1.16	1.02	.78
IN.	1.01	1.12	2.71	2.75	2.63	6.96	2.56	1.87	1.35	1.34	1.18	.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	4.75	5.67	10.6	10.7	10.5	28.5	18.4	11.1	7.34	5.81	5.00	4.73
MEAN	4.75	5.67	10.6	10.7	10.5	28.5	18.4	11.1	7.34	5.81	5.00	4.73
MAX	5.84	6.72	15.7	15.9	16.9	40.3	21.5	11.3	8.08	7.78	6.84	5.99
(WY)	1994	1994	1994	1994	1994	1994	1993	1993	1994	1994	1994	1993
MIN	3.66	4.62	5.46	5.41	4.13	16.7	15.3	10.8	6.40	4.27	3.29	3.00
(WY)	1993	1993	1993	1993	1993	1993	1994	1994	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1992 - 1994

ANNUAL TOTAL	3388.6	4731.9		
ANNUAL MEAN	9.28	13.0		
HIGHEST ANNUAL MEAN			10.5	
LOWEST ANNUAL MEAN			13.0	1994
HIGHEST DAILY MEAN	129	Dec 5	236	Jan 28 1994
LOWEST DAILY MEAN	e3.2	Feb 9-11	4.0	Oct 11 1992
ANNUAL SEVEN-DAY MINIMUM	a3.3	Feb 6	4.3	Sep 10 1992
INSTANTANEOUS PEAK FLOW			b857	Jan 28 1994
INSTANTANEOUS PEAK STAGE			6.49	Jan 28 1994
ANNUAL RUNOFF (CFSM)	1.39		1.94	
ANNUAL RUNOFF (INCHES)	18.87		26.35	
10 PERCENT EXCEEDS	17		21	
50 PERCENT EXCEEDS	5.8		7.7	
90 PERCENT EXCEEDS	4.0		4.6	

a Using estimated daily discharges.

b From rating curve extended above 60 ft³/s.

e Estimated.

CONESTOGA RIVER BASIN

01576520 MUDDY RUN AT WEAVERTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1992 to current year.

REMARKS.--Operated as part of the Mill Creek project. The following water-quality data were collected and analyzed by the Pennsylvania Department of Environmental Resources. Stormflow samples collected by the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT							
19...	1055	9813	9813	4.5	28	12.1	11.6
NOV							
09...	2055	9813	9813	5.1	22	13.5	13.1
DEC							
08...	1120	9813	9813	16	30	14.7	14.3
JAN							
11...	1100	9813	9813	e5.4	58	14.3	13.3
FEB							
10...	1105	9813	9813	e6.8	32	14.8	13.9
MAR							
10...	1050	9813	9813	324	692	0.950	0.880
27...	1100	1028	9813	76	582	7.79	--
27...	1200	1028	9813	108	834	5.28	--
27...	1330	1028	9813	81	460	4.36	--
APR							
11...	0935	9813	9813	15	34	12.3	12.1
13...	1330	1028	9813	46	210	9.37	--
13...	1430	1028	9813	52	262	7.26	--
13...	1600	1028	9813	46	202	6.05	--
MAY							
07...	2115	1028	9813	23	304	6.47	--
08...	0415	1028	9813	34	176	8.71	--
08...	0715	1028	9813	18	192	5.81	--
12...	1050	9813	9813	11	60	13.4	12.0
25...	1800	1028	9813	18	630	10.9	--
25...	1900	1028	9813	26	520	9.20	--
25...	2000	1028	9813	23	720	9.68	--
25...	2200	1028	9813	15	394	8.47	--
25...	2400	1028	9813	11	244	7.99	--
26...	1800	1028	9813	20	912	8.18	--
26...	1900	1028	9813	29	1290	5.94	--
26...	2000	1028	9813	25	1260	6.86	--
26...	2200	1028	9813	15	828	6.34	--
27...	0100	1028	9813	11	246	6.34	--
JUN							
06...	1900	1028	9813	28	964	9.44	--
06...	2000	1028	9813	41	2000	7.74	--
06...	2200	1028	9813	20	2480	6.53	--
06...	2400	1028	9813	13	853	5.57	--
07...	0400	1028	9813	10	620	7.74	--
15...	1005	9813	9813	7.9	54	11.4	11.1
27...	1900	1028	9813	15	110	8.47	--
27...	2000	1028	9813	17	188	7.26	--
27...	2200	1028	9813	15	136	5.08	--
27...	2400	1028	9813	22	154	5.32	--
28...	0400	1028	9813	9.4	160	4.11	--
30...	1900	1028	9813	70	1980	7.50	--
30...	2000	1028	9813	36	1820	5.08	--
30...	2200	1028	9813	14	558	5.08	--
JUL							
01...	0500	1028	9813	8.5	194	7.26	--
07...	0930	9813	9813	7.2	72	6.05	6.05
14...	1900	1028	9813	91	2260	4.09	--
14...	2100	1028	9813	110	2060	2.51	--
15...	0600	1028	9813	10	58	5.41	--
AUG							
09...	0955	9813	9813	5.2	52	8.71	8.47
17...	1400	1028	9813	17	224	8.47	--
17...	1500	1028	9813	43	1130	6.77	--
17...	1600	1028	9813	65	2100	2.38	--
17...	1900	1028	9813	34	384	2.90	--
17...	2300	1028	9813	12	158	4.60	--
SEP							
15...	1305	9813	9813	4.2	32	10.2	9.92
17...	2400	1028	9813	7.3	956	10.2	--
18...	0300	1028	9813	13	178	7.39	--
18...	0400	1028	9813	14	146	7.02	--
18...	0800	1028	9813	8.3	70	5.28	--
26...	1000	1028	9813	28	1370	3.70	--
26...	1100	1028	9813	53	1480	2.24	--
26...	1200	1028	9813	56	566	2.11	--
26...	1500	1028	9813	36	298	2.64	--
26...	1900	1028	9813	11	118	4.09	--

CONESTOGA RIVER BASIN

01576520 MUDDY RUN AT WEAVERTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT							
19...	0.080	0.070	0.51	0.40	0.220	0.185	0.102
NOV							
09...	0.060	0.050	0.40	0.25	0.160	0.119	0.048
DEC							
08...	0.090	0.090	0.62	0.41	0.160	0.111	0.040
JAN							
11...	0.160	0.130	0.82	0.41	0.170	0.060	<0.002
FEB							
10...	--	--	0.53	0.35	0.120	0.058	0.036
MAR							
10...	2.25	2.12	5.6	2.8	1.86	0.780	0.654
27...	0.630	--	4.6	--	1.92	--	--
27...	0.840	--	6.7	--	2.64	--	--
27...	0.860	--	5.3	--	1.92	--	--
APR							
11...	0.060	0.050	0.30	<0.20	0.130	0.087	0.020
13...	0.790	--	5.1	--	1.56	--	--
13...	0.650	--	4.0	--	1.38	--	--
13...	0.710	--	4.9	--	1.44	--	--
MAY							
07...	0.860	--	3.3	--	0.910	--	--
08...	0.390	--	1.6	--	0.380	--	--
08...	0.570	--	2.5	--	0.740	--	--
12...	0.150	0.140	0.74	<0.20	0.200	0.079	0.003
25...	0.430	--	2.0	--	0.690	--	--
25...	1.45	--	3.5	--	0.680	--	--
25...	2.89	--	6.5	--	1.38	--	--
25...	2.22	--	2.6	--	1.26	--	--
25...	1.40	--	3.6	--	1.02	--	--
26...	0.460	--	1.9	--	0.950	--	--
26...	0.970	--	3.0	--	1.84	--	--
26...	1.07	--	3.4	--	1.87	--	--
26...	1.04	--	4.7	--	1.69	--	--
27...	0.590	--	2.4	--	0.940	--	--
JUN							
06...	0.330	--	2.9	--	0.930	--	--
06...	0.930	--	3.5	--	2.11	--	--
06...	0.950	--	4.9	--	1.34	--	--
06...	0.620	--	3.9	--	1.29	--	--
07...	0.470	--	3.5	--	1.27	--	--
15...	0.140	0.110	1.3	0.74	0.220	0.130	--
27...	0.150	--	0.98	--	0.540	--	--
27...	0.220	--	1.6	--	0.700	--	--
27...	0.470	--	2.3	--	1.26	--	--
27...	0.420	--	2.2	--	0.850	--	--
28...	0.530	--	2.5	--	1.20	--	--
30...	0.670	--	2.1	--	1.04	--	--
30...	0.830	--	2.6	--	1.50	--	--
30...	0.620	--	2.8	--	1.20	--	--
JUL							
01...	0.260	--	1.4	--	0.590	--	--
07...	0.150	0.130	1.7	0.65	0.420	0.242	0.133
14...	0.900	--	5.2	--	4.50	--	--
14...	0.810	--	0.91	--	1.68	--	--
15...	0.480	--	2.8	--	1.28	--	--
AUG							
09...	0.100	0.090	1.0	0.40	0.310	0.147	0.035
17...	0.250	--	1.8	--	0.930	--	--
17...	0.920	--	4.6	--	2.77	--	--
17...	1.12	--	7.6	--	2.88	--	--
17...	0.620	--	4.8	--	2.64	--	--
17...	0.590	--	3.7	--	1.96	--	--
SEP							
15...	0.070	0.060	1.5	1.2	0.230	0.153	0.047
17...	0.440	--	1.8	--	0.310	--	--
18...	1.11	--	5.5	--	0.800	--	--
18...	1.35	--	3.8	--	1.43	--	--
18...	1.51	--	4.8	--	1.37	--	--
26...	1.10	--	8.5	--	1.08	--	--
26...	1.36	--	12	--	1.98	--	--
26...	0.940	--	9.4	--	2.16	--	--
26...	0.660	--	3.6	--	1.98	--	--
26...	0.710	--	3.4	--	1.62	--	--

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA

LOCATION.--Lat 39°59'53", Long 76°15'55", Lancaster County, Hydrologic Unit 02050306, on left bank 300 ft upstream of Long Rifle Road bridge near the intersection with Gypsy Hill Road, and 1.5 mi northeast of Willow Street.

DRAINAGE AREA.--1.77 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 292.13 ft above sea level.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.5	3.3	2.3	3.4	4.0	4.9	3.9	2.1	1.6	1.6	1.7
2	1.2	1.7	3.2	2.3	3.2	4.2	4.5	2.9	2.0	1.5	1.5	1.7
3	2.1	1.6	3.0	2.2	3.0	4.3	4.3	2.7	2.0	1.7	1.5	1.7
4	1.1	1.5	4.0	e1.9	2.8	4.1	4.2	3.2	1.9	1.6	1.4	1.6
5	1.1	1.5	62	e1.8	2.7	6.1	4.1	2.8	1.9	1.5	1.9	1.6
6	1.0	1.5	5.7	e1.7	2.8	6.1	4.2	2.7	2.2	2.1	1.3	1.6
7	1.0	1.4	4.2	e2.1	3.0	7.3	6.0	5.0	1.9	2.2	1.3	1.5
8	1.0	1.3	3.7	e2.2	2.3	13	4.0	5.4	1.8	1.5	1.2	1.5
9	1.0	1.3	3.3	e1.9	2.1	7.8	4.0	3.2	1.7	1.6	1.2	1.4
10	1.0	1.3	3.6	e1.7	2.0	51	4.8	2.9	1.6	1.4	1.1	1.4
11	.97	1.3	3.2	e1.8	2.1	15	3.9	2.7	1.8	1.4	1.1	1.4
12	5.2	1.3	2.8	e2.1	1.9	13	3.7	3.7	23	1.4	1.6	1.3
13	1.6	1.6	2.7	e2.3	1.9	21	9.0	2.6	3.7	1.4	1.1	1.2
14	1.3	1.4	2.7	e2.5	1.9	33	5.0	2.5	2.2	24	2.0	1.2
15	1.2	1.3	2.7	e2.1	1.9	23	4.2	2.5	2.0	3.5	1.3	1.2
16	1.2	1.2	2.6	e1.8	2.0	12	4.9	2.8	1.9	2.0	1.2	1.1
17	1.2	1.5	2.4	e1.8	2.0	8.8	3.9	2.4	1.8	1.8	27	1.5
18	1.2	1.4	2.4	e1.9	2.2	7.2	3.7	2.4	1.7	2.6	3.1	3.2
19	1.1	1.3	2.6	e1.6	3.3	7.5	3.6	2.4	2.0	1.7	2.1	1.1
20	2.6	1.2	2.4	e1.5	8.2	13	3.5	2.5	1.7	1.6	1.8	1.0
21	2.1	1.2	9.2	e1.4	29	23	3.5	2.3	1.7	1.6	3.2	.99
22	1.5	1.2	3.5	e1.3	13	15	3.4	2.2	1.6	2.0	13	3.5
23	1.4	1.2	3.1	e1.2	8.4	8.0	3.5	2.3	1.5	2.7	3.2	1.9
24	1.3	1.2	2.9	e1.1	14	6.1	3.5	2.2	1.6	1.7	2.4	1.2
25	1.2	1.2	2.7	e1.1	7.3	5.5	3.4	3.7	1.5	1.6	2.2	1.1
26	1.2	1.2	2.6	e1.5	5.0	4.7	3.2	5.5	1.4	3.0	3.4	42
27	1.2	4.0	2.4	e2.2	4.4	13	3.3	2.8	3.0	5.0	2.1	3.8
28	1.2	43	2.4	e35	4.2	12	3.1	2.3	1.9	4.2	1.9	2.3
29	1.2	4.6	2.4	11	---	14	3.4	2.2	2.1	2.0	2.3	1.9
30	3.5	3.7	2.3	4.7	---	6.6	3.2	2.2	2.4	1.8	1.9	1.7
31	3.8	---	2.2	3.7	---	5.6	---	2.1	---	1.7	1.8	---
TOTAL	48.77	91.6	158.2	103.7	140.0	374.9	123.9	91.0	79.6	85.4	93.7	90.29
MEAN	1.57	3.05	5.10	3.35	5.00	12.1	4.13	2.94	2.65	2.75	3.02	3.01
MAX	5.2	43	62	35	29	51	9.0	5.5	23	24	27	42
MIN	.97	1.2	2.2	1.1	1.9	4.0	3.1	2.1	1.4	1.4	1.1	.99
CFSM	.89	1.73	2.88	1.89	2.82	6.83	2.33	1.66	1.50	1.56	1.71	1.70
IN.	1.02	1.93	3.32	2.18	2.94	7.88	2.60	1.91	1.67	1.79	1.97	1.90

SUMMARY STATISTICS

FOR 1994 WATER YEAR

ANNUAL TOTAL	1481.06	
ANNUAL MEAN	4.06	
HIGHEST DAILY MEAN	62	Dec 5
LOWEST DAILY MEAN	.97	Oct 11
ANNUAL SEVEN-DAY MINIMUM	1.0	Oct 5
INSTANTANEOUS PEAK FLOW	357	Sep 26
INSTANTANEOUS PEAK STAGE	7.48	Sep 26
INSTANTANEOUS LOW FLOW	0.97	Oct 10 ^a
ANNUAL RUNOFF (CFSM)	2.29	
ANNUAL RUNOFF (INCHES)	31.13	
10 PERCENT EXCEEDS	7.2	
50 PERCENT EXCEEDS	2.2	
90 PERCENT EXCEEDS	1.2	

^a Also Oct. 11,12; Sept. 20-22,26

^e Estimated.

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1993 to current year.

INSTRUMENTATION.--Automatic pumping sampler for stormflow, nutrient and sediment samples since December 1993.

REMARKS.--Fixed-time, baseflow, and stormflow samples collected at streamflow control. Constituent values for stormflow water-quality are for discharge-weighted composited samples. Samples with two dates are composited samples; sample time is the composite start time, discharge is the mean for the composited period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 29...	1400	1028	1028	2.2	589	7.2	19.0	--	--	--
JUL 06...	0830	1028	1028	--	--	--	--	--	K48000	8500
21...	1000	1028	80020	1.2	685	8.0	16.0	--	--	--
AUG 03...	1015	1028	80020	1.0	678	7.9	16.5	--	--	--
18...	1130	1028	1028	1.1	671	--	18.5	--	--	--
SEP 07...	0937	1028	1028	0.82	692	--	15.5	--	--	--
22...	1030	1028	80020	0.91	701	8.1	15.0	8.9	--	--

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)
JUN 29...	0.040	10.0	0.030	0.30	0.20	0.040	0.030	0.030	--
JUL 06...	--	--	--	--	--	--	--	--	--
21...	0.030	12.0	0.050	0.30	<0.20	0.050	0.040	0.020	7
AUG 03...	0.030	12.0	0.030	<0.20	<0.20	0.010	<0.010	0.010	86
18...	0.030	11.0	0.050	<0.20	<0.20	0.030	0.030	0.010	55
SEP 07...	0.020	11.0	0.040	<0.20	<0.20	0.030	0.020	0.020	7
22...	0.020	11.0	0.040	0.20	0.20	0.040	0.040	0.030	2

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE (MEAN) (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
03...	0100	1028	1028	--	7.9	--	--	--	--	--	--
03...	0145	1028	1028	--	7.1	--	--	--	--	--	--
03...	0230	1028	1028	--	6.5	--	--	--	--	--	--
18...	1100	1028	80020	--	1.2	703	8.0	14.0	9.6	9400	K2800
18...	1101	1028	80020	--	1.2	--	--	--	--	--	--
30...	1545	1028	80020	--	5.5	--	--	--	--	--	--
30...	1600	1028	1028	--	6.0	--	--	--	--	--	--
30...	1715	1028	1028	--	11	--	--	--	--	--	--
30...	1730	1028	1028	--	11	--	--	--	--	--	--
30...	2000	1028	1028	--	6.3	--	--	--	--	--	--
30...	2015	1028	80020	--	6.0	--	--	--	--	--	--
31...	1945	1028	80020	--	5.5	--	--	--	--	--	--
31...	2000	1028	1028	--	5.5	--	--	--	--	--	--
NOV											
15...	1020	1028	80020	--	1.3	700	8.2	14.0	12.5	--	--
DEC											
05...	0045	1028	1028	--	39	--	--	--	--	--	--
05...	0330	1028	1028	--	44	--	--	--	--	--	--
05...	0500	1028	1028	--	87	--	--	--	--	--	--
05...	0730	1028	1028	--	157	--	--	--	--	--	--
05...	0930	1028	1028	--	161	--	--	--	--	--	--
05...	1030	1028	1028	--	112	--	--	--	--	--	--
05...	1230	1028	1028	--	64	--	--	--	--	--	--
05...	1930	1028	1028	--	12	--	--	--	--	--	--
14...	1126	1028	80020	--	2.8	476	7.9	8.5	10.5	K2000	K 870
DEC											
21-21	0322	1028	80020	13	--	--	--	--	--	--	--
JAN											
24...	1140	1028	80020	--	e1.1	866	8.4	7.5	13.2	K 540	K3400
24...	1141	1028	80020	--	e1.1	866	8.4	7.5	13.2	--	--
FEB											
16...	0900	1028	80020	--	1.7	760	8.5	5.0	12.6	K1200	8000
MAR											
08...	1030	1028	80020	--	12	371	7.8	3.5	11.5	5500	>25000
08...	1031	1028	80020	--	12	--	--	--	--	--	>25000
MAR											
10-10	0530	1028	80020	80	--	--	--	--	--	--	--
MAR											
14-14	1230	1028	80020	64	--	--	--	--	--	--	--
14...	1315	1028	80020	--	66	--	--	--	--	--	--
15...	1215	1028	1028	--	31	--	--	--	--	--	--
MAR											
21-22	1730	1028	80020	70	--	--	--	--	--	--	--
MAR											
27-27	0945	1028	80020	47	--	--	--	--	--	--	--
APR											
12...	1230	1028	80020	--	3.8	684	8.2	10.5	13.6	--	--
APR											
13-13	1115	1028	80020	15	--	--	--	--	--	--	--
26...	1020	1028	80020	--	3.2	685	8.3	13.5	13.2	--	1900
MAY											
02...	1005	1028	80020	--	3.0	688	--	--	--	--	--
10...	1025	1028	80020	--	2.9	694	8.0	13.5	10.1	--	--
12...	0940	1028	80020	--	4.2	696	7.9	12.5	9.4	--	6800
12...	0941	1028	80020	--	4.2	--	--	--	--	--	--
23...	0930	1028	80020	--	2.4	704	7.9	15.5	10.0	--	--
MAY											
25-25	1737	1028	80020	9.5	--	--	--	--	--	--	--
MAY											
26-26	1707	1028	80020	17	--	--	--	--	--	--	--
JUN											
01...	0930	1028	80020	--	2.1	681	7.9	15.5	9.8	--	1900
10...	0910	1028	80020	--	1.7	694	7.9	14.0	10.6	--	--
10...	0911	1028	80020	--	1.7	--	--	--	--	--	--
21...	0950	1028	80020	--	1.7	683	7.9	15.5	9.7	--	--
JUN											
27-27	1453	1028	80020	7.1	--	--	--	--	--	--	--
JUN											
27-27	1738	1028	80020	8.5	--	--	--	--	--	--	--

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT									
03...	--	--	--	--	--	--	--	--	358
03...	--	--	--	--	--	--	--	--	217
03...	--	--	--	--	--	--	--	--	74
18...	0.030	9.40	0.060	0.50	0.80	0.070	0.030	0.030	72
18...	0.030	9.30	0.050	0.50	0.40	0.070	0.030	0.030	--
30...	0.050	4.40	0.300	2.1	1.1	0.390	0.140	0.130	--
30...	--	--	--	--	--	--	--	--	102
30...	--	--	--	--	--	--	--	--	163
30...	0.040	2.40	0.350	2.4	1.5	0.610	0.270	0.240	--
30...	--	--	--	--	--	--	--	--	39
30...	0.060	4.30	0.160	1.3	0.80	0.320	0.180	0.170	--
31...	0.040	4.10	0.280	1.7	1.0	0.420	0.230	0.200	--
31...	--	--	--	--	--	--	--	--	29
NOV									
15...	0.030	9.80	0.020	<0.20	<0.20	0.040	0.030	0.030	65
DEC									
05...	--	--	--	--	--	--	--	--	208
05...	--	--	--	--	--	--	--	--	486
05...	--	--	--	--	--	--	--	--	712
05...	--	--	--	--	--	--	--	--	1510
05...	--	--	--	--	--	--	--	--	1080
05...	--	--	--	--	--	--	--	--	613
05...	--	--	--	--	--	--	--	--	367
05...	--	--	--	--	--	--	--	--	218
14...	0.030	11.0	0.040	<0.20	0.20	0.040	0.030	0.040	88
DEC									
21-21	0.030	4.90	0.810	3.5	1.5	1.20	0.340	0.320	488
JAN									
24...	0.040	11.0	0.080	1.0	0.90	0.060	0.020	0.010	26
24...	0.040	11.0	0.080	1.0	0.90	0.040	0.020	0.010	--
FEB									
16...	0.070	11.0	0.060	0.30	0.60	0.060	0.030	0.020	75
MAR									
08...	0.040	4.40	1.60	3.8	3.1	0.680	0.500	0.420	61
08...	0.040	4.50	1.60	4.3	3.2	0.760	0.520	0.430	--
MAR									
10-10	0.030	1.50	1.30	5.0	2.2	1.40	0.350	0.300	1150
MAR									
14-14	0.020	1.20	1.30	2.8	2.3	0.780	0.640	0.560	1100
14...	0.030	1.20	0.750	--	1.6	--	0.550	0.490	--
15...	--	--	--	--	--	--	--	--	599
MAR									
21-22	0.040	2.30	1.10	3.7	2.0	1.40	0.460	0.410	1380
MAR									
27-27	0.050	3.50	0.490	2.5	1.4	0.870	0.310	0.270	2110
APR									
12...	0.030	10.0	0.040	0.20	<0.20	0.020	<0.010	0.010	10
APR									
13-13	0.060	5.20	0.320	4.0	1.1	1.10	0.230	0.230	609
26...	0.040	10.0	0.030	0.30	0.20	0.020	0.020	<0.010	93
MAY									
02...	0.030	8.80	0.050	0.40	0.30	0.080	0.020	0.010	120
10...	0.050	11.0	0.070	0.40	0.30	0.070	0.040	0.030	66
12...	0.050	9.10	0.070	0.60	0.30	0.080	0.030	0.030	82
12...	0.050	9.00	0.080	0.70	0.30	0.090	0.030	0.030	109
23...	0.050	11.0	0.040	0.30	<0.20	0.040	0.020	0.020	93
MAY									
25-25	0.100	3.90	0.380	2.3	0.90	0.570	0.140	0.110	687
MAY									
26-26	0.090	3.80	0.600	1.9	1.3	0.520	0.220	0.150	2040
JUN									
01...	0.040	10.0	0.050	0.30	<0.20	0.040	0.020	<0.010	16
10...	<0.010	11.0	0.020	0.20	<0.20	0.030	0.020	0.020	61
10...	0.040	10.0	0.030	0.20	0.20	0.040	0.020	0.030	69
21...	0.040	10.0	0.020	0.40	0.30	0.080	0.020	0.030	18
JUN									
27-27	0.080	8.30	0.060	1.2	0.50	0.570	0.100	0.090	374
JUN									
27-27	0.080	3.90	0.140	2.6	0.80	0.810	0.200	0.160	395

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE (MEAN) (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN--Con't										
30-30	1753	1028	80020	8.7	--	--	--	--	--	--
JUL										
01...	0905	1028	80020	--	1.7	669	7.8	16.0	9.5	--
JUL										
06-07	2138	1028	80020	7.5	--	--	--	--	--	--
11...	1015	1028	80020	--	1.4	672	8.0	17.0	10.1	2900
JUL										
14-15	1708	1028	80020	67	--	--	--	--	--	--
21...	1015	1028	80020	--	1.5	671	7.9	19.0	10.2	--
JUL										
23-23	1222	1028	80020	11	--	--	--	--	--	--
JUL										
26-26	1438	1028	80020	14	--	--	--	--	--	--
JUL										
27-28	2108	1028	80020	22	--	--	--	--	--	--
AUG										
01...	1000	1028	80020	--	1.7	693	7.9	16.0	8.6	--
10...	1015	1028	80020	--	1.1	688	7.9	15.0	9.3	5200
AUG										
17-17	1222	1028	80020	73	--	--	--	--	--	--
19...	0930	1028	80020	--	2.1	682	7.8	16.0	8.4	--
AUG										
21-21	1837	1028	80020	9.2	--	--	--	--	--	--
AUG										
22-22	0222	1028	80020	22	--	--	--	--	--	--
30...	1130	1028	80020	--	1.9	680	8.0	17.5	10.7	--
SEP										
09...	1010	1028	80020	--	1.5	749	8.0	14.5	10.7	--
09...	1011	1028	80020	--	1.5	--	--	--	--	--
14...	0930	1028	80020	--	1.2	697	7.9	14.5	10.8	--
SEP										
18-18	0152	1028	80020	13	--	--	--	--	--	--
19...	1050	1028	80020	--	1.1	697	7.9	15.0	9.0	5900
SEP										
22-23	1737	1028	80020	10	--	--	--	--	--	--
SEP										
26-26	0738	1028	80020	102	--	--	--	--	--	--
SEP										
26-26	1508	1028	80020	40	40	--	--	--	--	--
29...	1325	1028	80020	--	1.9	709	7.9	16.0	8.8	--

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)
JUN--Con't 30-30	0.040	5.20	0.190	1.9	0.60	0.750	0.140	0.110	602
JUL 01...	0.030	10.0	0.050	0.30	<0.20	0.040	0.020	0.020	100
JUL 06-07	0.080	3.90	0.400	2.9	1.3	0.570	0.160	0.140	236
JUL 11...	0.060	10.0	0.100	0.60	0.40	0.140	0.050	0.040	73
JUL 14-15	0.070	1.90	0.220	4.0	1.1	3.60	0.470	0.420	2220
JUL 21...	0.050	9.30	0.060	0.60	0.50	0.100	0.050	0.050	119
JUL 23-23	0.170	4.20	0.330	2.0	0.90	0.970	0.350	0.330	401
JUL 26-26	0.160	2.70	0.300	1.2	0.70	0.490	0.290	0.290	733
JUL 27-28	0.090	2.70	0.310	2.5	1.0	0.840	0.410	0.380	323
AUG 01...	0.030	10.0	0.050	0.30	<0.20	0.070	0.030	0.030	19
AUG 10...	0.030	11.0	0.040	<0.20	<0.20	0.040	0.020	0.020	107
AUG 17-17	0.050	1.50	0.220	3.1	0.90	2.00	0.690	0.610	885
AUG 19...	0.020	9.80	0.040	0.30	0.20	0.090	0.060	0.050	123
AUG 21-21	0.040	3.70	0.090	1.5	0.50	0.540	0.240	0.200	164
AUG 22-22	0.050	2.60	0.150	2.2	1.0	1.10	0.700	0.610	200
AUG 30...	0.020	9.40	0.030	<0.20	<0.20	0.040	0.040	0.030	21
SEP 09...	0.020	10.0	0.020	<0.20	<0.20	0.020	0.010	0.010	91
SEP 09...	0.020	10.0	0.020	<0.20	<0.20	0.030	0.020	0.010	44
SEP 14...	0.030	10.0	0.030	<0.20	0.30	0.030	0.020	0.020	--
SEP 18-18	0.100	3.00	0.390	2.3	1.1	0.700	0.390	0.360	388
SEP 19...	0.030	11.0	0.080	1.1	0.90	0.210	0.140	0.140	86
SEP 22-23	0.070	3.00	0.120	1.3	0.60	0.440	0.250	0.240	162
SEP 26-26	0.060	1.50	0.440	3.3	1.0	1.80	0.730	0.720	1360
SEP 26-26	0.050	1.90	0.290	3.0	1.0	1.70	0.760	0.770	703
SEP 29...	0.020	8.20	0.040	0.30	<0.20	0.110	0.070	0.060	6

CONESTOGA RIVER BASIN

01576525 SOUTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA

LOCATION.--Lat 39°59'23", long 76°14'55", Lancaster County, Hydrologic Unit 02050306, 40 ft above culvert at SR 741, and 0.5 mi west of Lampeter.

DRAINAGE AREA.--0.33 mi².

PERIOD OF RECORD.--June 1993 to current year.

REMARKS.--Land surface elevation is 361 ft, from topographic map.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 15...	1045	1028	80020	--	561	7.1	14.5	9.0	1900	<1
JUL 06...	0945	1028	1028	--	--	--	--	--	2200	4000
AUG 03...	1103	1028	80020	0.27	521	7.3	15.0	--	--	--
18...	1410	1028	80020	0.21	520	--	16.0	--	--	--
SEP 07...	1105	1028	80020	0.20	--	--	16.5	--	--	--
22...	1305	1028	80020	0.13	513	7.9	13.0	7.8	--	--

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
JUN 15...	0.090	10.0	0.090	0.80	0.80	0.120	0.140	0.050	--
JUL 06...	--	--	--	--	--	--	--	--	--
AUG 03...	0.030	12.0	0.050	0.30	<0.20	0.060	0.040	0.040	26
18...	0.020	11.0	0.040	0.40	0.20	0.050	0.020	0.010	15
SEP 07...	0.020	12.0	0.070	10	2.1	0.050	0.060	0.030	85
22...	<0.010	12.0	0.020	0.30	0.30	0.050	0.040	0.020	13

CONESTOGA RIVER BASIN

01576525 SOUTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT										
18...	1135	1028	80020	0.16	462	7.6	12.5	11.5	650	1600
NOV										
15...	1130	1028	80020	0.18	597	7.6	13.0	8.5	--	--
15...	1131	1028	80020	0.18	--	--	--	--	--	--
DEC										
14...	1315	1028	80020	0.54	623	7.7	8.5	9.3	K 50	<1
JAN										
24...	1245	1028	80020	--	680	7.9	8.0	10.2	K 25	K 25
FEB										
16...	1025	1028	80020	0.38	632	7.8	8.0	10.7	K 50	K 200
MAR										
08...	1215	1028	80020	0.90	464	7.6	4.0	11.1	--	>5000
APR										
12...	1050	1028	80020	0.69	558	7.6	11.0	10.3	--	--
26...	1150	1028	80020	0.65	525	7.7	13.5	9.8	--	180
MAY										
02...	1115	1028	80020	0.56	549	--	--	--	--	--
12...	1055	1028	80020	0.51	--	--	--	--	--	1000
23...	1200	1028	80020	0.41	562	7.5	13.0	8.3	--	--
23...	1201	1028	80020	0.41	--	--	--	--	--	--
JUN										
01...	1115	1028	80020	0.46	541	7.5	13.0	8.3	--	840
10...	1050	1028	80020	0.38	526	7.6	13.5	10.7	--	--
21...	1120	1028	80020	0.38	521	7.5	14.5	9.2	--	--
JUL										
01...	1140	1028	80020	0.28	521	7.6	15.0	8.5	--	--
11...	1130	1028	80020	0.29	514	7.6	14.5	8.6	--	4600
21...	1115	1028	80020	0.26	509	7.6	15.5	9.1	--	--
AUG										
01...	1100	1028	80020	0.28	528	7.6	15.0	7.9	--	--
10...	1150	1028	80020	0.21	524	7.6	14.5	8.4	--	720
19...	1050	1028	80020	0.39	535	7.6	15.0	7.7	--	--
30...	1200	1028	80020	0.29	541	7.7	14.5	8.5	--	--
SEP										
09...	1100	1028	80020	0.35	579	7.7	14.0	9.2	--	--
19...	1210	1028	80020	0.27	539	7.5	13.5	7.3	--	--
29...	1230	1028	80020	0.33	585	7.4	13.5	7.9	--	--

CONESTOGA RIVER BASIN

01576525 SOUTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT									
18...	0.030	11.0	0.040	0.40	0.20	0.080	0.020	<0.010	22
NOV									
15...	0.030	12.0	0.040	0.30	0.30	0.030	0.010	0.010	26
15...	0.030	12.0	0.040	0.20	0.20	0.020	<0.010	0.010	--
DEC									
14...	0.050	14.0	0.070	0.30	0.30	0.020	0.020	0.020	40
JAN									
24...	0.030	14.0	0.030	0.20	<0.20	0.030	<0.010	<0.010	8
FEB									
16...	0.050	13.0	0.040	<0.20	<0.20	0.030	0.010	<0.010	10
MAR									
08...	0.030	6.30	0.900	2.2	1.7	0.340	0.150	0.140	89
APR									
12...	0.040	12.0	0.030	0.30	0.20	0.020	0.010	0.010	9
26...	0.040	12.0	0.030	0.20	<0.20	0.020	<0.010	<0.010	30
MAY									
02...	0.040	11.0	0.040	0.20	<0.20	0.030	<0.010	<0.010	49
12...	0.050	12.0	0.040	0.50	0.20	0.030	<0.010	<0.010	7
23...	0.050	13.0	0.030	0.20	<0.20	0.020	0.010	0.020	51
23...	0.050	13.0	0.040	0.20	<0.20	0.050	<0.010	0.020	--
JUN									
01...	0.040	12.0	0.040	0.20	0.20	0.020	0.010	<0.010	9
10...	0.070	9.90	0.030	0.30	0.30	0.040	0.010	0.020	9
21...	0.050	11.0	0.030	0.20	<0.20	0.040	0.040	0.050	12
JUL									
01...	0.090	11.0	0.040	0.50	0.30	0.060	0.030	<0.010	17
11...	0.040	11.0	0.020	0.30	<0.20	0.040	0.010	0.010	13
21...	0.040	11.0	0.040	0.30	<0.20	0.050	0.020	0.020	19
AUG									
01...	0.050	10.0	0.050	0.40	0.20	0.070	0.040	0.030	16
10...	0.030	12.0	0.050	<0.20	<0.20	0.030	0.020	0.010	14
19...	0.040	11.0	0.070	0.40	0.20	0.070	0.020	0.020	17
30...	0.030	12.0	0.030	0.20	<0.20	0.040	0.030	0.020	15
SEP									
09...	0.030	11.0	0.020	<0.20	<0.20	0.030	<0.010	0.010	20
19...	0.020	12.0	0.050	0.20	<0.20	0.050	0.030	0.030	--
29...	0.050	10.0	0.040	0.40	<0.20	0.070	0.030	0.020	20

CONESTOGA RIVER BASIN

01576526 NORTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR WILLOW STREET, PA

LOCATION.--Lat 39°59'44", long 76°15'06", Lancaster County, Hydrologic Unit 02050306, 0.2 mi north of culvert on SR 741, 0.5 mi northwest of Lampeter, and 1.5 mi northwest of Willow Street.

DRAINAGE AREA.--1.13 mi².

PERIOD OF RECORD.--September 1993 to current year.

REMARKS.--Land surface elevation is 335 ft, from topographic map.

WATER-QUALITY DATA, WATER YEAR SEPTEMBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE NUMBER (CODE (00027)	AGENCY ANA- LYZING SAMPLE NUMBER (CODE (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
SEP 24, 1993	1145	1028	80020	--	617	7.6	17.0	8.9	0.070
MAY 10, 1994	1455	1028	80020	1.2	608	8.0	15.5	10.8	0.040
SEP 14, 1994	1245	1028	80020	0.52	644	7.7	19.5	10.4	0.050

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
SEP 24, 1993	11.0	0.070	0.30	0.30	0.070	0.060	0.050	92
MAY 10, 1994	11.0	0.040	0.30	0.30	0.040	0.010	<0.010	85
SEP 14, 1994	11.0	0.050	0.50	0.40	0.050	0.040	0.030	--

CONESTOGA RIVER BASIN

01576527 NORTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA

LOCATION.--Lat 39°59'47", long 76°14'59", Lancaster County, Hydrologic unit 02050306, on right bank 30 ft upstream of box culvert on Mentzer Road, and 0.5 mi northwest of Lampeter.
DRAINAGE AREA.--0.36 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1993 to current year.

GAGE.--Water-stage recorder and wooden weir control. Datum of gage is 350.66 ft above sea level.

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

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 127 ft³/s, Nov. 28, gage height, 3.98 ft; minimum, 0.03 ft³/s, July 13, gage height, 0.96 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e.50	.88	.34	.29	.46	.74	e.25	e.30	.08	.13	.13
2	---	e.32	.75	.34	.23	.66	.66	e.20	e.26	.07	.11	.13
3	---	e.30	.73	.33	.20	e1.2	.72	e.20	e.24	.06	.11	.12
4	---	e.28	1.6	.39	.23	.47	.63	e.20	e.24	.06	.10	.11
5	---	.26	19	.23	e.22	.82	.52	e.20	e.24	.06	.21	.11
6	---	.19	2.6	.26	e.20	e.92	.54	e.18	e.28	.33	.09	.10
7	---	.16	1.7	e.26	e.20	1.1	1.1	e.55	e.25	.16	.08	.10
8	---	.13	1.3	e.30	e.20	2.1	.51	e.65	e.21	.09	.08	.10
9	---	.12	1.1	e.26	e.20	1.2	.51	e.45	e.18	.08	.08	.09
10	---	.13	1.3	e.24	.19	6.3	.71	e.40	e.17	.07	.07	.09
11	---	.13	1.0	e.23	.17	e2.8	.47	e.36	e.19	.05	.06	.09
12	---	.12	.83	e.25	.16	e3.0	.38	e.37	e4.2	.04	.10	.09
13	---	.31	.72	e.28	.16	e4.2	2.8	e.34	e.59	.03	.07	.09
14	---	.17	.68	e.25	.20	e5.8	.58	e.30	.14	6.5	.27	.08
15	---	.12	.65	e.22	.22	e4.5	.30	e.27	.12	.34	.10	.08
16	---	.10	.53	e.20	.25	e2.8	.43	e.24	.12	.18	.07	.09
17	---	.22	.49	e.18	.21	e2.1	.36	e.21	.13	.15	5.6	.17
18	---	.15	.49	e.28	e.21	e1.4	.38	e.18	.12	.25	.39	.40
19	---	.12	.57	e.20	e.21	e1.5	.42	.16	.12	.14	.18	.09
20	---	.13	.47	e.18	e.45	e3.2	.31	.19	.12	.13	.15	.08
21	---	.11	3.9	e.16	e2.7	e4.2	.29	.15	.10	.17	.48	.08
22	---	.11	1.1	e.15	2.9	e3.7	.27	.14	.10	.26	6.1	.61
23	---	.11	.90	e.12	1.9	e1.9	.25	.13	.10	.50	.47	.16
24	---	.12	.73	e.10	2.7	1.2	.26	.14	.08	.10	.29	.10
25	---	.11	.72	e.10	1.4	.97	e.22	.50	.08	.10	.24	.09
26	---	.12	.61	e.12	.86	.69	e.22	.64	.08	.48	.34	9.5
27	---	1.4	.53	e.20	.69	3.6	e.22	e.25	.23	1.1	.20	.54
28	---	14	.49	e.95	.53	3.9	e.20	e.19	.13	.68	.17	.28
29	---	1.7	.46	e.70	---	4.7	e.20	e.16	.09	.20	.24	.21
30	---	1.1	.34	.67	---	1.1	e.20	e.14	.27	.16	.15	.18
31	---	---	.32	.41	---	.76	---	e.14	---	.13	.14	---
TOTAL	---	22.84	47.49	8.90	18.08	73.25	15.40	8.48	9.48	12.75	16.87	14.09
MEAN	---	.76	1.53	.29	.65	2.36	.51	.27	.32	.41	.54	.47
MAX	---	.14	.19	.95	2.9	6.3	2.8	.65	4.2	6.5	6.1	9.5
MIN	---	.10	.32	.10	.16	.46	.20	.13	.08	.03	.06	.08
CFSM	---	2.11	4.26	.80	1.79	6.56	1.43	.76	.88	1.14	1.51	1.30
IN.	---	2.36	4.91	.92	1.87	7.57	1.59	.88	.98	1.32	1.74	1.46

e Estimated.

CONESTOGA RIVER BASIN

01576527 NORTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1993 to current year.

INSTRUMENTATION.--Automatic pumping sampler since March 94.

REMARKS.--Fixed-time, baseflow, and stormflow samples collected at streamflow control. Constituent values for stormflow water-quality are for discharge-weighted composite samples. Samples with two dates are composited samples; sample time is the composite start time, discharge is the mean for the composited period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 15...	1400	1028	1028	0.10	790	7.5	27.0	6.3	--	--
JUL 06...	0920	1028	1028	--	--	--	--	--	K49000	16000
21...	1305	1028	80020	0.03	680	8.0	25.5	--	--	--
AUG 18...	1430	1028	80020	--	633	--	28.0	--	--	--
SEP 07...	1020	1028	80020	--	--	--	23.5	--	--	--

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)
JUN 15...	--	--	--	--	--	--	--	--	--
JUL 06...	--	--	--	--	--	--	--	--	--
21...	0.310	12.0	0.200	1.3	1.2	0.210	0.160	0.110	63
AUG 18...	0.140	7.50	0.110	0.50	0.50	0.110	0.100	0.080	3
SEP 07...	0.420	9.60	0.730	1.7	1.7	0.200	0.130	0.110	21

CONESTOGA RIVER BASIN

01576527 NORTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE (MEAN) (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
18...	1225	1028	80020	--	0.12	765	7.4	19.0	6.8	62000	11000
NOV											
15...	1055	1028	80020	--	0.11	797	7.4	17.5	5.8	--	--
DEC											
14...	1220	1028	80020	--	0.65	783	7.9	9.5	9.4	12000	17000
JAN											
24...	1220	1028	80020	--	0.10	742	8.2	0.5	13.9	K 1000	20000
FEB											
16...	0930	1028	80020	--	0.25	736	8.1	2.0	15.8	K 200	0
MAR											
08...	1140	1028	80020	--	2.1	275	7.7	2.5	12.1	470	>25000
MAR											
27-27	0900	1028	80020	14	--	--	--	--	--	--	--
APR											
12...	1115	1028	80020	--	0.43	700	8.2	9.0	13.9	--	--
APR											
13-13	1015	1028	80020	3.8	--	--	--	--	--	--	--
26...	1120	1028	80020	--	0.25	712	8.2	17.5	12.2	--	K 240
26...	1121	1028	80020	--	0.25	--	--	--	--	--	--
MAY											
02...	1035	1028	80020	--	0.20	708	--	--	--	--	--
02...	1036	1028	80020	--	0.20	--	--	--	--	--	--
12...	1005	1028	80020	--	0.37	655	8.0	15.0	11.4	--	4000
23...	1050	1028	80020	--	0.13	692	8.3	20.5	17.3	--	--
MAY											
25-25	1737	1028	80020	1.7	--	--	--	--	--	--	--
MAY											
26-26	1707	1028	80020	2.0	--	--	--	--	--	--	--
JUN											
01...	1030	1028	80020	--	0.30	697	8.3	21.5	14.4	--	4700
07...	1350	1028	80020	--	0.25	--	--	--	--	--	--
10...	1015	1028	80020	--	0.17	732	8.3	19.0	14.8	--	--
21...	1050	1028	80020	--	0.10	746	7.9	19.5	10.1	--	--
JUN											
27-27	1522	1028	80020	0.61	--	--	--	--	--	--	--
JUN											
27-27	1822	1028	80020	1.1	--	--	--	--	--	--	--
JUN											
30-30	1753	1028	80020	1.8	--	--	--	--	--	--	--
JUL											
01...	1040	1028	80020	--	0.09	661	7.9	23.5	10.3	--	--
JUL											
06-07	2112	1028	80020	1.4	--	--	--	--	--	--	--
11...	1055	1028	80020	--	0.05	687	8.2	25.5	12.6	--	4100
13...	1305	1028	80020	--	0.03	--	--	--	--	--	--
JUL											
14-15	1658	1028	80020	23	--	--	--	--	--	--	--
21...	1200	1028	80020	--	0.17	688	8.1	28.0	12.3	--	--
JUL											
23-23	1145	1028	80020	2.2	--	--	--	--	--	--	--
JUL											
27-28	2057	1028	80020	8.9	8.9	--	--	--	--	--	--
AUG											
01...	1145	1028	80020	--	0.14	720	8.1	24.0	10.9	--	--
09...	1020	1028	80020	--	0.08	--	--	--	--	--	--
10...	1115	1028	80020	--	0.06	752	8.0	22.5	10.7	--	4900
AUG											
17-17	1227	1028	80020	18	--	--	--	--	--	--	--
19...	1020	1028	80020	--	0.18	714	7.8	20.0	8.2	--	--
AUG											
21-21	1847	1028	80020	1.9	--	--	--	--	--	--	--
AUG											
22-22	0223	1028	80020	15	--	--	--	--	--	--	--
30...	1245	1028	80020	--	0.15	722	8.0	21.5	11.4	--	--
SEP											
09...	1145	1028	80020	--	0.10	820	8.0	20.5	10.3	--	--
12...	1425	1028	80020	--	0.09	773	8.0	21.5	11.1	--	--
SEP											
18-18	0205	1028	80020	1.6	--	--	--	--	--	--	--
19...	1130	1028	80020	--	0.09	739	7.8	19.5	7.9	--	2000
SEP											
22-22	1753	1028	80020	2.1	--	--	--	--	--	--	--
SEP											
26-26	0747	1028	80020	26	--	--	--	--	--	--	--
29...	1248	1028	80020	--	0.21	763	7.8	17.5	7.9	--	--

CONESTOGA RIVER BASIN

01576527 NORTH FORK UNNAMED TRIBUTARY TO BIG SPRING RUN AT LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	ALKA- LITY, CARBON- ATE IT-LAB (MG/L - CAC03) (90430)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT										
18...	--	0.080	11.0	0.130	1.1	0.80	0.140	0.060	0.060	56
NOV										
15...	--	0.190	10.0	1.20	15	9.4	1.80	0.290	0.270	214
DEC										
14...	--	0.040	15.0	0.150	3.2	2.6	0.230	0.050	0.060	121
JAN										
24...	--	0.030	14.0	0.080	1.4	0.80	0.200	0.010	0.010	190
FEB										
16...	--	0.100	15.0	0.050	0.30	0.50	0.020	0.020	<0.010	29
MAR										
08...	--	0.040	3.80	0.820	2.4	1.9	0.600	0.470	0.400	38
MAR										
27-27	--	0.040	2.30	0.480	2.2	1.6	0.670	0.330	0.270	1270
APR										
12...	--	0.030	14.0	0.040	0.40	<0.20	0.020	<0.010	<0.010	58
APR										
13-13	--	0.050	4.10	0.180	3.4	0.90	0.940	0.190	0.170	538
26...	--	0.040	13.0	0.030	0.20	<0.20	0.010	<0.010	<0.010	92
26...	--	0.040	13.0	0.030	0.30	<0.20	0.010	0.010	<0.010	112
MAY										
02...	--	0.040	13.0	0.040	<0.20	0.20	0.010	0.020	<0.010	96
02...	--	0.040	12.0	0.040	0.20	<0.20	0.030	<0.010	<0.010	--
12...	--	0.050	13.0	0.030	0.50	0.40	0.030	0.040	<0.010	30
23...	--	0.040	12.0	0.030	0.30	0.20	0.010	<0.010	<0.010	57
MAY										
25-25	--	0.080	4.60	0.250	2.4	0.70	0.680	0.030	<0.010	881
MAY										
26-26	--	0.180	5.40	0.170	1.6	0.90	0.240	0.010	<0.010	752
JUN										
01...	--	0.030	12.0	0.040	0.30	0.20	<0.010	<0.010	<0.010	101
07...	109	0.120	11.0	0.170	--	2.7	--	0.020	0.020	--
10...	--	0.090	11.0	0.030	0.50	0.30	0.020	<0.010	<0.010	35
21...	--	0.060	11.0	0.030	0.30	0.20	0.030	<0.010	0.010	1
JUN										
27-27	--	0.590	2.90	1.70	8.1	3.1	1.50	0.100	0.060	--
JUN										
27-27	--	0.130	8.60	0.130	1.2	1.0	0.160	0.090	0.070	3460
JUN										
30-30	--	0.350	2.70	0.220	8.3	0.60	2.10	0.060	0.050	1320
JUL										
01...	--	0.080	8.70	0.050	0.40	0.30	0.040	0.030	0.030	49
JUL										
06-07	--	0.110	3.20	0.150	3.0	0.80	0.480	0.060	0.060	284
11...	--	0.070	8.80	0.040	0.60	0.30	0.050	0.030	0.020	14
13...	164	0.060	7.90	0.060	--	0.40	--	0.020	0.010	--
JUL										
14-15	--	0.070	2.00	0.420	5.5	1.2	2.80	0.560	0.530	1860
21...	--	0.060	9.40	0.050	0.50	0.40	0.090	0.040	0.040	72
JUL										
23-23	--	0.210	2.40	0.140	1.7	0.70	0.850	0.310	0.310	386
JUL										
27-28	--	0.060	2.60	0.110	1.3	0.80	0.500	0.350	0.350	191
AUG										
01...	--	0.040	11.0	0.050	0.30	<0.20	0.030	0.020	0.020	3
09...	240	0.040	11.0	0.030	--	0.20	--	0.010	0.010	--
10...	--	0.050	9.90	0.040	0.30	0.20	0.040	0.030	0.020	100
AUG										
17-17	--	0.050	0.960	0.620	2.3	1.4	1.30	0.980	0.930	435
19...	--	0.020	12.0	0.030	0.30	0.30	0.060	0.040	0.040	128
AUG										
21-21	--	0.190	3.90	0.110	1.5	0.70	0.420	0.230	0.190	91
AUG										
22-22	--	0.020	1.60	0.170	1.9	1.1	0.980	0.720	0.650	224
30...	--	0.020	11.0	0.030	0.30	<0.20	0.040	0.030	0.020	83
SEP										
09...	--	0.030	11.0	0.030	0.30	0.30	0.040	0.020	0.020	116
12...	240	0.040	12.0	0.060	--	0.30	--	0.020	0.020	--
SEP										
18-18	--	0.150	3.30	0.460	2.2	1.2	0.500	0.230	0.210	202
19...	--	0.060	9.80	0.070	0.30	0.30	0.060	0.050	0.040	147
SEP										
22-22	--	0.190	5.80	0.280	2.8	1.7	0.960	0.680	0.670	95
SEP										
26-26	--	0.050	1.40	0.140	2.6	0.70	1.60	0.630	0.630	705
29...	--	0.020	11.0	0.050	0.30	0.20	0.090	0.060	0.040	47

CONESTOGA RIVER BASIN

01576528 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR WILLOW STREET, PA

LOCATION.--Lat 39°59'49", long 76°15'20", Lancaster County, Hydrologic Unit 02050306, 100 ft below pond, and 0.7 mi northwest of Lampeter and 1.5 mi northeast of Willow Street.

DRAINAGE AREA.--1.21 mi².

PERIOD OF RECORD.--September 1993 to current year.

REMARKS.--Land surface elevation is 325 ft, from topographic map.

WATER-QUALITY DATA, WATER YEAR SEPTEMBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
SEP 24, 1993	0930	1028	80020	--	648	7.7	14.5	7.7	0.150
MAY 10, 1994	1300	1028	80020	1.2	610	8.1	18.0	10.2	0.050
SEP 14, 1994	1040	1028	80020	0.51	663	7.7	16.5	9.3	0.070

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
SEP 24, 1993	10.0	0.340	1.1	0.60	0.350	0.120	0.100	75
MAY 10, 1994	11.0	0.050	0.40	0.30	0.040	0.010	<0.010	100
SEP 14, 1994	11.0	0.050	0.30	0.20	0.040	0.030	0.030	--

CONESTOGA RIVER BASIN

01576529 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR LAMPETER, PA

LOCATION.--Lat 39°59'57", long 76°15'52", Lancaster County, Hydrologic Unit 02050306, on left bank 70 ft upstream from bridge on Morningside Drive near the intersection of Long Rifle Road, Gypsy Hill Road, and Morningside Drive, and 1.0 mi northwest of Lampeter.
DRAINAGE AREA.--1.42 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 290.24 ft above sea level.

REMARKS.--Records fair. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	1.9	1.9	e1.3	e1.7	1.8	4.1	1.8	.91	.95	.57	.78
2	.49	1.1	1.5	e1.3	e1.7	1.7	3.5	1.4	.80	.66	.54	.71
3	1.0	1.0	1.3	e1.3	e1.7	2.6	3.2	1.3	.70	.71	.49	.67
4	.47	.95	2.1	e1.4	e1.6	1.7	3.1	1.4	.71	.66	.45	.65
5	.35	.90	41	e1.3	e1.5	3.2	2.5	1.4	.70	.54	.63	.63
6	.34	.87	5.0	e1.2	e1.5	3.7	2.5	1.3	.85	.71	.43	.60
7	.34	.80	3.8	e1.2	e1.4	5.3	4.0	2.1	.72	.83	.37	.54
8	.34	.69	3.1	e1.4	e1.4	10	2.8	2.8	.60	.37	.33	.48
9	.34	.65	2.9	e1.2	e1.3	6.2	2.7	1.5	.54	.36	.32	.45
10	.30	.65	2.8	e1.1	e1.2	30	3.1	1.3	.53	.38	.31	.43
11	.27	.65	2.7	e1.0	e1.2	14	2.7	1.3	.59	.44	.31	.41
12	3.2	.56	2.2	e1.2	e1.1	12	2.6	1.5	17	.41	.44	.41
13	.73	.61	2.1	e1.3	e1.1	17	7.3	1.2	1.8	.40	.30	.41
14	.50	.67	2.0	e1.1	e1.0	23	3.9	1.1	.95	15	.68	.39
15	.43	.55	2.0	e.91	e1.0	18	3.4	1.1	.72	1.9	.47	.36
16	.37	.50	1.9	e.71	e.94	11	3.7	1.2	.64	1.0	.32	.34
17	.34	.60	1.8	e.80	e.94	8.4	2.9	1.0	.43	.79	12	.40
18	.33	.72	1.8	e1.2	e.94	5.8	2.7	.97	.48	.67	2.0	1.3
19	.37	.60	1.8	e1.1	e.94	6.1	2.1	.97	.55	.44	1.1	.39
20	1.5	.58	1.7	e1.0	1.5	13	1.6	1.0	.63	.39	.81	.35
21	1.1	.56	7.4	e.94	8.5	17	1.7	.99	.61	.33	1.3	.36
22	.92	.52	2.7	e.90	10	15	1.8	.97	.58	.52	11	1.4
23	.57	.50	2.3	e.81	5.6	7.6	1.7	.97	.55	1.3	1.9	.86
24	.50	.50	2.1	e.62	9.4	5.1	1.7	.95	.56	.62	1.4	.46
25	.43	.46	2.0	e.38	5.3	4.1	1.7	1.5	.55	.52	1.2	.39
26	.40	.43	e2.0	e.62	2.7	3.2	1.6	2.1	.49	1.2	1.4	23
27	.37	1.6	e1.6	e.90	2.2	9.8	1.7	1.3	.74	1.8	1.2	2.5
28	.37	27	e1.6	e3.0	1.8	10	1.6	1.1	.68	2.6	1.1	1.5
29	.40	3.3	e1.5	e2.3	---	13	1.6	.97	.62	1.0	1.2	1.3
30	2.0	2.3	e1.5	e1.9	---	6.0	1.7	.92	.98	.77	.93	1.2
31	2.6	---	e1.3	e1.8	---	4.7	---	.84	---	.66	.84	---
TOTAL	22.20	52.72	111.4	37.19	71.16	290.0	81.2	40.25	37.21	38.93	46.34	43.67
MEAN	.72	1.76	3.59	1.20	2.54	9.35	2.71	1.30	1.24	1.26	1.49	1.46
MAX	3.2	.27	.41	3.0	10	30	7.3	2.8	.17	.15	.12	.23
MIN	.27	.43	1.3	.38	.94	1.7	1.6	.84	.43	.33	.30	.34
CFSM	.50	1.24	2.53	.84	1.79	6.59	1.91	.91	.87	.88	1.05	1.03
IN.	.58	1.38	2.92	.97	1.86	7.60	2.13	1.05	.97	1.02	1.21	1.14

SUMMARY STATISTICS

FOR 1994 WATER YEAR

ANNUAL TOTAL	872.27
ANNUAL MEAN	2.39
HIGHEST DAILY MEAN	41 Dec 5
LOWEST DAILY MEAN	.27 Oct 11
ANNUAL SEVEN-DAY MINIMUM	.33 Oct 5
INSTANTANEOUS PEAK FLOW	267 Jun 12
INSTANTANEOUS PEAK STAGE	6.31 Jun 12
ANNUAL RUNOFF (CFSM)	1.68
ANNUAL RUNOFF (INCHES)	22.85
10 PERCENT EXCEEDS	5.0
50 PERCENT EXCEEDS	1.1
90 PERCENT EXCEEDS	.40

e Estimated.

CONESTOGA RIVER BASIN

01576529 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR LAMPETER, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1993 to current year.

INSTRUMENTATION.--Automatic pumping sampler since December 1993.

REMARKS.--Fixed-time, baseflow, and stormflow samples collected at streamflow control. Constituent values for stormflow water-quality are for discharge-weighted composite samples. Samples with two dates are composited samples; sample time is the composite start time, discharge is the mean for the composited period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 15...	1230	1028	1028	0.81	615	8.5	25.0	11.1	11000	9600
JUL 06...	0900	1028	1028	<0.10	--	--	--	--	7800	6900
21...	1010	1028	80020	0.67	621	8.2	20.0	--	--	--
AUG 03...	0930	1028	80020	0.51	625	8.0	20.5	--	--	--
18...	1230	1028	1028	0.41	610	--	23.5	--	--	--
SEP 07...	0915	1028	1028	<0.32	654	--	19.5	--	--	--
22...	0910	1028	80020	<0.37	662	8.2	16.5	7.8	--	--

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
JUN 15...	0.100	12.0	0.030	0.60	0.70	0.110	0.130	0.040	--
JUL 06...	--	--	--	--	--	--	--	--	--
21...	0.090	11.0	0.040	0.60	0.40	0.080	0.070	0.040	15
AUG 03...	0.140	11.0	0.120	1.4	0.90	0.130	0.050	0.050	54
18...	0.150	9.30	0.140	0.80	0.80	0.240	0.200	0.170	45
SEP 07...	0.090	11.0	0.060	0.40	0.40	0.140	0.120	0.100	4
22...	0.130	11.0	0.070	0.50	0.50	0.120	0.120	0.110	2

CONESTOGA RIVER BASIN

01576529 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE (MEAN) (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
18...	1025	1028	80020	--	0.33	698	8.1	14.5	--	K200000	32000
30...	1715	1028	80020	--	5.5	--	--	--	--	--	--
30...	1930	1028	80020	--	5.5	--	--	--	--	--	--
31...	2000	1028	80020	--	5.3	--	--	--	--	--	--
NOV											
15...	0945	1028	80020	--	0.60	682	8.1	15.0	12.7	--	--
DEC											
04...	2315	1028	1028	--	E 6.2	--	--	--	--	--	--
04...	2400	1028	1028	--	16	--	--	--	--	--	--
05...	0145	1028	1028	--	E 38	--	--	--	--	--	--
05...	0315	1028	1028	--	E 33	--	--	--	--	--	--
05...	0530	1028	1028	--	E 53	--	--	--	--	--	--
05...	0900	1028	1028	--	137	--	--	--	--	--	--
05...	1115	1028	1028	--	E 46	--	--	--	--	--	--
05...	1645	1028	1028	--	E 19	--	--	--	--	--	--
14...	1022	1028	80020	--	2.0	737	8.1	5.5	11.4	K 800	K 870
DEC											
21-21	0522	1028	80020	9.1	--	--	--	--	--	--	--
JAN											
24...	1110	1028	80020	--	e0.62	753	8.5	3.5	14.2	K 100	K 100
FEB											
16...	0845	1028	80020	--	e0.94	709	8.3	1.5	14.1	K	8300
16...	0846	1028	80020	--	e0.94	709	8.3	1.5	14.1	--	--
MAR											
08...	1020	1028	80020	--	9.3	334	7.7	3.0	11.9	>30000	>50000
MAR											
10-10	0530	1028	80020	30	30	--	--	--	--	--	--
14...	0900	1028	80020	--	11	421	7.9	4.5	12.5	--	--
MAR											
14-14	1230	1028	80020	31	--	--	--	--	--	--	--
15...	1400	1028	1028	--	29	--	--	--	--	--	--
MAR											
21-22	1645	1028	80020	25	--	--	--	--	--	--	--
22...	1200	1028	1028	--	22	--	--	--	--	--	--
22...	1201	1028	1028	--	22	--	--	--	--	--	--
MAR											
27-27	0945	1028	80020	22	--	--	--	--	--	--	--
APR											
12...	1205	1028	80020	--	2.7	621	8.5	10.5	14.4	--	--
12...	1206	1028	80020	--	2.7	--	--	--	--	--	--
APR											
13-13	1115	1028	80020	11	--	--	--	--	--	--	--
26...	1045	1028	80020	--	1.7	625	8.4	16.0	12.4	--	3900
MAY											
02...	0945	1028	80020	--	1.4	616	--	--	--	--	--
10...	0850	1028	80020	--	1.5	627	8.2	13.5	9.3	--	--
12...	0855	1028	80020	--	1.4	616	8.1	13.0	9.0	--	33000
23...	1010	1028	80020	--	0.97	609	8.3	19.0	11.4	--	--
MAY											
25-25	1807	1028	80020	4.3	--	--	--	--	--	--	--
MAY											
26-26	1707	1028	80020	5.4	--	--	--	--	--	--	--
JUN											
01...	0950	1028	80020	--	0.99	565	8.4	20.5	11.5	--	120000
01...	0951	1028	80020	--	0.99	--	--	--	--	--	--
07...	0945	1028	80020	--	0.84	562	8.2	21.5	9.3	--	--
10...	0945	1028	80020	--	0.55	593	8.2	19.0	10.6	--	--
21...	1020	1028	80020	--	0.62	588	8.2	20.5	10.4	--	--
JUN											
27-27	1822	1028	80020	1.5	--	--	--	--	--	--	--
JUN											
30-30	1852	1028	80020	3.3	--	--	--	--	--	--	--
JUL											
01...	0955	1028	80020	--	1.0	526	8.1	21.5	9.8	--	--
JUL											
06-07	2222	1028	80020	5.1	--	--	--	--	--	--	--
11...	0950	1028	80020	--	0.45	566	8.3	22.0	11.1	--	K1000
11...	0951	1028	80020	--	0.45	--	--	--	--	--	--
13...	0945	1028	80020	--	0.37	--	--	--	--	--	--

CONESTOGA RIVER BASIN

01576529 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L - CAC03) (90430)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT										
18...	--	0.080	11.0	0.060	0.60	0.30	0.240	0.090	0.090	64
30...	--	0.320	6.70	1.10	7.4	3.6	1.80	0.670	0.560	605
30...	--	0.160	3.40	0.510	3.5	2.1	1.20	0.580	0.520	177
31...	--	0.110	5.80	0.960	5.9	3.4	1.80	0.920	0.850	198
NOV										
15...	--	0.120	12.0	0.020	0.50	0.40	0.090	0.050	0.040	26
DEC										
04...	--	--	--	--	--	--	--	--	--	354
04...	--	--	--	--	--	--	--	--	--	1350
05...	--	--	--	--	--	--	--	--	--	1240
05...	--	--	--	--	--	--	--	--	--	529
05...	--	--	--	--	--	--	--	--	--	1730
05...	--	--	--	--	--	--	--	--	--	5910
05...	--	--	--	--	--	--	--	--	--	603
05...	--	--	--	--	--	--	--	--	--	209
14...	--	0.080	15.0	0.110	0.30	0.30	0.080	0.070	0.040	7
DEC										
21-21	--	0.070	6.10	0.610	5.9	1.7	1.10	0.490	0.470	691
JAN										
24...	--	0.040	15.0	0.060	0.20	0.20	0.020	0.020	0.010	--
FEB										
16...	--	0.090	15.0	0.090	0.60	0.40	0.100	0.020	0.010	87
16...	--	0.070	15.0	0.090	0.80	0.40	0.100	0.020	0.010	--
MAR										
08...	--	0.050	4.70	1.70	4.3	3.0	0.940	0.640	0.610	94
MAR										
10-10	--	0.030	1.50	1.30	5.3	2.6	1.70	0.540	0.460	1070
14...	--	0.050	5.80	0.590	--	1.3	--	0.260	0.230	--
MAR										
14-14	--	0.030	1.30	1.10	2.2	1.9	0.860	0.640	0.570	1300
15...	--	--	--	--	--	--	--	--	--	490
MAR										
21-22	--	0.050	2.40	1.20	2.9	1.9	0.880	0.490	0.470	1150
22...	--	--	--	--	--	--	--	--	--	386
22...	--	--	--	--	--	--	--	--	--	387
MAR										
27-27	--	0.060	3.50	0.660	2.8	1.8	0.920	0.390	0.330	1900
APR										
12...	--	0.050	13.0	0.040	0.40	<0.20	0.020	<0.010	0.010	25
12...	--	0.050	12.0	0.040	0.40	<0.20	0.030	<0.010	0.010	--
APR										
13-13	--	0.070	6.00	0.340	2.0	1.4	0.730	0.380	0.360	735
26...	--	0.060	12.0	0.090	5.8	6.4	0.350	0.120	0.100	117
MAY										
02...	--	0.060	13.0	0.070	0.50	0.20	0.060	0.010	0.020	84
10...	--	0.070	12.0	0.080	0.50	0.30	0.060	0.020	<0.010	84
12...	--	0.070	12.0	0.080	0.60	0.40	0.040	0.020	0.020	36
23...	--	0.070	12.0	0.030	0.40	0.30	0.080	0.060	0.060	30
MAY										
25-25	--	0.100	6.30	0.620	2.3	1.6	0.830	0.410	0.390	436
MAY										
26-26	--	0.230	7.20	0.720	4.2	2.8	1.40	0.590	0.490	1430
JUN										
01...	--	0.090	10.0	0.040	0.70	0.50	0.080	0.040	0.020	11
01...	--	0.090	11.0	0.030	0.50	0.60	0.040	0.090	0.060	12
07...	174	0.100	10.0	0.040	--	0.40	--	0.020	0.020	--
10...	--	0.100	9.00	0.080	2.5	2.0	0.210	0.060	0.050	66
21...	--	0.080	9.30	0.020	0.70	0.30	0.060	<0.010	<0.010	6
JUN										
27-27	--	0.330	4.00	0.090	2.0	0.90	0.360	0.050	0.040	46
JUN										
30-30	--	0.100	7.70	0.150	1.5	0.80	0.340	0.080	0.060	125
JUL										
01...	--	0.070	7.70	0.050	0.60	0.40	0.060	0.020	0.020	8
JUL										
06-07	--	0.120	9.60	0.070	1.7	0.60	0.330	0.030	0.010	198
11...	--	0.070	7.90	0.020	0.60	0.30	0.030	0.020	<0.010	3
11...	--	0.070	8.00	0.020	0.70	0.40	0.070	<0.010	<0.010	4
13...	174	0.050	7.80	0.020	--	0.40	--	<0.010	<0.010	--

CONESTOGA RIVER BASIN

01576529 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE (MEAN) (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LITY, CARBON- ATE IT-LAB (MG/L - CAC03) (90430)
JUL--Con't											
14-15	1652	1028	80020	38	--	--	--	--	--	--	--
JUL											
14-15	1653	1028	80020	38	--	--	--	--	--	--	--
21...	1040	1028	80020	--	0.31	604	8.3	25.0	12.7	--	--
JUL											
23-23	1222	1028	80020	4.7	--	--	--	--	--	--	--
JUL											
26-26	1422	1028	80020	4.8	--	--	--	--	--	--	--
JUL											
26-26	1423	1028	80020	4.8	--	--	--	--	--	--	--
JUL											
27-28	2138	1028	80020	7.2	--	--	--	--	--	--	--
AUG											
01...	1025	1028	80020	--	0.58	652	8.1	20.5	9.7	--	--
01...	1026	1028	80020	--	0.58	--	--	--	--	--	--
09...	0940	1028	80020	--	0.34	640	8.1	18.5	10.3	--	216
10...	0955	1028	80020	--	0.31	624	7.9	20.0	8.7	4300	--
AUG											
17-17	1207	1028	80020	29	--	--	--	--	--	--	--
19...	1000	1028	80020	--	1.2	652	8.0	19.0	9.1	--	--
AUG											
21-22	2007	1028	80020	4.4	--	--	--	--	--	--	--
AUG											
22-22	0252	1028	80020	16	--	--	--	--	--	--	--
30...	1100	1028	80020	--	0.84	665	8.2	18.5	11.6	--	--
SEP											
09...	1030	1028	80020	--	0.45	719	8.3	17.5	13.1	--	--
12...	1020	1028	80020	--	0.37	673	8.3	15.5	13.7	--	--
14...	0900	1028	80020	--	0.35	680	8.0	17.0	10.9	--	--
SEP											
18-18	0308	1028	80020	4.2	--	--	--	--	--	--	--
19...	1105	1028	80020	--	0.40	661	8.1	17.5	9.8	550	--
SEP											
22-23	1907	1028	80020	5.4	--	--	--	--	--	--	--
SEP											
26-26	0738	1028	80020	51	--	--	--	--	--	--	--
SEP											
26-26	1508	1028	80020	17	--	--	--	--	--	--	--
29...	1312	1028	80020	--	1.2	742	8.0	16.5	8.0	--	--

CONESTOGA RIVER BASIN

01576529 UNNAMED TRIBUTARY TO BIG SPRING RUN NEAR LAMPETER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)
JUL--Con't									
14-15	0.070	1.80	0.270	6.9	1.0	4.80	0.430	0.260	3160
JUL									
14-15	0.070	2.10	0.300	4.4	1.1	4.60	0.430	0.400	3020
21...	0.050	10.0	0.030	0.40	0.30	0.030	0.010	<0.010	70
JUL									
23-23	0.170	5.90	0.570	3.9	1.6	1.80	0.760	0.750	450
JUL									
26-26	0.160	6.60	0.370	2.7	1.5	1.20	0.600	0.620	582
JUL									
26-26	0.160	7.20	0.360	1.8	1.2	0.790	0.600	0.610	596
JUL									
27-28	0.100	3.80	0.260	2.8	1.2	1.10	0.590	0.620	259
AUG									
01...	0.050	11.0	0.050	0.60	<0.20	0.100	0.020	0.020	54
01...	0.050	11.0	0.050	0.50	0.30	0.090	0.030	0.020	--
09...	0.050	10.0	0.030	--	0.30	--	0.010	<0.010	--
10...	0.060	9.50	0.030	0.30	0.30	<0.010	<0.010	<0.010	4
AUG									
17-17	0.050	1.50	0.270	3.2	1.1	3.10	0.930	0.870	1060
19...	0.030	11.0	0.030	0.30	0.30	0.080	0.070	0.050	4
AUG									
21-22	0.120	6.50	0.230	1.9	1.2	0.730	0.510	0.440	56
AUG									
22-22	0.040	2.60	0.130	2.0	1.2	1.20	0.870	0.750	156
30...	0.040	11.0	0.030	0.30	<0.20	0.040	0.030	0.030	4
SEP									
09...	0.050	12.0	0.030	0.80	0.60	0.070	0.040	0.030	26
12...	0.050	12.0	0.020	--	<0.20	--	0.010	<0.010	--
14...	0.080	11.0	0.030	0.20	0.30	0.020	0.010	<0.010	--
SEP									
18-18	0.330	7.00	0.930	4.6	3.2	1.00	0.760	0.610	106
19...	0.060	11.0	0.060	0.40	0.30	0.090	0.060	0.050	6
SEP									
22-23	0.060	2.80	0.130	1.7	0.70	0.510	0.250	0.230	98
SEP									
26-26	0.050	1.30	0.210	2.6	0.80	1.70	0.730	0.750	1500
SEP									
26-26	0.040	2.20	0.120	1.8	0.90	1.10	0.710	0.710	615
29...	0.030	5.40	0.060	3.3	3.2	0.280	0.220	0.220	13

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA
(National water-quality assessment station)

LOCATION.--Lat 40°00'36", Long 76°16'39", Lancaster County, Hydrologic Unit 02050306, on right bank 200 ft downstream from bridge on Eshelman Mill Road (Township Route 476), 0.8 mi east of Lyndon, 2.2 mi southeast of Lancaster, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--54.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	102	117	e66	77	82	184	97	56	64	45	35
2	34	52	103	e72	e66	80	162	86	53	42	56	34
3	42	47	94	e66	e58	68	149	82	53	40	51	34
4	35	41	85	e61	e57	81	144	82	53	39	48	39
5	33	42	2140	e65	e56	90	134	84	51	40	54	44
6	32	40	302	e58	e54	110	129	79	55	48	58	44
7	32	38	164	e54	e52	113	183	87	94	188	47	40
8	31	37	137	e63	e50	300	129	169	53	61	43	37
9	31	36	123	e52	e51	213	120	89	49	49	40	38
10	32	36	119	e46	55	1520	125	80	46	41	37	37
11	31	35	122	e44	134	595	131	77	46	38	38	38
12	154	36	101	e42	236	363	114	81	287	36	54	37
13	74	33	98	e49	56	468	197	77	69	35	38	43
14	44	39	96	e41	e45	779	196	73	44	339	51	37
15	39	34	95	e37	e42	498	130	72	44	413	45	37
16	37	33	92	e44	45	295	150	72	49	54	36	37
17	36	33	88	e51	46	187	125	69	43	45	312	33
18	36	37	86	e66	46	163	114	66	41	53	136	202
19	35	34	88	e60	50	149	109	66	40	46	43	48
20	63	34	84	e52	132	244	104	67	43	42	37	42
21	58	34	227	e48	787	368	100	65	40	40	41	39
22	52	34	130	e44	538	949	98	63	39	42	306	52
23	45	34	102	e40	266	301	96	62	36	87	84	81
24	42	35	e92	e38	219	239	95	60	36	62	54	50
25	40	32	e83	e35	214	214	93	76	36	50	47	41
26	39	32	e74	e38	118	179	90	126	33	80	47	719
27	39	35	e72	e35	93	354	86	82	41	59	42	119
28	38	722	e69	1600	86	353	87	64	81	114	40	68
29	38	204	e67	752	---	538	86	61	57	55	40	59
30	54	146	e65	151	---	267	88	59	50	48	38	57
31	90	---	e64	91	---	206	---	57	---	45	36	---
TOTAL	1421	2127	5379	3961	3729	10366	3748	2430	1718	2395	2044	2221
MEAN	45.8	70.9	174	128	133	334	125	78.4	57.3	77.3	65.9	74.0
MAX	154	722	2140	1600	787	1520	197	169	287	413	312	719
MIN	31	32	64	35	42	68	86	57	33	35	36	33
CFSM	.85	1.31	3.20	2.36	2.46	6.17	2.31	1.45	1.06	1.43	1.22	1.37
IN.	.98	1.46	3.69	2.72	2.56	7.11	2.57	1.67	1.18	1.64	1.40	1.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	MEAN	34.7	54.0	110	86.2	86.4	242	158	94.7	59.2	55.0	48.5	46.7
MAX	45.8	70.9	174	128	133	334	192	111	61.2	77.3	65.9	74.0	
(WY)	1994	1994	1994	1994	1994	1994	1993	1993	1993	1994	1994	1994	1994
MIN	23.5	37.2	45.8	44.6	39.7	150	125	78.4	57.3	32.8	31.0	19.8	
(WY)	1993	1993	1993	1993	1993	1993	1993	1994	1994	1994	1993	1993	1992

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1992 - 1994
ANNUAL TOTAL	30481.9	41539	
ANNUAL MEAN	83.5	114	90.9
HIGHEST ANNUAL MEAN			114
LOWEST ANNUAL MEAN			68.0
HIGHEST DAILY MEAN	2140 Dec 5	2140 Dec 5	2140 Dec 5
LOWEST DAILY MEAN	5.6 Jul 17	31 Oct 8,9,11	5.6 Jul 17
ANNUAL SEVEN-DAY MINIMUM	19 Jul 25	32 Oct 5	13 Sep 1
INSTANTANEOUS PEAK FLOW		a4610 Jan 28	a4610 Jan 28
INSTANTANEOUS PEAK STAGE		29.31 Jan 28	29.31 Jan 28
INSTANTANEOUS LOW FLOW		23 Sep 17	4.9 Jul 17
ANNUAL RUNOFF (CFSM)	1.54	2.10	1.68
ANNUAL RUNOFF (INCHES)	20.92	28.51	22.79
10 PERCENT EXCEEDS	147	213	155
50 PERCENT EXCEEDS	47	58	47
90 PERCENT EXCEEDS	27	36	24

a From rating curve extended above 600 ft³/s.

e Estimated.

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1992 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1993 to September 1994 (discontinued).

TEMPERATURE: April 1993 to September 1994 (discontinued).

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the NAWQA fixed-station network are shown in figure 10, page 111. For a complete list of pesticides analyzed as part of the NAWQA program and their corresponding reporting levels, see table 2, page 116.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 861 microsiemens, Nov. 27, 1994; minimum daily, 213 microseimens, June 12, 1994.

WATER TEMPERATURE: Maximum daily, 30.0°C, July 8-11, 1993; minimum daily, 0.0°C, many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 861 microsiemens, Nov. 27, 1994; minimum daily, 213 microseimens, June 12, 1994.

WATER TEMPERATURE: Maximum daily, 29.0°C, July 9; minimum daily, 0.0°C, many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM- PLING METHOD, CODES (82398)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT											
13...	1030	1028	80020	15.0	3045	10	66	365	7.9	10.5	760
27...	1040	1028	80020	15.0	3045	10	39	782	8.2	11.5	754
NOV											
09...	0800	1028	80020	15.0	3045	10	36	783	8.3	4.5	768
23...	1015	1028	80020	15.0	3045	10	74	815	8.4	4.5	766
DEC											
15...	1000	1028	80020	15.0	3045	10	95	737	8.2	6.0	748
JAN											
11...	0915	1028	80020	15.0	3045	10	e44	804	8.4	0.0	771
FEB											
16...	0930	1028	80020	15.0	3045	10	45	707	8.2	0.5	765
MAR											
24...	0945	1028	80020	15.0	3045	10	229	531	8.0	9.5	755
APR											
06...	0940	1028	80020	15.0	3045	10	128	632	8.3	11.5	753
20...	1050	1028	80020	15.0	3045	10	104	653	8.4	14.5	761
MAY											
04...	1010	1028	80020	15.0	3045	10	81	686	8.3	13.0	765
07...	2130	1028	80020	15.0	3045	10	130	602	8.1	13.5	747
18...	1100	1028	80020	15.0	3045	10	66	675	8.2	13.0	757
JUN											
06...	0915	1028	80020	15.0	3045	10	54	710	8.0	18.5	757
29...	1050	1028	80020	15.0	3045	10	58	537	8.0	22.5	753
JUL											
14...	1300	1028	80020	15.0	8010	30	34	724	8.4	24.5	758
25...	1250	1028	80020	15.0	3045	10	41	534	8.1	25.0	756
AUG											
11...	0910	1028	80020	15.0	3045	10	38	737	8.1	20.0	765
30...	1115	1028	80020	15.0	3045	10	38	726	8.2	19.5	761
SEP											
06...	1200	1028	80020	15.0	3045	10	44	741	8.3	17.0	759

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)
OCT												
13...	8.2	74	120	19	31	11	15	19	0.6	15	--	130
27...	7.7	72	310	80	74	31	35	19	0.9	6.1	--	280
NOV												
09...	8.3	64	290	61	70	29	35	20	0.9	5.8	--	280
23...	14.9	115	300	76	71	30	43	23	1	5.5	--	270
DEC												
15...	11.7	96	320	93	76	31	23	13	0.6	4.9	--	270
JAN												
11...	14.1	96	320	87	76	31	37	20	0.9	4.6	--	280
FEB												
16...	13.3	92	290	79	68	29	29	18	0.7	4.4	--	260
MAR												
24...	10.2	90	230	58	58	21	14	11	0.4	6.6	--	210
APR												
06...	10.1	94	280	81	66	28	17	11	0.4	4.2	--	240
20...	11.8	116	280	69	65	28	20	13	0.5	4.1	--	250
MAY												
04...	9.9	94	300	94	68	32	24	15	0.6	4.3	--	250
07...	7.1	69	250	69	62	23	20	15	0.6	2.1	--	220
18...	9.8	94	280	67	66	29	22	14	0.6	4.4	--	270
JUN												
06...	7.7	83	280	83	66	28	29	18	0.8	5.0	0.030	240
29...	6.9	81	190	51	45	18	30	25	1	8.5	<0.010	170
JUL												
14...	8.8	107	280	70	63	30	34	20	0.9	6.0	0.020	250
25...	7.6	93	210	54	53	20	23	18	0.7	9.4	<0.010	200
AUG												
11...	7.8	85	280	71	64	29	32	20	0.8	5.5	0.060	250
30...	8.7	95	310	86	74	31	31	17	0.8	7.0	0.020	280
SEP												
06...	9.7	101	300	66	70	30	31	18	0.8	5.7	0.050	280

DATE	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT											
13...	0	100	26	24	0.2	4.2	205	209	0.28	36.5	3.93
27...	0	230	52	50	0.2	6.2	453	443	0.62	47.7	11.0
NOV											
09...	1	230	53	58	0.2	6.2	450	446	0.61	43.7	11.0
23...	--	230	56	69	0.1	3.6	460	458	0.63	91.9	9.97
DEC											
15...	0	230	47	41	0.1	7.2	429	423	0.58	110	13.0
JAN											
11...	--	230	49	66	<0.1	7.5	470	467	0.64	55.8	13.0
FEB											
16...	0	210	42	51	<0.1	5.4	421	404	0.57	51.2	10.9
MAR											
24...	0	170	32	23	0.2	5.8	298	301	0.41	184	7.81
APR											
06...	0	200	38	32	0.1	3.3	361	357	0.49	125	11.0
20...	5	210	39	36	0.1	3.2	398	370	0.54	112	10.9
MAY											
04...	0	210	40	43	0.1	6.6	398	387	0.54	87.0	9.92
07...	0	180	36	35	0.1	5.9	352	332	0.48	124	8.72
18...	0	220	39	39	0.1	7.1	364	386	0.50	64.9	10.9
JUN											
06...	0	200	44	46	0.1	6.7	397	387	0.54	57.9	9.72
29...	0	140	36	50	0.3	4.3	305	301	0.41	47.8	5.93
JUL											
14...	4	210	46	58	0.1	2.5	437	404	0.59	40.1	8.38
25...	0	160	34	34	0.2	5.3	332	307	0.45	36.8	6.74
AUG											
11...	0	210	44	54	0.1	4.3	430	399	0.58	44.1	9.08
30...	0	230	44	47	0.1	6.9	428	421	0.58	43.9	9.87
SEP											
06...	0	230	46	51	0.1	6.0	448	422	0.61	53.2	9.58

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT											
13...	17	0.070	0.23	4.00	0.400	0.52	1.0	1.9	1.4	5.4	0.830
27...	48	0.050	0.16	11.0	0.040	0.05	0.26	0.30	0.30	11	0.130
NOV											
09...	49	0.030	0.10	11.0	0.030	0.04	0.27	0.30	0.30	11	0.080
23...	44	0.030	0.10	10.0	0.020	0.03	0.18	0.30	0.20	10	0.100
DEC											
15...	57	0.020	0.07	13.0	0.060	0.08	0.24	<0.20	0.30	13	0.050
JAN											
11...	57	0.020	0.07	13.0	0.050	0.06	0.25	0.30	0.30	13	0.080
FEB											
16...	48	0.060	0.20	11.0	0.190	0.24	0.31	0.50	0.50	12	0.070
MAR											
24...	35	0.090	0.30	7.90	0.430	0.55	0.47	1.4	0.90	8.8	0.470
APR											
06...	49	0.040	0.13	11.0	0.030	0.04	0.27	0.30	0.30	11	0.060
20...	48	0.060	0.20	11.0	0.030	0.04	0.27	0.40	0.30	11	0.070
MAY											
04...	44	0.080	0.26	10.0	0.070	0.09	0.33	0.50	0.40	10	0.110
07...	39	0.080	0.26	8.80	0.170	0.22	0.93	1.5	1.1	9.9	0.420
18...	48	0.110	0.36	11.0	0.100	0.13	0.20	0.40	0.30	11	0.100
JUN											
06...	43	0.080	0.26	9.80	0.040	0.05	0.36	0.70	0.40	10	0.180
29...	26	0.070	0.23	6.00	0.160	0.21	0.64	3.4	0.80	6.8	2.00
JUL											
14...	37	0.020	0.07	8.40	0.020	0.03	0.38	0.50	0.40	8.8	0.180
25...	30	0.060	0.20	6.80	0.050	0.06	0.65	0.90	0.70	7.5	0.440
AUG											
11...	40	0.020	0.07	9.10	0.030	0.04	0.27	0.40	0.30	9.4	0.180
30...	44	0.030	0.10	9.90	0.040	0.05	0.26	0.30	0.30	10	0.180
SEP											
06...	42	0.020	0.07	9.60	0.040	0.05	0.16	0.30	0.20	9.8	0.140

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
13...	0.660	0.660	2.0	230	29	--	10	>3.9	114	20	97
27...	0.100	0.110	0.34	14	24	--	6.1	0.2	5	0.53	85
NOV											
09...	0.070	0.080	0.25	8	16	220	3.6	0.2	3	0.29	83
23...	0.040	0.050	0.15	6	12	240	1.8	0.3	2	0.40	75
DEC											
15...	0.050	0.050	0.15	6	25	200	1.2	0.2	117	30	74
JAN											
11...	0.050	0.050	0.15	7	28	250	1.4	0.3	88	10	79
FEB											
16...	0.040	0.040	0.12	4	26	180	1.7	0.3	41	5.0	77
MAR											
24...	0.260	0.270	0.83	24	69	150	3.4	2.4	79	49	96
APR											
06...	0.030	0.030	0.09	<3	26	140	2.0	0.6	63	22	47
20...	0.030	0.040	0.12	<3	33	190	1.5	0.6	72	20	44
MAY											
04...	0.080	0.070	0.21	6	29	200	1.6	0.4	44	9.6	52
07...	0.110	0.100	0.31	16	18	170	2.9	>3.9	178	62	89
18...	0.090	0.080	0.25	5	32	190	1.8	--	32	5.7	72
JUN											
06...	0.090	0.070	0.21	6	13	190	2.4	1.3	73	11	91
29...	0.240	0.240	0.74	47	27	170	5.2	11	789	124	100
JUL											
14...	0.140	0.130	0.40	5	14	200	2.3	0.7	14	1.3	82
25...	0.350	0.340	1.0	51	12	150	4.7	1.0	39	4.3	99
AUG											
11...	0.140	0.130	0.40	7	13	210	2.2	0.4	10	1.0	98
30...	0.160	0.140	0.43	5	15	210	1.9	0.4	11	1.1	98
SEP											
06...	0.110	0.110	0.34	4	12	230	1.7	0.2	102	12	21

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

ADDITIONAL REMARKS.--The water-quality data in the following table were collected and analyzed by the Pennsylvania Department of Environmental Resources. Stormflow samples collected by the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT									
19...	1155	9813	9813	35	10	10.2	7.99	0.020	0.020
NOV									
09...	1215	9813	9813	36	20	11.9	11.9	<0.020	<0.020
27...	2400	1028	9813	139	952	5.41	--	0.210	--
28...	0500	1028	9813	867	3250	3.34	--	0.210	--
28...	0600	1028	9813	1690	4940	2.29	--	0.480	--
28...	0800	1028	9813	1210	2540	2.68	--	0.290	--
28...	1200	1028	9813	1130	1370	5.15	--	0.210	--
28...	2100	1028	9813	351	934	3.43	--	0.500	--
DEC									
07...	1340	9813	9813	159	24	11.8	10.9	0.150	0.150
JAN									
11...	1200	9813	9813	e44	26	12.8	12.6	0.040	0.030
FEB									
10...	1305	9813	9813	67	12	12.0	12.0	--	--
MAR									
10...	1305	9813	9813	2350	1420	2.64	2.24	1.75	1.66
27...	1700	9813	9813	628	948	7.13	--	0.230	--
27...	1800	1028	9813	648	478	6.73	--	0.250	--
27...	2100	1028	9813	472	402	7.66	--	0.200	--
27...	2200	1028	9813	410	394	6.20	--	0.450	--
27...	2300	1028	9813	367	330	5.54	--	0.500	--
APR									
11...	1035	9813	9813	130	28	9.92	9.68	<0.020	<0.020
13...	1300	1028	9813	199	902	8.95	--	0.090	--
13...	1500	1028	9813	232	250	8.95	--	0.070	--
13...	1900	1028	9813	278	170	8.71	--	0.060	--
13...	2100	1028	9813	386	276	8.23	--	0.130	--
14...	0200	1028	9813	294	180	8.47	--	0.170	--
MAY									
12...	1250	9813	9813	78	24	9.92	9.68	0.070	0.070
25...	1900	1028	9813	92	376	8.23	--	0.070	--
25...	2200	1028	9813	115	428	7.74	--	0.230	--
26...	0100	1028	9813	214	370	8.47	--	0.180	--
26...	0700	1028	9813	119	180	7.74	--	0.220	--
26...	1100	1028	9813	86	228	6.53	--	0.480	--
26...	1823	1028	9813	142	2220	3.96	--	0.790	--
26...	1900	1028	9813	155	2760	5.02	--	1.01	--
26...	2000	1028	9813	176	1810	5.15	--	0.640	--
26...	2100	1028	9813	142	1300	3.83	--	0.680	--
26...	2300	1028	9813	108	592	3.96	--	0.540	--
JUN									
07...	0038	1028	9813	83	204	9.44	--	0.080	--
07...	0608	1028	9813	140	220	8.95	--	0.110	--
12...	1949	1028	9813	2350	2090	5.08	--	0.670	--
12...	2249	1028	9813	220	524	4.60	--	0.450	--
13...	0249	1028	9813	96	718	5.81	--	0.310	--
15...	1125	9813	9813	40	76	8.47	8.23	0.080	0.060
30...	2131	1028	9813	77	188	7.02	--	0.040	--
30...	2330	1028	9813	66	174	6.78	--	0.050	--
JUL									
01...	0300	1028	9813	77	252	6.53	--	0.050	--
01...	0600	1028	9813	106	324	6.30	--	0.100	--
07...	1030	9813	9813	217	318	5.32	5.32	0.310	0.260
14...	1830	1028	9813	882	4620	2.64	--	0.710	--
AUG									
09...	1055	9813	9813	40	2	7.99	7.74	<0.020	<0.020
17...	1400	1028	9813	876	2590	2.18	--	0.270	--
17...	1500	1028	9813	1290	1600	3.17	--	0.170	--
17...	1700	1028	9813	658	892	2.77	--	0.220	--
17...	2200	1028	9813	529	528	4.49	--	0.240	--
18...	0300	1028	9813	297	202	3.96	--	0.470	--
SEP									
14...	1330	9813	9813	37	4	9.50	--	<0.020	--
18...	0100	1028	9813	98	120	7.99	--	0.220	--
18...	0400	1028	9813	360	540	7.74	--	0.290	--
18...	0500	1028	9813	371	328	7.13	--	0.300	--
18...	1300	1028	9813	211	300	4.49	--	0.880	--
26...	0900	1028	9813	1170	5160	2.64	--	0.550	--
26...	1000	1028	9813	2470	3120	2.64	--	0.280	--
26...	1100	1028	9813	2030	2490	3.30	--	0.190	--
26...	1400	1028	9813	928	1150	3.43	--	0.200	--
26...	1700	1028	9813	1460	1850	2.38	--	0.350	--
26...	2300	1028	9813	406	416	2.24	--	0.460	--

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH- DIS- SOLVED (MG/L AS P) (00671)
OCT					
19...	0.68	0.40	0.190	0.163	0.072
NOV					
09...	0.37	0.35	0.120	0.107	0.044
27...	6.6	--	2.34	--	--
28...	10	--	5.70	--	--
28...	16	--	6.49	--	--
28...	9.8	--	4.50	--	--
28...	6.0	--	3.00	--	--
28...	2.8	--	1.98	--	--
DEC					
07...	0.68	0.63	0.250	0.145	0.005
JAN					
11...	0.30	<0.20	0.110	0.070	<0.002
FEB					
10...	1.8	1.4	0.250	0.188	0.125
MAR					
10...	7.7	2.4	2.34	0.498	0.292
27...	4.1	--	1.50	--	--
27...	2.2	--	0.900	--	--
27...	2.0	--	0.750	--	--
27...	2.9	--	1.08	--	--
27...	3.3	--	1.14	--	--
APR					
11...	0.37	0.37	0.090	0.060	0.004
13...	4.5	--	1.62	--	--
13...	1.8	--	0.610	--	--
13...	1.3	--	0.440	--	--
13...	2.0	--	0.680	--	--
14...	1.9	--	0.540	--	--
MAY					
12...	0.51	<0.20	0.170	0.110	0.033
25...	1.3	--	0.300	--	--
25...	1.0	--	0.360	--	--
26...	1.1	--	0.230	--	--
26...	1.2	--	0.210	--	--
26...	1.4	--	0.520	--	--
26...	2.2	--	1.32	--	--
26...	2.9	--	1.34	--	--
26...	2.5	--	1.66	--	--
26...	2.6	--	1.16	--	--
26...	2.0	--	0.860	--	--
JUN					
07...	20	--	0.220	--	--
07...	9.2	--	0.410	--	--
12...	21	--	1.27	--	--
12...	13	--	1.40	--	--
13...	3.6	--	0.910	--	--
15...	0.87	0.62	0.320	0.220	0.085
30...	1.1	--	0.340	--	--
30...	0.88	--	0.280	--	--
JUL					
01...	0.77	--	0.310	--	--
01...	0.95	--	0.330	--	--
07...	3.7	1.2	1.07	0.400	0.289
14...	2.0	--	0.950	--	--
AUG					
09...	0.71	0.34	0.180	0.153	0.020
17...	3.1	--	4.14	--	--
17...	2.0	--	1.22	--	--
17...	3.0	--	1.44	--	--
17...	2.4	--	1.26	--	--
18...	3.3	--	1.59	--	--
SEP					
14...	0.20	--	0.160	--	--
18...	1.2	--	0.570	--	--
18...	2.3	--	0.640	--	--
18...	1.5	--	0.800	--	--
18...	2.9	--	1.93	--	--
26...	1.5	--	1.98	--	--
26...	0.99	--	1.56	--	--
26...	0.37	--	1.00	--	--
26...	0.85	--	0.780	--	--
26...	7.2	--	1.56	--	--
26...	2.4	--	1.20	--	--

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESELMAN MILL ROAD NEAR LYNDON, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, ($\mu\text{G/L}$) (46342)	ATRA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (39632)	CHLOR- PYRIFOS DIS- SOLVED ($\mu\text{G/L}$) (38933)	CYANA- ZINE, WATER, DISS, REC, ($\mu\text{G/L}$) (04041)	DCPA WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82682)
OCT							
13...	1030	66	<0.009	0.056	<0.008	<0.027	<0.005
27...	1040	39	<0.009	0.088	<0.008	<0.027	<0.005
NOV							
09...	0800	36	<0.009	0.110	<0.008	<0.027	<0.005
23...	1015	74	<0.009	0.095	<0.008	<0.027	<0.005
DEC							
15...	1000	95	<0.009	0.120	<0.008	<0.027	<0.005
JAN							
11...	0915	e44	<0.009	0.110	<0.008	<0.027	<0.005
FEB							
16...	0930	45	<0.009	0.069	<0.008	<0.027	<0.005
MAR							
24...	0945	229	0.016	0.070	<0.008	<0.027	<0.005
APR							
06...	0940	128	0.011	0.090	<0.008	<0.027	<0.005
20...	1050	104	<0.009	0.100	<0.008	<0.027	<0.005
MAY							
04...	1010	81	<0.009	0.100	<0.008	<0.027	<0.005
07...	2130	130	0.048	0.340	<0.008	<0.027	<0.005
18...	1100	66	<0.009	0.140	<0.008	<0.027	<0.005
JUN							
06...	0915	54	0.010	0.250	0.024	0.030	<0.005
29...	1050	58	<0.009	1.50	0.016	0.130	0.009
JUL							
14...	1300	34	<0.009	0.200	<0.008	<0.027	<0.005
25...	1250	41	<0.009	0.190	0.011	<0.027	<0.005
AUG							
11...	0910	38	<0.009	0.180	<0.008	<0.027	<0.005
30...	1115	38	<0.009	0.150	<0.008	<0.027	<0.005
SEP							
06...	1200	44	<0.009	0.160	<0.008	<0.027	<0.005

DATE	DESETHYL ATRA- ZINE, WATER, DISS, REC ($\mu\text{G/L}$) (04040)	DI- AZINON, DIS- SOLVED ($\mu\text{G/L}$) (39572)	METO- LACHLOR WATER DISSOLV ($\mu\text{G/L}$) (39415)	PENDI- METH- ALIN WAT FLT 0.7 μ GF, REC ($\mu\text{G/L}$) (82683)	PRO- METON, WATER, DISS, REC ($\mu\text{G/L}$) (04037)	SI- MAZINE, WATER, DISS, REC ($\mu\text{G/L}$) (04035)	TER- BACIL WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82665)
OCT							
13...	e0.024	0.024	0.096	<0.018	0.093	0.130	<0.030
27...	e0.071	<0.008	0.032	<0.018	0.100	0.062	<0.030
NOV							
09...	e0.086	<0.008	0.041	<0.018	0.120	0.082	<0.030
23...	e0.059	<0.008	0.032	<0.018	0.099	0.042	<0.030
DEC							
15...	e0.064	<0.008	0.051	<0.018	0.150	0.063	<0.030
JAN							
11...	e0.072	<0.008	0.039	<0.018	0.086	0.047	<0.030
FEB							
16...	e0.049	<0.008	0.027	<0.018	0.055	0.032	<0.030
MAR							
24...	e0.110	<0.008	0.053	<0.018	0.065	0.072	0.110
APR							
06...	e0.170	<0.008	0.049	<0.018	0.061	0.068	0.047
20...	e0.200	<0.008	0.045	<0.018	0.078	0.160	<0.030
MAY							
04...	e0.200	<0.008	0.044	<0.018	0.067	0.340	<0.030
07...	e0.120	<0.008	0.950	0.047	0.150	0.810	<0.030
18...	e0.120	<0.008	0.078	<0.018	0.240	0.530	<0.030
JUN							
06...	e0.150	0.012	0.130	<0.018	0.220	1.40	--
29...	e0.140	<0.008	1.10	0.072	0.380	1.70	<0.030
JUL							
14...	e0.120	<0.008	0.078	<0.018	0.090	5.40	<0.030
25...	e0.110	<0.008	0.270	<0.018	0.130	0.140	<0.030
AUG							
11...	e0.150	<0.008	0.048	<0.018	0.081	3.00	<0.030
30...	e0.130	<0.008	0.050	<0.018	0.099	0.130	<0.030
SEP							
06...	e0.190	<0.008	0.047	<0.018	0.100	0.430	<0.030

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

ADDITIONAL REMARKS.--The data in the following table were collected as part of a pilot study of agricultural pesticides.

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	ALA- CHLOR TOTAL RECOVER (μ G/L) (77825)	ALDRIN, TOTAL (μ G/L) (39330)	ATRA- ZINE WATER REC (μ G/L) (39630)
FEB										
17...	1045	1028	9813	46	759	8.6	1.5	<0.08	<0.005	<0.2
MAY										
08...	1131	1028	9813	205	--	--	--	<0.08	<0.005	0.7
09...	1325	1028	9813	87	--	--	--	<0.08	<0.005	0.7
18...	1940	1028	9813	66	--	--	--	<0.08	<0.005	<0.2
25...	2045	1028	9813	126	--	--	--	0.14	<0.005	0.6
25...	2345	1028	9813	197	--	--	--	<0.08	<0.005	1.6
26...	0545	1028	9813	140	--	--	--	0.10	<0.005	3.0
26...	1723	1028	9813	93	--	--	--	7.0	<0.005	20
26...	1923	1028	9813	173	--	--	--	3.2	<0.005	8.0
26...	2053	1028	9813	145	--	--	--	--	--	--
26...	2223	1028	9813	115	--	--	--	--	--	--
27...	0423	1028	9813	100	--	--	--	0.64	<0.005	13
JUN										
07...	0208	1028	9813	155	--	--	--	0.32	<0.005	0.3
07...	0408	1028	9813	180	--	--	--	0.08	<0.005	0.3
07...	0808	1028	9813	108	--	--	--	0.08	<0.005	0.5
12...	1845	1028	9813	1900	--	--	--	0.36	0.005	6.1
12...	2119	1028	9813	505	--	--	--	0.45	<0.005	8.2
13...	0049	1028	9813	118	--	--	--	0.17	<0.005	7.5
22...	1700	1028	9813	38	--	--	--	<0.08	<0.005	--
29...	1315	1028	9813	82	--	--	--	0.14	0.009	1.6
29...	1359	1028	9813	81	550	7.8	--	--	--	--
29...	1445	1028	9813	67	--	--	--	0.13	0.007	3.7
29...	2030	1028	9813	73	--	--	--	0.12	0.031	3.9
29...	2124	1028	9813	69	510	7.8	--	--	--	--
29...	2324	1028	9813	61	470	8.0	--	--	--	--
30...	2130	1028	9813	77	--	--	--	0.08	<0.005	<0.2
JUL										
01...	0302	1028	9813	77	--	--	--	--	--	--
01...	0602	1028	9813	106	--	--	--	0.21	<0.005	1.8
01...	1350	1028	9813	53	--	--	--	<0.08	<0.005	<0.2
06...	2228	1028	9813	61	--	--	--	--	--	--
06...	2328	1028	9813	250	--	--	--	<0.08	<0.005	0.6
07...	0028	1028	9813	265	--	--	--	--	--	--
07...	0328	1028	9813	222	--	--	--	--	--	--
07...	0528	1028	9813	420	--	--	--	0.11	0.005	0.6
07...	0728	1028	9813	350	--	--	--	--	--	--
07...	0928	1028	9813	250	--	--	--	<0.08	<0.005	1.5
07...	1415	1028	9813	110	--	--	--	--	--	--
14...	1828	1028	9813	860	255	7.7	--	--	--	--
14...	1928	1028	9813	1830	--	--	--	0.30	<0.005	<0.2
14...	2058	1028	9813	798	295	7.4	--	--	--	--
14...	2332	1028	9813	1590	440	7.4	--	--	--	--
14...	2345	1028	9813	1650	410	7.7	--	0.12	<0.005	0.7
15...	0132	1028	9813	1780	--	--	--	0.16	<0.005	1.7
15...	0302	1028	9813	1400	220	7.5	--	--	--	--
15...	0632	1028	9813	350	--	--	--	<0.08	<0.005	1.4
15...	1032	1028	9813	156	245	7.5	--	--	--	--
AUG										
08...	1210	1028	9813	44	650	8.1	20.0	<0.08	<0.005	<0.2
SEP										
08...	1310	1028	9813	36	--	--	--	<0.08	<0.005	<0.2

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CHLOR- DANE, TOTAL (µG/L) (39350)	CYAN- AZINE TOTAL (µG/L) (81757)	DI- ELDRIN TOTAL (µG/L) (39380)	MALA- THION, TOTAL (µG/L) (39530)	METOLA- CHLOR WATER WHOLE TOT.REC (µG/L) (82612)	PRO- PAZINE TOTAL (µG/L) (39024)	SIMA- ZINE TOTAL (µG/L) (39055)	TOX- APHENE, TOTAL (µG/L) (39400)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
FEB										
17...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	14	1.7
MAY										
08...	<0.1	<0.40	<0.010	<0.16	4.4	<0.20	0.55	<1	--	--
09...	<0.1	0.95	<0.010	<0.16	2.1	<0.20	0.46	<1	22	5.2
18...	<0.1	<0.40	<0.010	<0.16	0.20	<0.20	1.4	<1	34	6.1
25...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	0.35	<1	--	--
25...	<0.1	<0.40	<0.010	<0.16	1.6	<0.20	<0.20	<1	--	--
26...	<0.1	<0.40	<0.010	<0.16	0.38	<0.20	2.3	<1	--	--
26...	<0.1	1.8	0.016	<0.16	31	<0.20	4.0	<1	--	--
26...	<0.1	1.5	0.010	<0.16	13	<0.20	1.8	<1	--	--
26...	--	--	--	--	--	--	--	--	632	247
26...	--	--	--	--	--	--	--	--	191	59
27...	<0.1	3.5	<0.010	<0.16	16	<0.20	4.5	<1	--	--
JUN										
07...	<0.1	1.1	<0.010	<0.16	0.77	<0.20	0.60	<1	--	--
07...	<0.1	0.50	<0.010	<0.16	0.33	<0.20	0.81	<1	--	--
07...	<0.1	0.72	<0.010	<0.16	0.25	<0.20	0.39	<1	--	--
12...	<0.1	4.7	<0.010	<0.16	12	<0.20	<0.20	<1	11000	56600
12...	<0.1	2.8	<0.010	<0.16	7.9	<0.20	0.24	<1	6690	9120
13...	<0.1	1.3	0.023	<0.16	8.0	<0.20	1.3	<1	1420	452
22...	<0.1	<0.40	<0.010	<0.16	--	<0.20	--	<1	--	--
29...	<0.1	0.40	<0.010	<0.16	1.7	<0.20	1.4	<1	--	--
29...	--	--	--	--	--	--	--	--	349	76
29...	<0.1	0.50	<0.010	<0.16	2.3	<0.20	6.0	<1	--	--
29...	<0.1	<0.40	<0.010	<0.16	2.4	<0.20	4.9	<1	--	--
29...	--	--	--	--	--	--	--	--	156	29
29...	--	--	--	--	--	--	--	--	124	20
30...	<0.1	1.7	<0.010	<0.16	1.3	<0.20	<0.20	<1	157	33
JUL										
01...	--	--	--	--	--	--	--	--	199	41
01...	<0.1	1.8	<0.010	<0.16	1.0	<0.20	<0.20	<1	246	70
01...	<0.1	0.41	<0.010	<0.16	0.35	<0.20	<0.20	<1	97	14
06...	--	--	--	--	--	--	--	--	123	20
06...	<0.1	<0.40	<0.010	<0.16	0.91	<0.20	0.24	<1	--	--
07...	--	--	--	--	--	--	--	--	840	601
07...	--	--	--	--	--	--	--	--	513	307
07...	<0.1	1.2	<0.010	<0.16	0.91	<0.20	0.24	<1	--	--
07...	--	--	--	--	--	--	--	--	536	507
07...	<0.1	1.7	<0.010	<0.16	1.5	<0.20	0.20	<1	--	--
07...	--	--	--	--	--	--	--	--	209	62
14...	--	--	--	--	--	--	--	--	4400	10200
14...	<0.1	2.0	<0.010	<0.16	1.7	<0.20	16	<1	--	--
14...	--	--	--	--	--	--	--	--	2090	4500
14...	--	--	--	--	--	--	--	--	3690	15800
14...	<0.1	1.4	<0.010	<0.16	1.2	<0.20	0.38	<1	3940	17600
15...	<0.1	1.7	<0.010	<0.16	2.7	<0.20	0.26	<1	--	--
15...	--	--	--	--	--	--	--	--	1790	6770
15...	<0.1	1.9	0.012	<0.16	1.7	<0.20	0.66	<1	--	--
15...	--	--	--	--	--	--	--	--	418	176
AUG										
08...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	0.42	<1	7	0.83
SEP										
08...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	7	0.68

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

ADDITIONAL REMARKS.--The following table contains data collected as part of an ecological survey of sites in the fixed-station network. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional-targeted habitat (DTH). This site was sampled at the bridge on T-476 (Eshelman Mill Road). The fixed station sites are shown in figure 18, page 300. Data from all sites sampled for the fixed-site ecological survey can be found on pages 301-303.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM VELOC-ITY, MEAN (F/S)	SPE-CIFIC CON-DUCT-ANCE (µS/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)
EFS03 -RTH	01576540	06-08-94	1200	1028	80020	1.35	550	--	21.5	--
EFS03 -DTH		06-08-94	1215	1028	80020	.073	545	--	21.5	--
EFS03		06-08-94	1300	1028	1028	--	546	7.5	22.0	754

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L)	BICAR-BONATE WH FET FIELD (MG/L AS HCO3)	CAR-BONATE WH FET FIELD (MG/L AS CO3)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQM)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM)
EFS03 -RTH	06-08-94	--	--	--	--	6.6	3.5	300	310	10
EFS03 -DTH	06-08-94	--	--	--	--	17	4.2	950	1000	50
EFS03	06-08-94	9.0	105	190	0	156	--	--	--	--

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESELMAN MILL ROAD NEAR LYNDON, PA--Continued

REMARKS--Explanation of column headings--SED, BM: streambed-sediment, bottom material; WS: wet sieve; DW, REC: dry weight recoverable; µG/KG: micrograms per kilogram; µG/G: micrograms per gram;

ORGANOCHLORINES, TRACE ELEMENTS, AND CARBON IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	PCB, SED, BM WS, <2MM DW, REC (µG/KG) (49459)	O, P'-DDD, SED, BM WS, <2MM DW, REC (µG/KG) (49325)	P, P'-DDD, SED, BM WS, <2MM DW, REC (µG/KG) (49326)	O, P'-DDE, SED, BM WS, <2MM DW, REC (µG/KG) (49327)	P, P'-DDE, SED, BM WS, <2MM DW, REC (µG/KG) (49328)	O, P'-DDT, SED, BM WS, <2MM DW, REC (µG/KG) (49329)	P, P'-DDT, SED, BM WS, <2MM DW, REC (µG/KG) (49330)	CIS-CHLOR-DANE, SED, BM WS, <2MM DW, REC (µG/KG) (49320)	
09-23-92	1000	1028	80020	<100	<1.0	2.0	<1.0	3.8	<2.0	<2.0	1.1	
DATE		TRANS-CHLOR-DANE, SED, BM WS, <2MM DW, REC (µG/KG) (49321)	CHLORO-NEB, SED, BM WS, <2MM DW, REC (ξG/KG) (49322)	CIS-NONA-CHLOR, SED, BM WS, <2MM DW, REC (µG/KG) (49316)	TRANS-NONA-CHLOR, SED, BM WS, <2MM DW, REC (µG/KG) (49317)	OXY-CHLOR-DANE, SED, BM WS, <2MM DW, REC (µG/KG) (49318)	HEPTA-CHLOR, SED, BM WS, <2MM DW, REC (µG/KG) (49341)	HEPTA-CHLOR EPOXIDE, SED, BM WS, <2MM DW, REC (µG/KG) (49342)	PENTA-CHLORO-ANISOLE, SED, BM WS, <2MM DW, REC (µG/KG) (49460)	ALDRIN, SED, BM WS, <2MM DW, REC (µG/KG) (49319)	DIEL-DRIN, SED, BM WS, <2MM DW, REC (µG/KG) (49331)	ENDRIN, SED, BM WS, <2MM DW, REC (µG/KG) (49335)
09-23-92	1.1		<5.0	1.5	1.6	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<2.0
DATE		ISODRIN, SED, BM WS, <2MM DW, REC (µG/KG) (49344)	MIREX, SED, BM WS, <2MM DW, REC (µG/KG) (49348)	CIS-PER-METHRIN, SED, BM WS, <2MM DW, REC (µG/KG) (49349)	TRANS-PER-METHRIN, SED, BM WS, <2MM DW, REC (µG/KG) (49350)	METHOXY CHLOR, O, P'-, SED, BM WS, <2MM DW, REC (µG/KG) (49347)	METHOXY CHLOR, P, P'-, SED, BM WS, <2MM DW, REC (µG/KG) (49346)	ALPHA-HCH, SED, BM WS, <2MM DW, REC (µG/KG) (49338)	BETA-HCH, SED, BM WS, <2MM DW, REC (µG/KG) (49339)	LINDANE, SED, BM WS, <2MM DW, REC (µG/KG) (49345)	ENDO-SULFAN I, SED, BM WS, <2MM DW, REC (µG/KG) (49332)	BENZENE HEXA-CHLORO-SED, BM WS, <2MM DW, REC (µG/KG) (49343)
09-23-92	<1.0	<1.0	<1.0	<7.0	<7.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<5.0
DATE		DCPA, SED, BM WS, <2MM DW, REC (µG/KG) (49324)	TOXA-PHENE, SED, BM WS, <2MM DW, REC (µG/KG) (49351)	ALPHA-HCH, D6 SURROGT, SED, BM WS, <2MM DW, REC PERCENT (µG/G) (49275)	BIPHENYL 35DICH, SURROGT, SED, BM WS, <2MM DW, REC PERCENT (µG/G) (49277)	OCTCHLR BIPHENYL, SURROGT, SED, BM WS, <2MM DW, REC PERCENT (µG/G) (49276)	ALUM-INUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34790)	ANTI-MONY, BOT MAT <63U WS FIELD PERCENT (µG/G) (34795)	ARSENIC, BOT MAT <63U WS FIELD PERCENT (µG/G) (34800)	BERYL-LIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34810)	BISMUTH, BOT MAT <180UWS FIELD PERCENT (µG/G) (34816)	CADMIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34825)
09-23-92	<5.0	<200		85	81	37	7.4	1.0	6.8	2.0	<10	.3
DATE		CALCIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34830)	CERIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34835)	CHRO-MIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34840)	COBALT, BOT MAT <63U WS FIELD PERCENT (µG/G) (34845)	COPPER, BOT MAT <63U WS FIELD PERCENT (µG/G) (34850)	EURO-PIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34855)	GALLIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34860)	GOLD, BOT MAT <63U WS FIELD PERCENT (µG/G) (34870)	HOLMIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34875)	IRON, BOT MAT <63U WS FIELD PERCENT (µG/G) (34880)	LANTHA-NUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34885)
09-23-92	2.1		86	79	18	33	56	21	<8.0	<4.0	3.8	56
DATE		LEAD, BOT MAT <63U WS FIELD PERCENT (µG/G) (34890)	LITHIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34895)	MAGNE-SIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34900)	MANGA-NESE, BOT MAT <63U WS FIELD PERCENT (µG/G) (34905)	MERCURY, BOT MAT <63U WS FIELD PERCENT (µG/G) (34910)	MOLYB-DENUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34915)	NEODYM-IUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34920)	NICKEL, BOT MAT <63U WS FIELD PERCENT (µG/G) (34925)	NIOBIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34930)	PHOS-PHORUS, BOT MAT <63U WS FIELD PERCENT (µG/G) (34935)	POTAS-SIUM, BOT MAT <63U WS FIELD PERCENT (µG/G) (34940)
09-23-92	35		80	1.2	1500	.08	<2.0	57	33	10	.18	2.6

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

ORGANOCHLORINES, TRACE ELEMENTS, AND CARBON IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

DATE	SCAN- DIUM BOT MAT <63U WS FIELD (μG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (μG/G) (34950)	SILVER BOT MAT <63U WS FIELD (μG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	STRON- TIUM BOT MAT <63U WS FIELD (μG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (μG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (μG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (μG/G) (34980)	TIN BOT MAT <63U WS FIELD (μG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (μG/G) (35000)	VANA- DIUM BOT MAT <63U WS FIELD (μG/G) (35005)
	09-23-92	13	1.0	.2	.47	98	.09	<40	11	<10	3.5
DATE											
	YTTIR- BIUM BOT MAT <63U WS FIELD (μG/G) (35015)	YTRIUM BOT MAT <63U WS FIELD (μG/G) (35010)	ZINC BOT MAT <63U WS FIELD (μG/G) (35020)	TITA- NIUM BOT MAT PERCENT ()	CARBON TOTAL BOT MAT PERCENT ()	CARBON- ATE BOT MAT PERCENT ()	CARBON ORGANIC BOT MAT PERCENT ()				
09-23-92	5.0	53	190	.37	3.23	.52	2.71				

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

REMARKS--Explanation of column headings--WH ORG: whole organism; WW, REC: whole weight recoverable; $\mu\text{G}/\text{KG}$: micrograms per kilogram; WSU: white sucker; BIO TIS: biota tissue; DRY WGT REC: dry weight recoverable; $\mu\text{G}/\text{G}$: micrograms per gram.

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1992

DATE	FISH TYPE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	PCB, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	O,P'-DDT, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	P,P'-DDT, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	O,P'-DDD, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	P,P'-DDD, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	O,P'-DDE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	P,P'-DDE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	CIS-CHLOR-DANE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)
09-23-92	WSU	1105	1028	80020	130	<5.0	6.0	<5.0	16	<5.0	100	9.9

DATE	TRANS-CHLOR-DANE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	CIS-NONA-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	TRANS-NONA-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	OXY-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	HEPTA-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	HEPTA-CHLOR EPOXIDE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	PENTA-CHLORO-ANISOLE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	ALDRIN, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	DIEL-DRIN, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	ENDRIN, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	MIREX, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)
09-23-92	<5.0	6.5	13	<5.0	<5.0	<5.0	<5.0	<5.0	6.0	<5.0	<5.0

DATE	METHOXY CHLOR, O,P'-, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	METHOXY CHLOR, P,P'-, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	ALPHA-HCH, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	BETA-HCH, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	DELTA-HCH, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	LINDANE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	BENZENE HEXA-CHLORO-BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	DCPA, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	TOXA-PHENE, BIOTA, WH ORG WW, REC ($\mu\text{G}/\text{KG}$)	LIPIDS, BIOTA, WH ORG WW, REC PERCENT	ALPHA-HCH,D6 SURROGT, BIOTA, WH ORG WW, REC PERCENT
09-23-92	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<200	3.0	53

DATE	BIPHENYL 35DICHL SURROGT, BIOTA, WH ORG WW, REC PERCENT	SET NUMBER SCHED-ULE (NO.)	SAMPLE WEIGHT SCHED-ULE (GRAMS)
09-23-92	82	93.18	11.1

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1992

DATE	FISH TYPE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	ALUMI-NUM, BIO TIS LIVER, DRY WGT REC (μG/G)	ANTI-MONY, BIO TIS LIVER, DRY WGT REC (μG/G)	ARSENIC, BIO TIS LIVER, DRY WGT REC (μG/G)	BARIUM, BIO TIS LIVER, DRY WGT REC (μG/G)	BERYL-LIUM-, BIO TIS LIVER, DRY WGT REC (μG/G)	BORON, BIO TIS LIVER, DRY WGT REC (μG/G)	CADMIUM, BIO TIS LIVER, DRY WGT REC (μG/G)	CHROM-IUM-, BIO TIS LIVER, DRY WGT REC (μG/G)
09-23-92	WSU	1101	1028	80020	<1.0	<0.3	<0.3	<0.1	<0.3	0.7	0.4	.8
			COBALT, BIO TIS LIVER, DRY WGT REC (μG/G)	COPPER, BIO TIS LIVER, DRY WGT REC (μG/G)	IRON, BIO TIS LIVER, DRY WGT REC (μG/G)	LEAD, BIO TIS LIVER, DRY WGT REC (μG/G)	MANGAN-ESE, BIO TIS LIVER, DRY WGT REC (μG/G)	MERCURY, BIO TIS LIVER, DRY WGT REC (μG/G)	MOLYB-DENUM, BIO TIS LIVER, DRY WGT REC (μG/G)	NICKEL, BIO TIS LIVER, DRY WGT REC (μG/G)		
			(49250)	(49241)	(49242)	(49251)	(49243)	(49258)	(49252)	(49253)		
			09-23-92	.7	30.4	488	<0.3	9.7	.2	1.3	<0.3	
			SELEN-IUM, BIO TIS LIVER, DRY WGT REC (μG/G)	SILVER, BIO TIS LIVER, DRY WGT REC (μG/G)	STRON-TIUM, BIO TIS LIVER, DRY WGT REC (μG/G)	URANIUM, BIO TIS LIVER, DRY WGT REC (μG/G)	VANA-DIUM, BIO TIS LIVER, DRY WGT REC (μG/G)	WATER, PRESENT, BIO TIS LIVER, DRY WGT REC PERCENT (49273)	ZINC, BIO TIS LIVER, DRY WGT REC (μG/G)			
			(49254)	(49255)	(49244)	(49257)	(49465)	(49273)	(49245)			
			09-23-92	6.7	<0.3	.3	<0.3	.9	80.6	110		

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	701	633	679	747	631	671	721	662	687	776	762	768
2	720	697	708	687	639	667	747	720	733	764	748	757
3	720	649	677	672	632	647	760	746	750	756	734	744
4	733	680	704	786	672	747	763	750	756	751	717	735
5	749	717	732	793	782	788	752	371	537	747	715	728
6	729	643	693	793	780	786	574	368	462	758	741	750
7	729	640	687	795	781	788	677	574	636	---	---	---
8	765	729	745	798	785	792	702	677	689	---	---	---
9	767	758	763	791	777	786	715	700	708	---	---	---
10	760	730	744	788	775	783	717	699	708	---	---	---
11	730	682	699	796	778	787	716	702	709	---	---	---
12	723	489	617	823	796	813	715	704	710	---	---	---
13	531	339	384	834	800	824	718	705	712	---	---	---
14	415	347	376	819	791	803	724	697	710	---	---	---
15	520	415	469	818	801	812	737	719	729	---	---	---
16	617	520	569	832	790	814	738	715	730	---	---	---
17	673	617	647	804	779	794	745	730	738	---	---	---
18	---	---	---	779	737	760	736	724	730	---	---	---
19	761	712	737	827	753	797	743	722	733	747	720	730
20	774	699	748	848	818	836	735	712	723	765	732	742
21	761	672	716	824	794	814	714	512	651	772	765	769
22	751	695	722	813	793	804	679	550	583	775	760	768
23	701	679	686	817	796	810	713	595	664	847	767	794
24	739	701	720	824	799	812	747	712	735	790	747	768
25	749	737	743	827	774	810	757	739	750	---	---	---
26	767	746	758	818	767	788	755	728	740	---	---	---
27	783	767	776	861	818	847	735	719	724	772	750	760
28	773	738	763	841	338	524	735	719	724	759	428	693
29	791	737	767	568	422	497	769	721	739	428	241	306
30	845	677	818	664	568	624	774	762	770	486	380	423
31	750	663	711	---	---	---	782	771	778	595	486	550
MONTH	845	339	685	861	338	761	782	368	702	847	241	693

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	625	595	615	652	632	640	623	616	619	667	626	650
2	665	615	646	672	652	662	622	616	619	661	610	641
3	655	642	648	669	657	661	624	615	619	660	616	638
4	678	655	671	671	656	663	625	615	619	686	654	672
5	684	670	678	691	647	673	635	617	624	684	662	675
6	679	665	672	647	615	631	657	630	639	678	657	665
7	683	666	676	618	599	608	658	576	605	669	590	654
8	---	---	---	599	482	546	619	542	574	597	506	548
9	---	---	---	506	477	488	636	607	622	594	506	538
10	---	---	---	518	317	402	643	604	626	684	594	654
11	---	---	---	395	318	357	621	590	608	711	682	699
12	---	---	---	447	395	418	641	600	612	711	679	699
13	646	625	639	474	447	460	651	531	601	708	670	689
14	---	---	---	473	405	457	558	477	511	698	675	683
15	---	---	---	447	405	426	619	549	592	698	682	689
16	---	---	---	479	447	462	658	608	632	698	681	691
17	---	---	---	519	479	503	---	---	---	688	671	678
18	---	---	---	555	519	539	677	541	644	690	666	679
19	---	---	---	579	555	569	687	654	666	692	667	682
20	---	---	---	581	538	567	---	---	---	680	654	666
21	---	---	---	538	466	512	670	636	657	675	649	662
22	---	---	---	466	383	406	666	631	654	664	634	651
23	---	---	---	496	426	455	662	629	651	671	654	660
24	517	476	501	559	496	528	662	633	647	664	640	654
25	517	499	508	564	551	557	659	634	648	672	593	653
26	565	516	540	564	553	557	658	638	648	608	448	537
27	606	565	587	568	409	497	684	648	672	642	442	510
28	636	606	620	461	402	431	682	663	673	660	638	649
29	---	---	---	451	429	441	677	661	669	714	655	687
30	---	---	---	562	448	503	676	652	666	710	692	703
31	---	---	---	621	562	594	---	---	---	703	685	695
MONTH	684	476	615	691	317	523	687	477	629	714	442	653

CONESTOGA RIVER BASIN

01576540 MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	693	681	686	657	528	597	747	712	727	719	709	714
2	705	682	692	662	596	634	771	747	757	744	717	734
3	746	705	733	598	530	566	786	770	777	756	733	743
4	732	708	725	676	561	626	792	771	781	749	723	737
5	719	707	712	706	675	696	784	767	776	740	723	731
6	716	691	709	711	650	689	768	740	754	741	713	723
7	701	564	636	650	395	511	741	728	735	721	701	714
8	583	540	560	448	381	407	740	722	732	728	701	717
9	698	555	627	583	448	519	733	712	724	761	713	740
10	745	698	729	695	580	651	738	716	727	783	757	773
11	734	704	722	726	694	707	737	718	724	773	751	763
12	733	213	629	729	696	716	728	592	668	770	749	764
13	384	272	336	711	683	700	738	676	718	756	738	745
14	463	384	422	738	262	620	754	649	710	755	738	747
15	509	463	491	495	293	383	685	625	653	752	738	743
16	556	507	529	565	495	536	689	669	678	786	751	771
17	588	555	574	625	565	596	691	251	541	777	752	769
18	605	586	595	645	625	637	550	412	507	752	413	542
19	612	602	607	651	629	640	549	482	514	462	409	428
20	611	600	605	688	647	664	638	549	592	525	461	487
21	606	599	603	689	673	682	695	638	672	648	525	575
22	607	594	601	676	640	659	691	577	616	697	609	675
23	596	569	581	645	555	611	644	582	612	674	609	636
24	579	567	573	594	560	575	705	641	670	694	629	658
25	575	560	566	562	469	530	768	705	734	629	579	607
26	580	563	571	577	441	523	815	768	790	603	290	441
27	590	558	580	541	441	493	829	764	811	471	378	432
28	589	559	574	565	461	515	764	710	723	541	461	499
29	560	460	536	590	547	562	721	708	714	637	541	596
30	583	460	524	658	590	619	765	718	742	668	637	658
31	---	---	---	712	658	683	769	709	731	---	---	---
MONTH	746	213	601	738	262	598	829	251	697	786	290	662
YEAR	861	213	652									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.0	10.5	12.5	9.5	7.5	8.5	6.5	4.5	5.5	2.0	.0	1.0
2	15.5	12.0	13.5	8.5	6.0	7.0	7.5	5.0	6.0	4.5	2.0	3.0
3	16.0	14.5	15.0	8.0	6.0	7.0	8.5	6.0	7.0	4.5	4.0	4.0
4	16.0	12.5	14.0	9.5	6.0	7.5	8.5	7.0	7.5	4.0	1.0	2.5
5	15.0	13.0	14.0	10.5	8.5	9.5	9.5	8.5	9.0	2.0	1.0	1.5
6	14.0	11.0	12.5	11.0	9.5	10.0	9.5	7.0	7.5	1.0	.0	.5
7	15.5	11.5	13.5	9.5	7.0	8.5	9.0	7.5	8.0	2.0	1.0	1.5
8	16.0	13.5	14.5	8.0	5.0	6.5	9.0	7.5	8.0	3.0	1.5	2.0
9	17.0	14.0	15.5	7.0	4.5	6.0	8.5	6.5	7.5	2.0	.0	.5
10	17.0	12.5	14.5	7.5	4.5	6.0	8.0	6.5	7.0	.0	.0	.0
11	12.5	9.5	11.0	7.5	4.5	6.0	8.5	6.5	8.0	.5	.0	.0
12	12.0	11.0	11.0	10.0	6.5	7.5	6.5	2.5	4.0	1.5	.5	1.0
13	12.0	10.5	11.0	9.0	6.5	7.5	3.5	1.5	2.5	3.5	1.5	2.5
14	11.0	10.0	10.5	12.0	8.5	9.5	5.5	3.0	4.0	4.5	3.5	4.0
15	13.0	11.0	11.5	15.0	11.5	12.5	7.5	5.5	6.0	4.0	.0	1.0
16	13.5	11.0	12.0	14.0	11.0	12.5	8.5	7.5	7.5	.0	.0	.0
17	15.0	13.0	14.0	12.5	10.5	11.0	7.5	5.5	6.0	.0	.0	.0
18	16.0	14.0	15.0	12.0	10.5	11.5	6.0	4.5	5.0	.0	.0	.0
19	16.0	13.0	14.0	11.0	8.5	9.5	7.0	6.0	6.5	.0	.0	.0
20	14.0	13.5	14.0	10.0	7.5	9.0	7.0	6.0	6.5	.0	.0	.0
21	16.5	14.0	15.0	7.5	5.0	6.0	6.5	6.0	6.5	.0	.0	.0
22	16.0	12.5	14.5	7.5	4.5	6.0	6.0	4.0	4.5	.0	.0	.0
23	14.0	10.5	12.0	7.5	4.5	6.0	5.0	4.0	4.5	.0	.0	.0
24	13.0	9.5	11.0	8.0	5.5	6.5	5.0	4.0	4.5	.0	.0	.0
25	13.0	9.5	11.5	8.0	6.5	7.0	5.0	3.5	4.0	.5	.0	.0
26	13.0	11.0	11.5	6.5	3.5	5.0	4.5	1.5	2.5	.5	.0	.5
27	13.0	12.0	12.5	8.0	5.5	6.0	1.5	.0	.5	.0	.0	.0
28	13.0	11.0	12.0	13.0	8.0	11.5	1.0	.0	.5	.5	.0	.0
29	12.5	9.0	10.5	12.5	8.5	10.0	1.0	.0	.5	2.0	.0	1.0
30	12.0	10.0	11.0	8.5	6.0	7.0	.5	.0	.5	3.0	1.5	2.5
31	10.0	9.5	9.5	---	---	---	.5	.0	.0	3.5	1.5	2.5
MONTH	17.0	9.0	12.7	15.0	3.5	8.1	9.5	.0	5.1	4.5	.0	1.0

CONESTOGA RIVER BASIN

01576754 CONESTOGA RIVER AT CONESTOGA, PA

LOCATION.--Lat 39°56'47", long 76°22'05", Lancaster County, Hydrologic Unit 02050306, on left bank on SR 3030, 1,500 ft downstream from Little Conestoga Creek, 1.0 mi west of Conestoga, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--470 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR PA-86-2: 1985(M).

GAGE.--Water-stage recorder. Datum of gage is 180.45 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	391	1110	1020	e590	984	e900	2550	872	469	601	452	453
2	354	707	869	e600	801	e830	2220	900	449	394	432	438
3	399	477	787	e590	e640	e760	1980	750	431	320	409	411
4	372	418	744	e560	e600	e800	1850	740	415	354	393	390
5	321	399	8610	e500	e590	e850	1660	757	407	287	408	376
6	296	390	9480	e450	e560	1000	1540	738	400	284	460	369
7	274	366	2580	e430	e540	942	1880	742	1020	633	391	360
8	260	334	1870	e440	e520	1520	1670	1580	601	393	355	347
9	259	311	1550	e410	e460	1860	1380	1120	472	306	341	340
10	250	302	1380	e350	e420	4630	1320	809	454	283	328	327
11	240	300	1500	e330	e380	5460	1480	742	452	267	314	322
12	525	290	1260	e350	e400	3010	1280	756	829	259	335	315
13	1270	287	1070	e410	e420	2700	1450	746	952	245	323	315
14	504	331	1000	e430	e430	3660	2630	673	467	1080	416	306
15	377	330	969	e400	e460	4410	1580	654	422	4010	399	297
16	331	301	951	e320	489	3550	1520	637	396	804	316	296
17	304	293	888	e350	494	2400	1620	625	363	575	1030	301
18	297	386	821	e350	495	2090	1300	608	350	506	1550	1010
19	286	462	823	e250	529	1820	1210	597	337	498	654	546
20	415	344	833	e240	703	1890	1160	588	336	414	473	361
21	409	312	1630	e230	2430	2540	1070	574	327	399	435	330
22	400	283	1950	e250	3630	7010	1020	564	313	430	2880	346
23	364	273	1090	e260	2480	5870	982	546	302	725	2070	580
24	306	270	949	e300	1850	4920	945	532	284	1080	925	471
25	285	265	880	e320	1910	4280	922	579	274	539	738	367
26	279	255	e810	e360	1410	3690	895	1210	262	824	681	1570
27	263	256	e720	e380	1120	4360	856	821	270	780	610	1510
28	261	6180	e660	e1800	997	5840	831	651	635	1320	569	629
29	250	4920	e620	5190	---	6300	799	530	514	799	545	495
30	309	1380	e580	1850	---	4570	792	503	497	573	510	439
31	667	---	e580	1210	---	3030	---	488	---	495	470	---
TOTAL	11518	22532	49474	20500	26742	97492	42392	22632	13700	20477	20212	14617
MEAN	372	751	1596	661	955	3145	1413	730	457	661	652	487
MAX	1270	6180	9480	5190	3630	7010	2630	1580	1020	4010	2880	1570
MIN	240	255	580	230	380	760	792	488	262	245	314	296
CFSM	.79	1.60	3.40	1.41	2.03	6.69	3.01	1.55	.97	1.41	1.39	1.04
IN.	.91	1.78	3.92	1.62	2.12	7.72	3.36	1.79	1.08	1.62	1.60	1.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1994, BY WATER YEAR (WY)

	344	532	707	671	797	1097	884	792	485	523	389	445
MEAN	344	532	707	671	797	1097	884	792	485	523	389	445
MAX	651	751	1596	1119	1264	3145	2508	2148	1277	1202	659	1252
(WY)	1990	1994	1994	1991	1986	1994	1993	1989	1989	1988	1986	1987
MIN	231	257	276	343	323	366	274	397	223	192	191	233
(WY)	1993	1992	1990	1992	1992	1985	1985	1991	1991	1991	1987	1992

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1985 - 1994

ANNUAL TOTAL	321605	362288	
ANNUAL MEAN	881	993	638
HIGHEST ANNUAL MEAN			993
LOWEST ANNUAL MEAN			389
HIGHEST DAILY MEAN	9480	Dec 6	13500
LOWEST DAILY MEAN	149	Aug 31, Sep 2	89
ANNUAL SEVEN-DAY MINIMUM	166	Aug 27	106
INSTANTANEOUS PEAK FLOW		15900	Dec 6
INSTANTANEOUS PEAK STAGE		12.59	Dec 6
INSTANTANEOUS LOW FLOW		b225	Oct. 11
ANNUAL RUNOFF (CFSM)	1.87	2.11	1.36
ANNUAL RUNOFF (INCHES)	25.45	28.67	18.45
10 PERCENT EXCEEDS	1910	1960	1160
50 PERCENT EXCEEDS	474	546	433
90 PERCENT EXCEEDS	239	296	210

a Computed using estimated daily discharges.

b May have been lower during period of ice affect.

e Estimated.

CONESTOGA RIVER BASIN**01576754 CONESTOGA RIVER AT CONESTOGA, PA--Continued****WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1985 to current year.

INSTRUMENTATION.--Automatic pumping sampler used to collect storm-flow nutrient and sediment samples since October 1986.

REMARKS.--Water-quality sampling continued by the Susquehanna River Basin Commission, but since September 1993 the data are not stored in the USGS data base or published in this report. Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

PEQUEA CREEK BASIN

01576787 PEQUEA CREEK AT MARTIC FORGE, PA

LOCATION.--Lat 39°54'21, long 76°19'43", Lancaster County, Hydrologic Unit 02050306, on left bank 400 ft upstream from bridge on State Highway 324 at Martic Forge, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--148 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1977 to September 1981, February 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 227 ft, by barometer. February 1977 to September 1981, water-stage recorder at same site, datum 228.50 ft, by barometer.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	277	173	e145	242	e205	532	e274	167	191	114	102
2	93	154	162	176	e200	e200	481	e283	161	125	112	98
3	106	129	155	174	e180	e210	447	e236	157	119	104	95
4	97	122	152	e165	e175	222	426	e233	156	119	99	94
5	87	117	3110	e155	e175	247	397	e238	154	113	101	92
6	83	118	1020	e125	e170	335	384	e232	159	115	108	92
7	81	111	384	e130	e170	334	589	e233	188	156	98	89
8	81	107	318	e125	e170	857	e513	e498	158	119	93	87
9	79	106	281	e120	e115	632	e434	285	150	109	91	86
10	77	105	265	e115	e110	2260	e416	252	147	109	90	85
11	75	103	266	e120	e110	1510	e466	238	145	105	88	83
12	433	102	230	e130	e120	889	e403	241	167	102	91	82
13	283	102	218	e190	e145	1020	e457	240	282	100	91	82
14	121	110	212	e185	e150	1410	e828	223	152	516	94	81
15	108	106	210	e155	e125	1190	e497	219	143	670	111	80
16	102	100	204	e99	e130	819	e478	237	138	141	92	81
17	98	99	192	e100	e140	514	e510	215	137	120	542	82
18	98	107	190	e99	e150	449	e409	210	135	145	348	138
19	94	104	195	e82	182	414	e381	207	132	152	133	103
20	120	100	188	e83	577	548	e365	213	130	117	114	84
21	139	95	433	e80	1910	623	e337	205	127	111	111	82
22	120	94	340	e83	1410	1480	e321	198	127	113	442	92
23	106	93	232	e87	838	799	e309	192	122	118	226	155
24	101	94	216	e140	819	668	e298	190	122	118	139	105
25	98	93	210	e175	694	596	e290	192	121	107	123	90
26	97	91	200	e210	369	509	e282	222	119	115	131	682
27	96	97	e180	e215	e240	770	e270	244	122	126	118	233
28	95	1570	e145	e135	e200	854	e262	187	169	243	131	128
29	91	359	e140	e1000	---	1160	e252	180	134	144	115	111
30	112	200	e145	436	---	749	e249	176	147	115	111	102
31	258	---	e140	283	---	585	---	171	---	107	104	---
TOTAL	3728	5165	10506	5517	10016	23058	12283	7164	4468	4860	4465	3596
MEAN	120	172	339	178	358	744	409	231	149	157	144	120
MAX	433	1570	3110	1000	1910	2260	828	498	282	670	542	682
MIN	75	91	140	80	110	200	249	171	119	100	88	80
CFSM	.81	1.16	2.29	1.20	2.42	5.03	2.77	1.56	1.01	1.06	.97	.81
IN.	.94	1.30	2.64	1.39	2.52	5.80	3.09	1.80	1.12	1.22	1.12	.90

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

MEAN	153	148	222	381	275	376	298	208	165	141	119	138
MAX	363	235	339	773	647	744	558	276	266	220	167	403
(WY)	1980	1980	1994	1979	1979	1994	1993	1993	1978	1978	1978	1979
MIN	64.3	73.9	53.6	44.0	118	72.5	80.3	81.6	65.5	65.5	31.8	28.6
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981

SUMMARY STATISTICS

FOR 1994 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL TOTAL	94826	
ANNUAL MEAN	260	218
HIGHEST ANNUAL MEAN		296
LOWEST ANNUAL MEAN		64.5
HIGHEST DAILY MEAN	3110	Dec 5
LOWEST DAILY MEAN	75	Oct 11
ANNUAL SEVEN-DAY MINIMUM	80	Oct 5
INSTANTANEOUS PEAK FLOW	a5350	Dec 5
INSTANTANEOUS PEAK STAGE	b11.19	Jan 29
INSTANTANEOUS LOW FLOW	d75	Oct 9,10,11
ANNUAL RUNOFF (CFSM)	1.76	
ANNUAL RUNOFF (INCHES)	23.83	
10 PERCENT EXCEEDS	522	369
50 PERCENT EXCEEDS	152	147
90 PERCENT EXCEEDS	92	63

a Gage height 10.85 ft.

b Affected by backwater from ice.

c Site and datum then in use.

d But may have been lower Jan. 16, during an ice affected period.

e Estimated.

PEQUEA CREEK BASIN

01576787 PEQUEA CREEK AT MARTIC FORGE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977-81, 1992 to current year.

PERIOD OF DAILY RECORD.--

KJELDAL NITROGEN DISCHARGE: February 1977 to March 1979.

NITRITE PLUS NITRATE DISCHARGE: February 1977 to March 1979.

PHOSPHORUS DISCHARGE: February 1977 to March 1979.

DISSOLVED ORGANIC CARBON DISCHARGE: February 1977 to March 1979.

SUSPENDED ORGANIC CARBON DISCHARGE: February 1977 to March 1979.

SUSPENDED SEDIMENT DISCHARGE: February 1977 to March 1979.

COOPERATION.--Suspended-sediment samples analyzed by U.S. Geological Survey.

REMARKS.--Water-quality data collected for this station as part of the NAWQA program may be found on pages 268-271.

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	ALA- CHLOR TOTAL RECOVER (μG/L) (77825)	ALDRIN, TOTAL (μG/L) (39330)	ATRA- ZINE WATER REC (μG/L) (39630)
FEB										
17...	1000	1028	9813	e140	500	8.5	0.5	<0.08	<0.005	<0.2
MAY										
08...	0248	1028	9813	415	--	--	--	--	--	--
08...	0418	1028	9813	620	--	--	--	<0.08	<0.005	0.5
08...	0848	1028	9813	553	--	--	--	--	--	--
08...	1040	1028	9813	540	--	--	12.5	<0.08	<0.005	1.3
08...	1041	1028	9813	540	--	--	12.5	<0.08	<0.005	1.3
08...	2036	1028	9813	390	--	--	--	<0.08	<0.005	0.5
09...	1100	1028	9813	281	--	--	12.5	--	--	--
18...	2020	1028	9813	211	--	--	--	<0.08	<0.005	<0.2
26...	2118	1028	9813	270	--	--	--	--	--	--
27...	0018	1028	9813	323	--	--	--	0.21	<0.005	8.2
27...	0548	1028	9813	266	--	--	--	1.2	<0.005	3.4
27...	1345	1028	9813	239	--	--	--	0.77	<0.005	13
JUN										
07...	0759	1028	9813	177	--	--	--	--	--	--
07...	1059	1028	9813	197	--	--	--	--	--	--
07...	1329	1028	9813	224	--	--	--	0.09	<0.005	0.2
08...	1030	1028	9813	158	--	--	--	<0.08	<0.005	0.7
13...	0107	1028	9813	653	--	--	--	0.12	<0.005	1.2
13...	0407	1028	9813	447	--	--	--	0.53	<0.005	3.3
13...	0807	1028	9813	259	--	--	--	--	--	--
13...	1007	1028	9813	223	--	--	--	0.73	0.008	4.5
13...	1012	1028	9813	221	--	--	--	0.47	0.008	5.5
22...	1840	1028	9813	125	--	--	--	<0.08	<0.005	--
28...	1005	1028	9813	194	--	--	--	<0.08	<0.005	0.2
28...	1340	1028	9813	189	450	8.1	--	<0.08	<0.005	0.6
29...	0950	1028	9813	125	440	8.1	--	<0.08	<0.005	0.3
JUL										
01...	0021	1028	9813	312	--	--	--	6.7	<0.005	2.1
01...	0221	1028	9813	299	--	--	--	--	--	--
01...	0351	1028	9813	269	--	--	--	0.83	<0.005	1.3
01...	1200	1028	9813	162	370	--	--	<0.08	<0.005	3.1
01...	1201	1028	9813	162	370	--	--	0.17	<0.005	3.0
01...	1205	1028	80020	162	370	--	--	--	<0.040	E3.6
01...	1645	1028	9813	144	--	--	--	--	--	--
14...	1740	1028	9813	197	405	7.3	--	--	--	--
14...	1955	1028	9813	1040	250	7.5	--	1.3	<0.005	4.4
14...	2210	1028	9813	2610	275	7.5	--	--	--	--
14...	2230	1028	9813	2780	265	7.4	--	0.43	<0.005	1.7
15...	0120	1028	9813	2750	180	7.5	--	0.42	<0.005	2.5
15...	0915	1028	9813	507	240	7.4	--	0.09	<0.005	1.8
AUG										
08...	1055	1028	9813	92	430	8.0	--	<0.08	<0.005	<0.2
SEP										
08...	1125	1028	9813	88	--	--	--	<0.08	<0.005	<0.2

PEQUEA CREEK BASIN

01576787 PEQUEA CREEK AT MARTIC FORGE, PA--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CHLOR- DANE, TOTAL (μ G/L) (39350)	CYAN- AZINE TOTAL (μ G/L) (81757)	DI- ELDRIN TOTAL (μ G/L) (39380)	MALA- THION, TOTAL (μ G/L) (39530)	METOLA- CHLOR WATER WHOLE TOT. REC (μ G/L) (82612)	PRO- PAZINE TOTAL (μ G/L) (39024)	SIMA- ZINE TOTAL (μ G/L) (39055)	TOX- APHENE, TOTAL (μ G/L) (39400)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
FEB										
17...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	--	--
MAY										
08...	--	--	--	--	--	--	--	--	58	65
08...	<0.1	<0.40	<0.010	<0.16	1.4	<0.20	0.35	<1	--	--
08...	--	--	--	--	--	--	--	--	693	1030
08...	<0.1	<0.40	<0.010	<0.16	1.2	<0.20	0.25	<1	--	--
08...	<0.1	<0.40	<0.010	<0.16	0.40	<0.20	0.26	<1	156	227
08...	<0.1	0.54	<0.010	<0.16	1.2	<0.20	0.51	<1	--	--
09...	--	--	--	--	--	--	--	--	20	15
18...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	10	5.7
26...	--	--	--	--	--	--	--	--	26	19
27...	<0.1	0.92	<0.010	<0.16	8.6	<0.20	1.4	<1	203	177
27...	<0.1	2.3	<0.010	<0.16	2.8	<0.20	0.86	<1	127	91
27...	<0.1	4.5	0.010	<0.16	6.6	<0.20	5.4	<1	--	--
JUN										
07...	--	--	--	--	--	--	--	--	24	11
07...	--	--	--	--	--	--	--	--	26	14
07...	<0.1	<0.40	<0.010	<0.16	0.20	<0.20	0.28	<1	33	20
08...	<0.1	<0.40	<0.010	<0.16	0.59	<0.20	0.25	<1	24	10
13...	<0.1	1.3	<0.010	<0.16	0.53	<0.20	<0.20	<1	900	1590
13...	<0.1	3.3	<0.010	<0.16	1.3	<0.20	0.53	<1	2070	2500
13...	--	--	--	--	--	--	--	--	1370	958
13...	<0.1	4.9	<0.010	<0.16	5.7	<0.20	0.59	<1	1110	668
13...	<0.1	4.3	<0.010	<0.16	7.0	<0.20	0.57	<1	1140	680
22...	<0.1	<0.40	<0.010	<0.16	--	<0.20	--	<1	--	--
28...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	0.33	<1	75	39
28...	<0.1	<0.40	<0.010	<0.16	0.20	<0.20	0.30	<1	70	36
29...	<0.1	1.0	<0.010	<0.16	0.23	<0.20	0.20	<1	33	11
JUL										
01...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	--	--
01...	--	--	--	--	--	--	--	--	265	214
01...	<0.1	0.40	<0.010	<0.16	0.45	<0.20	0.97	<1	--	--
01...	<0.1	1.2	<0.010	<0.16	3.1	<0.20	<0.20	<1	180	79
01...	<0.1	1.1	<0.010	<0.16	3.0	<0.20	<0.20	<1	180	79
01...	<0.1	E1.1	<0.020	--	E3.1	--	E0.27	<2	180	79
01...	--	--	--	--	--	--	--	--	188	73
14...	--	--	--	--	--	--	--	--	97	52
14...	<0.1	1.9	<0.010	<0.16	1.1	<0.20	<0.20	<1	4310	12100
14...	--	--	--	--	--	--	--	--	7670	54100
14...	<0.1	2.5	<0.010	<0.16	2.7	<0.20	<0.20	<1	7280	54600
15...	<0.1	1.5	<0.010	<0.16	2.7	<0.20	<0.20	<1	3410	25300
15...	<0.1	1.5	<0.010	<0.16	1.1	<0.20	0.41	<1	1020	1400
AUG										
08...	<0.1	<0.40	<0.010	<0.16	0.21	<0.20	0.40	<1	11	2.7
SEP										
08...	<0.1	<0.40	<0.010	<0.16	<0.20	<0.20	<0.20	<1	7	1.7

MUDDY CREEK BASIN

01577300 MUDDY CREEK AT MUDDY CREEK FORKS, PA
(National water-quality assessment station)

LOCATION.--Lat 39°48'27", long 76°28'34", York County, Hydrologic Unit 02050306, on right bank on downstream side of highway bridge on SR 2069 at Muddy Creek Forks, and 100 ft downstream from confluence of North and South Forks.

DRAINAGE AREA.--71.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	95	207	149	155	184	351	134	e72	97	43	e47
2	37	61	186	e140	e139	182	313	121	e70	75	41	e45
3	43	52	172	e132	e127	191	288	118	e68	61	36	e44
4	35	48	172	e124	e117	174	262	125	e66	43	41	e43
5	32	49	1580	e116	e108	197	240	e126	e64	40	39	e42
6	31	46	536	e109	e101	206	230	e122	e62	39	32	e42
7	30	41	382	e103	e95	219	274	e142	e60	94	31	e41
8	30	38	320	e97	e89	417	208	e160	e58	46	30	e41
9	30	37	280	e92	e84	315	195	e140	e57	36	28	e40
10	28	36	263	e88	e79	1040	225	e128	e56	42	27	e40
11	30	36	253	e85	e75	491	206	e117	e55	33	37	e40
12	86	36	218	e81	e71	386	189	e112	e54	32	32	e39
13	57	36	205	e77	e68	470	302	e108	e54	29	40	e39
14	43	42	198	e74	e65	735	293	e105	e53	76	44	e38
15	40	37	e193	e72	e62	681	251	e104	e53	119	33	e39
16	37	34	e194	e75	e60	444	255	e101	e51	58	88	40
17	37	34	193	e90	e58	347	219	e98	e50	75	81	53
18	36	39	173	e130	e56	307	202	e96	49	138	54	39
19	35	34	167	e117	e70	297	195	e95	48	119	47	37
20	51	33	171	e105	541	373	185	95	46	97	67	37
21	50	31	160	e98	933	445	175	92	54	192	381	48
22	53	31	254	e92	582	651	167	88	53	119	106	99
23	41	31	199	e88	490	513	160	87	54	101	77	52
24	38	31	182	e84	642	452	157	84	65	67	67	46
25	37	30	171	e81	384	422	153	102	67	55	91	78
26	36	29	169	e78	291	356	147	110	56	62	68	71
27	37	35	161	e76	230	513	145	101	88	155	62	52
28	36	2330	191	e780	200	537	137	85	115	70	58	e51
29	34	381	170	e434	---	649	132	81	100	58	54	e48
30	56	260	153	224	---	512	132	78	118	50	51	e46
31	94	---	153	179	---	428	---	e77	---	45	50	---
TOTAL	1298	4053	8026	4270	5972	13134	6388	3332	1916	2323	1936	1417
MEAN	41.9	135	259	138	213	424	213	107	63.9	74.9	62.5	47.2
MAX	94	2330	1580	780	933	1040	351	160	118	192	381	99
MIN	28	29	153	72	56	174	132	77	46	29	27	37
CFSM	.58	1.88	3.60	1.92	2.97	5.89	2.96	1.49	.89	1.04	.87	.66
IN.	.67	2.10	4.15	2.21	3.09	6.80	3.31	1.72	.99	1.20	1.00	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

MEAN	41.9	135	259	138	213	424	213	107	69.2	63.3	58.0	46.4
MAX	41.9	135	259	138	213	424	213	107	74.6	74.9	62.5	47.2
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1993	1994	1994	1994
MIN	41.9	135	259	138	213	424	213	107	63.9	51.7	53.5	45.5
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1993	1993	1993

SUMMARY STATISTICS

FOR 1994 WATER YEAR

WATER YEARS 1993 - 1994

ANNUAL TOTAL	54065											
ANNUAL MEAN	148											
HIGHEST ANNUAL MEAN							148					1994
LOWEST ANNUAL MEAN							148					1994
HIGHEST DAILY MEAN	2330						2330					Nov 28 1993
LOWEST DAILY MEAN	27						27					Aug 10 1994
ANNUAL SEVEN-DAY MINIMUM	30						30					Oct 5 1993
INSTANTANEOUS PEAK FLOW	a9550						a9550					Nov 28 1993
INSTANTANEOUS PEAK STAGE	9.48						9.48					Nov 28 1993
INSTANTANEOUS LOW FLOW	23						23					Jul 14 1994
ANNUAL RUNOFF (CFSM)	2.06						2.06					
ANNUAL RUNOFF (INCHES)	27.97						27.97					
10 PERCENT EXCEEDS	331						262					
50 PERCENT EXCEEDS	85						67					
90 PERCENT EXCEEDS	36						35					

a From rating curve extended above 820 ft³/s.
e Estimated.

MUDDY CREEK BASIN

01577300 MUDDY CREEK AT MUDDY CREEK FORKS, PA--Continued
(National water-quality assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1994 to current year.

WATER TEMPERATURE: May 1994 to current year.

INSTRUMENTATION.--Daily record measured and collected with in-situ probes and electronic data logger.

REMARKS.--Due to the short period and interruptions in the record, the daily record for specific conductance and water temperature are not presented this year. Additional sites in the fixed-station network are shown in figure 10, page 111. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 2, page 116.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM- PLING METHOD, CODES (82398)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT											
19...	1305	1028	80020	15	3045	10	35	129	7.3	12.0	760
NOV											
03...	1200	1028	80020	15	3045	10	53	129	7.4	6.0	758
DEC											
15...	1315	1028	80020	15	3045	10	193	131	7.4	6.0	747
JAN											
11...	1240	1028	80020	15	3045	10	e85	128	8.1	0.0	765
FEB											
16...	1215	1028	80020	15	3045	10	e60	120	7.8	0.0	763
MAR											
30...	1400	1028	80020	15	3045	10	504	103	7.3	8.0	763
APR											
26...	1020	1028	80020	15	3045	10	148	118	7.8	14.0	756
MAY											
07...	1950	1028	80020	15	3045	10	142	116	7.5	11.5	747
11...	1030	1028	80020	15	3045	10	117	120	7.7	11.0	760
JUN											
15...	1100	1028	80020	15	3045	10	53	128	7.7	22.5	761
JUL											
12...	1240	1028	80020	15	3045	10	38	121	8.3	22.5	760
AUG											
11...	1110	1028	80020	15	3045	10	35	128	8.2	18.5	761

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	BICAR- BONATE WAT. DIS FET FIELD HCO3 (MG/L) (29804)
OCT												
19...	10.4	97	43	21	9.5	4.8	4.5	18	0.3	1.6	--	28
NOV												
03...	12.1	98	45	24	10	4.9	4.3	17	0.3	1.5	--	26
DEC												
15...	11.8	97	46	30	10	5.0	4.4	17	0.3	1.5	--	19
JAN												
11...	14.0	95	42	30	9.2	4.7	5.0	20	0.3	1.4	--	15
FEB												
16...	13.5	92	38	26	8.1	4.4	4.7	20	0.3	1.3	--	15
MAR												
30...	11.1	94	36	25	8.2	3.7	3.6	17	0.3	1.3	--	14
APR												
26...	10.5	102	38	23	8.4	4.2	4.1	18	0.3	1.2	--	18
MAY												
07...	10.0	93	37	24	8.0	4.2	4.0	18	0.3	2.8	--	17
11...	10.9	99	41	26	8.8	4.5	4.4	19	0.3	1.2	--	18
JUN												
15...	8.2	95	41	22	8.8	4.5	4.5	19	0.3	1.4	0.010	22
JUL												
12...	8.4	97	41	21	8.9	4.5	4.6	19	0.3	1.4	--	24
AUG												
11...	8.1	87	42	21	9.1	4.6	4.7	19	0.3	1.3	0.010	25

MUDDY CREEK BASIN

01577300 MUDDY CREEK AT MUDDY CREEK FORKS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT.DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N (00618)
OCT 19...	0	23	4.4	9.5	0.2	6.2	78	73	0.11	7.37	--
NOV 03...	0	22	5.8	10	0.1	6.4	77	75	0.10	11.0	--
DEC 15...	0	16	7.0	9.5	0.1	6.0	81	80	0.11	42.2	--
JAN 11...	0	12	5.7	11	<0.1	5.9	76	78	0.10	17.4	--
FEB 16...	0	12	5.5	11	<0.1	5.4	69	79	0.09	11.2	6.86
MAR 30...	0	11	8.9	7.8	<0.1	4.9	61	62	0.08	83.0	3.77
APR 26...	0	15	5.9	9.7	<0.1	4.8	70	69	0.09	28.0	4.99
MAY 07...	0	14	5.1	9.6	<0.1	5.5	82	68	0.11	31.4	--
11...	0	15	5.4	10	<0.1	5.7	78	71	0.11	24.6	--
JUN 15...	0	18	4.2	10	<0.1	6.1	84	70	0.11	12.1	4.49
JUL 12...	0	20	3.6	10	<0.1	5.3	69	67	0.09	7.08	--
AUG 11...	0	20	3.7	11	<0.1	4.8	74	73	0.10	7.05	--
DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS NO3 (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS NO2 (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4 (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L) AS N (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N (00623)	NITRO- GEN DIS- SOLVED (MG/L) AS N (00602)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)
OCT 19...	--	<0.010	--	4.30	<0.010	--	--	<0.20	<0.20	--	<0.010
NOV 03...	--	<0.010	--	4.30	0.020	0.03	--	<0.20	<0.20	--	<0.010
DEC 15...	--	<0.010	--	6.00	0.020	0.03	--	<0.20	<0.20	--	<0.010
JAN 11...	--	<0.010	--	6.20	<0.010	--	--	<0.20	<0.20	--	<0.010
FEB 16...	30	0.040	0.13	6.90	0.020	0.03	0.18	0.30	0.20	7.1	0.200
MAR 30...	17	0.030	0.10	3.80	0.040	0.05	--	<0.20	<0.20	--	0.030
APR 26...	22	0.010	0.03	5.00	0.020	0.03	--	<0.20	<0.20	--	<0.010
MAY 07...	--	<0.010	--	4.60	0.040	0.05	0.16	<0.20	0.20	4.8	<0.010
11...	--	<0.010	--	5.00	0.020	0.03	--	<0.20	<0.20	--	<0.010
JUN 15...	20	0.010	0.03	4.50	0.030	0.04	--	<0.20	<0.20	--	<0.010
JUL 12...	--	<0.010	--	3.80	0.020	0.03	--	<0.20	<0.20	--	<0.010
AUG 11...	--	<0.010	--	4.90	0.030	0.04	--	<0.20	<0.20	--	0.020

MUDDY CREEK BASIN

01577300 MUDDY CREEK AT MUDDY CREEK FORKS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 19...	<0.010	<0.010	--	47	10	--	3.8	0.2	3	0.28	67
NOV 03...	<0.010	<0.010	--	44	14	30	1.3	0.1	2	0.29	71
DEC 15...	<0.010	<0.010	--	26	11	40	0.8	0.2	15	7.8	70
JAN 11...	<0.010	<0.010	--	23	14	40	0.7	0.2	8	1.8	68
FEB 16...	0.200	0.180	0.55	13	10	30	1.5	0.3	18	2.9	88
MAR 30...	<0.010	<0.010	--	91	16	30	1.8	0.4	31	42	72
APR 26...	0.010	<0.010	--	16	11	50	1.0	--	5	2.0	95
MAY 07...	0.020	<0.010	--	18	16	30	1.1	0.3	14	5.4	82
JUN 11...	<0.010	<0.010	--	15	15	40	0.9	0.2	4	1.3	87
JUL 15...	<0.010	<0.010	--	17	11	20	1.1	0.5	10	1.4	--
AUG 12...	<0.010	<0.010	--	19	7	30	--	--	6	0.62	81
AUG 11...	0.020	<0.010	--	16	7	50	1.1	0.2	2	0.19	86

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC (MG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (MG/L) (39632)	DESETHYL ATRA- ZINE, WATER, DISS, REC (MG/L) (04040)	METO- LACHLOR WATER, DISSOLV (MG/L) (39415)	PRO- METON, WATER, DISS, REC (MG/L) (04037)	SI- MAZINE, WATER, DISS, REC (MG/L) (04035)
JUL 12...	1240	34	0.013	0.160	e 0.220	0.220	0.015	0.059

REMARKS.--The following table contains data from the fixed-site ecological survey. Two samples were taken at each site; one from a richest-targeted habitat (RTH), and the second from a depositional targeted habitat (DTH). This site was sampled 25 feet downstream from the bridge on SR 2069. The fixed-station sites are shown in figure 18, page 300. Data from all sites sampled for the fixed-station ecological survey may be found on pages 305-307.

Additional streams were sampled as part of an ecological synoptic survey. Only the richest-targeted habitat sample was taken at these sites. The synoptic sites are shown in figure 19, page 304. Data collected at synoptic sites can be found on pages 305-307.

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM VELOC-ITY, MEAN (F/S)	SPE-CIFIC CON-DUCT-ANCE (MG/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)
EFS07 -RTH	01577300	06-06-94	1200	1028	80020	2.02	122	--	18.0	--
EFS07 -DTH		06-06-94	1215	1028	80020	.317	122	--	18.0	--
EFS07		06-06-94	0940	1028	1028	--	114	6.3	17.5	756

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, SATUR-ATION (%)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HCO3)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CAC03)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQM)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM)
EFS07 -RTH	06-06-94	--	--	--	--	--	6.2	.9	220	230	10
EFS07 -DTH	06-06-94	--	--	--	--	--	26	4.2	1600	1800	200
EFS07	06-06-94	8.8	91	24	0	19	--	--	--	--	--

e Estimated.

POTOMAC RIVER BASIN

TONOLOWAY CREEK BASIN

01613050 TONOLOWAY CREEK NEAR NEEDMORE, PA

LOCATION.--Lat 39°53'54", long 78°07'57", Fulton County, Hydrologic Unit 02070004, on left bank 10 ft downstream from bridge on SR 3008, 0.2 mi upstream from Foster Creek, and 3.5 mi north of Needmore.

DRAINAGE AREA.--10.7 mi².

PERIOD OF RECORD.--Occasional discharge measurements and annual maximums, water years 1963-65. October 1965 to current year.

REVISED RECORDS.--WSP 2103: 1966-68(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 688.94 ft above sea level. Prior to Sept. 2, 1965, crest-stage gage at same site at datum 2.0 ft higher.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	6.3	e37	e2.3	e21	e17	41	50	2.8	.26	1.9	1.5
2	.74	4.3	e22	e2.3	e18	e15	32	46	2.4	.23	.63	1.0
3	.59	3.4	12	e3.0	e16	e16	28	37	2.3	.18	.44	.57
4	.45	2.9	15	e4.0	e15	e20	25	31	2.2	.27	.32	.60
5	.38	2.4	88	e3.9	e13	29	20	28	2.0	.22	.52	.56
6	.31	2.2	e60	e3.5	12	34	18	24	1.9	.17	.65	.56
7	.31	1.9	e40	e3.2	11	38	19	24	1.8	.39	.23	.32
8	.31	1.7	e25	e2.9	12	101	14	70	1.7	.20	.16	.25
9	.33	1.4	18	e2.7	16	103	13	54	1.7	.19	.12	.24
10	.32	1.2	22	e2.1	39	140	14	38	1.5	.14	.11	.28
11	.31	1.1	21	e1.5	e30	112	13	29	2.4	.12	.10	.20
12	1.7	1.0	17	e1.3	e20	71	12	24	1.9	.10	.10	.15
13	1.3	1.2	15	e1.6	e10	62	95	18	1.4	.09	.11	.12
14	.85	2.2	14	e2.5	e7.0	82	137	15	1.3	.10	.10	.12
15	.74	1.7	13	e3.5	e7.0	126	69	13	1.2	.11	.11	2.2
16	.68	1.4	11	e2.5	e9.0	134	51	12	1.9	.11	.10	2.3
17	.68	1.4	8.5	e1.7	11	77	37	10	1.5	.09	10	.78
18	.68	2.3	7.5	e2.2	14	56	30	9.0	.75	.30	8.7	.84
19	.73	1.9	8.0	e1.2	23	43	25	7.9	.56	.65	3.4	.59
20	2.8	1.8	7.1	e1.0	57	40	21	7.3	.37	.15	1.9	.32
21	2.7	1.6	7.1	e.60	142	54	18	6.7	.78	.11	1.2	.27
22	1.8	1.5	7.1	e.50	136	102	16	5.7	.64	.26	19	.35
23	1.3	1.4	6.1	e.40	99	135	14	5.1	.57	.98	10	2.3
24	1.1	1.3	e5.4	e.50	72	146	13	4.7	.87	.63	5.0	.94
25	1.1	1.3	e4.8	e2.0	55	133	12	5.7	1.5	.35	3.4	.68
26	.96	1.2	e4.1	e8.0	e35	74	11	7.9	.59	.30	3.5	1.3
27	.95	e20	e3.5	e25	e27	101	11	6.8	.84	.36	2.2	.98
28	1.0	e300	e3.1	e40	e20	117	8.9	4.7	.85	.71	1.6	.67
29	.97	e105	e2.8	63	---	109	11	4.4	.48	.35	1.5	.66
30	1.9	e60	e2.5	44	---	81	15	3.5	.33	3.5	1.1	.48
31	5.7	---	e2.4	e30	---	56	---	3.3	---	.48	.95	---
TOTAL	34.60	537.0	510.0	262.90	947.0	2424	843.9	605.7	41.03	12.10	79.15	22.13
MEAN	1.12	17.9	16.5	8.48	33.8	78.2	28.1	19.5	1.37	.39	2.55	.74
MAX	5.7	300	88	63	142	146	137	70	2.8	3.5	19	2.3
MIN	.31	1.0	2.4	.40	7.0	15	8.9	3.3	.33	.09	.10	.12
CFSM	.10	1.67	1.54	.79	3.16	7.31	2.63	1.83	.13	.04	.24	.07
IN.	.12	1.87	1.77	.91	3.29	8.43	2.93	2.11	.14	.04	.28	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY)

	6.07	10.4	14.9	12.5	21.8	27.7	24.3	17.4	9.66	4.08	2.13	2.71
MEAN	6.07	10.4	14.9	12.5	21.8	27.7	24.3	17.4	9.66	4.08	2.13	2.71
MAX	37.7	40.7	41.3	33.2	59.5	78.2	72.4	51.5	85.6	39.7	9.93	16.4
(WY)	1991	1986	1973	1991	1986	1994	1993	1988	1972	1989	1989	1975
MIN	.13	.65	1.35	.54	3.89	5.44	5.19	3.53	.38	.065	.000	.002
(WY)	1992	1983	1981	1981	1980	1990	1968	1976	1991	1966	1966	1991

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1966 - 1994

ANNUAL TOTAL	6623.25	6319.51	
ANNUAL MEAN	18.1	17.3	12.6
HIGHEST ANNUAL MEAN			21.5
LOWEST ANNUAL MEAN			5.21
HIGHEST DAILY MEAN	300	Nov 28	868
LOWEST DAILY MEAN	.00	Jul 18a	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 23	.00
INSTANTANEOUS PEAK FLOW		e700	c1300
INSTANTANEOUS PEAK STAGE		e8.4	9.17
INSTANTANEOUS LOW FLOW		.08	.00
ANNUAL RUNOFF (CFSM)	1.70	1.62	1.18
ANNUAL RUNOFF (INCHES)	23.03	21.97	16.06
10 PERCENT EXCEEDS	59	55	32
50 PERCENT EXCEEDS	3.3	2.7	4.9
90 PERCENT EXCEEDS	.14	.28	.31

a Also July 19, 24-28, Aug. 23-Sept. 3.

b No flow many days throughout period of record.

c From rating curve extended above 540 ft³/s on basis of contracted-opening measurement of peak flow.

e Estimated.

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 crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1994

Station name and number	Location and drainage area	Period of Record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
<u>SUSQUEHANNA RIVER BASIN</u>								
CHEMUNG RIVER BASIN								
Crooked Creek below Catlin Hollow at Middlebury Center, Pa. (01518420)	Lat 41°50'33", long 77°16'25", Tioga County, Hydrologic Unit 02050104, at single- span bridge on Township Route 586 at Middlebury Center. Drainage area is 74.3 mi ² .	1986-94	8-18-94	50.27	11,100	8-18-94	50.27	11,100
Cowanesque River at Elkland, Pa. (01519200)	Lat 41°59'15", long 77°18'09", Tioga County, Hydrologic Unit 02050104, at single- span steel-truss bridge on State Highway 49 at Elkland. Drainage area is 235 mi ² .	1980-94	8-18-94	28.76	22,800	8-18-94	28.76	22,800
TOWANDA CREEK BASIN								
South Branch Towanda Creek at New Albany, Pa. (01532200)	Lat 41°35'23", long 76°25'58", Bradford County, Hydrologic Unit 02050106, at bridge on Township Route 381, 0.1 mi below French Creek, 0.7 mi above Beaver Run, and 0.8 mi south of New Albany. Drain- age area is 13.3 mi ² .	1963-94	11-28-93	5.17	610	6-22-72	9.86	2,850
TUSCARORA CREEK BASIN								
Tuscarora Creek near Silvara, Pa. (01533250)	Lat 41°42'25", long 76°07'10", Bradford County, Hydrologic Unit 02050106, at single-span bridge on Township Route 510, 1.0 mi northeast of Silvara, 1.1 mi above Mill Creek, and 4.6 mi upstream from mouth. Drainage area is 11.8 mi ² .	1963-94	11-28-93	7.03	677	6-22-72	13.07	1,610
WEST BRANCH SUSQUEHANNA RIVER BASIN								
Wilson Run at Pen- field, Pa. (01542720)	Lat 41°12'58", long 78°35'00", Clearfield County, Hydro- logic Unit 02050201, at wood- en bridge 200 ft north of State Highway 153, 0.7 mi upstream from mouth, and 0.8 mi northwest of Penfield. Drainage area is 8.3 mi ² .	1962-94	3-25-94	3.12	215	3-10-64	4.39	592
First Fork Sinnemahoning Creek at Wharton, Pa. (01543700)	Lat 41°31'08", long 78°01'40", Potter County, Hydrologic Unit 02050202, 50 ft up- stream from bridge on State Highway 872, and 0.8 mi southwest of Wharton. Drainage area is 182 mi ² .	1968-80* 1982* 1984-94	11-28-93	11.15	6,870	2-14-84	12.16	9,810

* Operated as a low-flow partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations during water year 1994--Continued

			<u>Water year 1994 maximum</u>			<u>Period of record maximum</u>		
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>SUSQUEHANNA RIVER BASIN--Continued</u>								
WEST BRANCH SUSQUEHANNA RIVER BASIN--Continued								
West Branch Susquehanna River at Lock Haven, Pa. (01545800)	Lat 41°08'17", long 77°26'32", Clinton County, Hydrologic Unit 02050203, on right bank 1250 ft downstream from Jay Street bridge, and 2.1 mi upstream from Bald Eagle Creek. Drainage area is 3,345 mi ² .	1975-94	11-28-93	a18.30	60,700	9-26-75	22.92	91,500
Muncy Creek near Muncy, Pa. (01553005)	Lat 41°12'27", long 76°45'09", Lycoming County, Hydrologic Unit 02050206, 1,900 ft downstream from Little Muncy Creek, 2,300 ft upstream from bridge on State Highway 405, and 2.2 mi east of Muncy. Drainage area is 209 mi ² .	1989-94	11-28-93	14.68	8,210	11-28-93	14.68	8,210
White Deer Hole Creek near Elims- port, Pa. (01553050)	Lat 41°07'08", long 77°04'02", Lycoming County, Hydrologic Unit 02050206, at bridge on SR 2002, 2.5 mi west of Elims- port, and 12.5 mi upstream from mouth. Datum of gage is 650.84 ft above sea level. Drainage area is 18.2 mi ² .	1961-94	11-28-93	b3.68	1,050	6-22-72	11.83	4,200
JUNIATA RIVER BASIN								
Aughwick Creek near Shirleys- burg, Pa. (01564512)	Lat 40°16'55", long 77°53'27", Huntingdon County, Hydrologic Unit 02050304, on left bank 0.2 mi upstream from Sugar Run, and 1.2 mi southwest of Shirleysburg. Drainage area is 301 mi ² .	1990-94	11-28-93	15.19	11,500	11-28-93	15.19	11,500
Juniata River at Lewistown, Pa. (01564895)	Lat 40°35'40", long 77°34'58", Mifflin County, Hydrologic Unit 02050304, on left bank 1200 ft upstream from bridge on U.S. Highway 103, and 0.4 mi upstream from Kishaco- quillas Creek. Datum of gage is 443.83 ft above sea level. Drainage area is 2,519 mi ² .	1989-94	3-25-94	21.43	40,200	3-25-94	21.43	40,200
Kishacoquillas Creek at Reedsville, Pa. (01565000)	Lat 40°39'17", long 77°35'00", Mifflin County, Hydrologic Unit 02050304, on left bank 150 ft downstream from bridge on old U.S. Highway 322, and 1.0 mi southeast of Reeds- ville. Datum of gage is 551.23 ft above sea level. Drainage area is 164 mi ² .	1940-70‡ 1984-85‡ 1982-87* 1989-94	11-28-93	9.30	3,880	11-25-50	13.12	c9,830
CONODOGUINET CREEK BASIN								
Newburg Run at Newburg, Pa. (01569340)	Lat 40°07'40", long 77°32'50", Cumberland County, Hydrologic Unit 02050305, at concrete bridge on State Highway 696, 0.4 mi upstream from mouth, and 0.8 mi south of Newburg. Drainage area is 5.29 mi ² .	1964-94	11-28-93	b5.47	1,010	7-27-69	8.6	5,000

‡ Operated as a continuous-record station.

* Operated as a low-flow partial-record station.

a Maximum gage-height of 18.51 ft occurred during an ice jam on Feb. 23, 1994.

b Using auxiliary gage.

c Flood of 1936 reached a stage of about 14.1 ft, discharge, 11,500 ft³/s; flood of June 23, 1972 reached 16.17 ft from floodmarks, discharge, 16,400 ft³/s.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations during water year 1994--Continued

Station name and number	Location and drainage area	Period of Record	<u>Water year 1994 maximum</u>			<u>Period of record maximum</u>		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
<u>SUSQUEHANNA RIVER BASIN--Continued</u>								
CONESTOGA RIVER BASIN								
Stony Run at Reamstown, Pa. (01576320)	Lat 40°12'44", long 76°07'30", Lancaster County, Hydrologic Unit 02050306, at single-span bridge on SR 1051, 0.1 mi southeast of U.S. Highway 222, 0.1 mi northwest of Reamstown, and 0.7 mi up- stream from mouth. Drainage area is 3.55 mi ² .	1964-94	6-27-94	6.56	898	6-16-82	7.80	1,220
CONOWINGO CREEK BASIN								
Conowingo Creek near Buck, Pa. (01578200)	Lat 39°50'35", long 76°11'45", Lancaster County, Hydrologic Unit 02050306, at concrete bridge on SR 3008, 2.0 mi upstream from Jackson Run, and 2.5 mi southeast of Buck. Drainage area is 8.71 mi ² .	1963-94	12-05-93	6.35	520	7-01-84	13.50	6,200

d From floodmark; farm pond failure upstream.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Miscellaneous sites

Discharge measurements made at miscellaneous sites during water year 1994

Discharge measurements at miscellaneous sites during water year 1994						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SUSQUEHANNA RIVER BASIN						
SUGAR CREEK BASIN						
01531490 Sugar Creek	Susquehanna River	Lat 41°47'27", long 76°27'45", Bradford County, Hydrologic Unit 02050106, at steel-truss bridge in North Towanda, and 0.8 mi upstream from mouth.	188	1989-93	10-06-93	13
					12-03-93	136
					4-04-94	1,370
					4-26-94	107
					6-17-94	119
					9-07-94	44
WYALUSING CREEK BASIN						
01532950 Wyalusing Creek	Susquehanna River	Lat 41°41'49", long 76°13'52", Bradford County, Hydrologic Unit 02050106, at concrete bridge on State Highway 706, 2.8 mi north of Wyalusing, and 3.0 mi upstream from mouth.	215	1989-93	10-06-93	57
					12-03-93	424
					4-04-94	2,410
					4-26-94	196
					6-15-94	479
					9-07-94	86
NESCOPECK CREEK BASIN						
01538600 Nescopeck Creek	Susquehanna River	Lat 41°02'46", long 76°13'28", Luzerne County, Hydrologic Unit 02050107, at bridge on State Highway 339, just downstream from railroad bridge at Nescopeck.	171	1949-50 1982-87 1989-91 1993	10-05-93	148
					11-15-93	194
					4-20-94	829
					6-15-94	284
					8-10-94	117
					8-30-94	480
FISHING CREEK BASIN						
01539700 Little Fishing Creek	Fishing Creek	Lat 41°02'25", long 76°29'01", Columbia County, Hydrologic Unit 02050107, 100 ft upstream from covered bridge on Township Route 493, 1.6 mi upstream from mouth, and 2.8 mi northwest of Bloomsburg.	66.5	1991* 1992-93	10-05-93	35
					11-16-93	33
					3-29-94	767
					4-20-94	116
					6-16-94	37
					8-23-94	269
WEST BRANCH SUSQUEHANNA RIVER BASIN						
SINNEMAHOING CREEK BASIN						
01542790 Bennett Branch	Sinnemahoning Creek	Lat 41°20'02", long 78°08'10", Cameron County, Hydrologic Unit 02050202, at bridge on Township Route 343 at Drift- wood and 1000 ft upstream from mouth.	365	1975-93	4-19-94	1,140
					8-09-94	78
BALD EAGLE CREEK BASIN						
01548075 Fishing Creek	Bald Eagle Creek	Lat 41°04'31", long 77°28'40", Clinton County, Hydrologic Unit 02050204, at bridge on SR 2004, 1,700 ft south of Cedar Springs (Hill St.), and 4.5 mi upstream from mouth.	137	1989-93	3-29-94	1,350
					6-03-94	101
01548085 Bald Eagle Creek	West Branch Susquehanna River	Lat 41°07'35", long 77°26'00", Clinton County, Hydrologic Unit 02050204, at steel-truss bridge on SR 2012 at Castanea, and 1.8 mi upstream from mouth.	768	1988-89 1991-93	3-29-94	5,760
					4-28-94	1,160
					6-03-94	621
					7-20-94	382
PINE CREEK BASIN						
01548248 Pine Creek	West Branch Susquehanna River	Lat 41°44'37", long 77°26'03", Tioga County, Hydrologic Unit 02050205, at concrete bridge on forest road at Ansonia, 1,500 ft upstream from mouth, and 7.0 mi west of Wellsboro.	274	1989-93	4-14-94	3,060
					5-19-94	217
					9-09-94	201
01548351 Marsh Creek	Pine Creek	Lat 41°44'48", long 77°25'40", Tioga County, Hydrologic Unit 02050205, at bridge on State Highway 6 at Ansonia, 1,300 ft upstream from mouth, and 7.0 mi west of Wellsboro.	81.6	1989-93	10-14-93	8.9
					12-08-93	137
					5-19-94	50
					7-07-94	135
					9-09-94	51
01549590 Little Pine Creek	Pine Creek	Lat 41°21'06", long 77°21'18", Lycoming County, Hydrologic Unit 02050205, at bridge at Little Pine State Park campground, 0.2 mi downstream from Little Pine Dam, and 3.4 mi upstream from mouth and Waterville.	172	1987-90 1992-93	12-09-93	400
					5-09-94	227
					7-19-94	85

* Operated as a low-flow partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Miscellaneous sites

Discharge measurements made at miscellaneous sites during water year 1994

Stream	Tributary to	Location	Drainage area (mi ²)	previously Measured (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SUSQUEHANNA RIVER BASIN--Continued						
WHITE DEER CREEK BASIN						
01553150 White Deer Creek	West Branch Susquehanna River	Lat 41°04'29", long 76°52'22", Union County, Hydrologic Unit 02050206, at concrete bridge on SR 1011 at White Deer, and 0.5 mi upstream from mouth.	46.9	1945 1989-93	12-20-93 4-08-94 5-24-94 7-08-94	76 512 42 16
PENNS CREEK BASIN						
01555207 Middle Creek	Penns Creek	Lat 40°47'27", long 76°55'24", Snyder County, Hydrologic Unit 02050301, at double-span concrete bridge on Creek Road (T-460), 1.8 mi north of Kantz, and 2.2 mi northeast of Freeburg.	155	1989-93	10-06-93 11-16-93 4-21-94 6-16-94 8-11-94	25 53 338 64 47
JUNIATA RIVER BASIN						
01555858 Beaverdam Branch Juniata River	Frankstown Branch Juniata River	Lat 40°25'27", long 78°23'37", Blair County, Hydrologic Unit 02050302, at bridge on Plank Road in Hollidaysburg, 1.5 mi downstream from Blair Gap Run, and 2.2 mi upstream from mouth.	83.0	1982-93	10-05-93 11-15-93 3-03-94 4-14-94 6-07-94 8-04-94	25 69 164 542 41 19
01566000 Tuscarora Creek	Juniata River	Lat 40°30'55", long 77°25'10", Juniata County, Hydrologic Unit 02050304, at single-span bridge on SR 3008, 2.0 mi southwest of Port Royal, and 3.5 mi upstream from mouth. Datum of gage is 420.47 ft above sea level.	214	1911-58‡ 1982-91‡ ^a 1988-90b 1992-93	10-15-93 11-19-93 11-30-93 3-29-94 5-31-94	45 128 742 2,760 81
CONODOGUINET CREEK BASIN						
01569500 Conodo- guinet Creek	Susquehanna River	Lat 40°11'59", long 77°21'57", Cumber- land County, Hydrologic Unit 02050305, at bridge on Bridge Road (T-409), 2.6 mi east of Newville.	291	1992-93	11-10-93 3-29-94 6-07-94	114 3,620 217
01570280 Conodo- guinet Creek	Susquehanna River	Lat 40°16'38", long 76°57'00", Cumber- land County, Hydrologic Unit 02050305, at bridge on Oyster Mill Road at Enola, Enola, 0.2 mi downstream from Holtz Run, and 4.7 mi upstream from mouth.	501	1989-93	11-10-93 3-31-94 6-07-94	220 3,920 336
CHICKIES CREEK BASIN						
01575900 Chickies Creek	Susquehanna River	Lat 40°03'46", long 76°30'57", Lancaster County, Hydrologic Unit 02050306, at double-span concrete bridge on State Highway 23, 400 feet downstream from Little Chickies Creek, and 1.2 mi East of Marietta.	108	1989-93	10-07-93 11-23-93 2-04-94 4-05-94 6-02-94 7-14-94 9-21-94	51 67 108 372 75 49 72
PEQUEA CREEK BASIN						
‡01576787c Pequea Creek	Susquehanna River	Lat 39°54'21", long 76°19'43, Lancaster County, Hydrologic Unit 02050306, at bridge on State Highway 324 at Martic Forge, and 3.4 mi upstream from mouth.	148	1977-81‡ 1989-93	10-18-93 11-23-93 2-04-94 2-18-94 3-28-94 3-30-94 6-14-94 7-21-94 7-29-94 9-21-94	97 91 206 186 785 692 142 107 123 83
MUDDY CREEK BASIN						
01577500 Muddy Creek	Susquehanna River	Lat 39°46'21", long 76°18'58", York County, Hydrologic Unit 02050306, at bridge on Paper Mill Road (SR 2024), 0.8 mi northeast of Castle Fin, 1.1 mi 1.1 mi east of the intersection of SR 2024 and State Highway 74, and 3.4 mi upstream from mouth.	133	1929-38‡ 1968-71‡ 1983-91‡ ^a 1992-93	10-08-93 11-24-93 2-03-94 4-05-94 5-31-94 7-12-94 7-26-94 9-16-94	78 75 178 422 144 77 92 71

‡ Operated as a continuous-record gaging station.

* Operated as a low-flow partial-record station.

a Most years during period.

b Operated as a crest-stage partial-record station.

c Also a water-quality station; data collected as part of the NAWQA program may be found on pages 268-271.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Miscellaneous sites

Discharge measurements made at miscellaneous sites during water year 1994

Discharge measurements made at miscellaneous sites during water year 1994						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
<u>SUSQUEHANNA RIVER BASIN--Continued</u>						
OCTORARO CREEK BASIN						
01578475d Octoraro Creek	Susquehanna River	Lat 39°42'24", long 76°06'56", Cecil County, Hydrologic Unit 02050306, at single-span steel-truss bridge on New Bridge Road, 1.0 mi south of PA-MD state line, 1.3 mi northeast of Rich- ardsmere, and 2.5 mi east of Rock Springs, Md.	177	1989-93	10-12-93	182
					11-22-93	56
					2-22-94	2,070
					3-30-94	1,120
					5-31-94	201
					7-13-94	61
					7-29-94	222
					9-20-94	60
<u>POTOMAC RIVER BASIN</u>						
NORTH BRANCH POTOMAC RIVER BASIN						
WILLS CREEK BASIN						
01600700 Little Wills Creek	Wills Creek	Lat 39°55'35", long 78°39'40", Bedford County, Hydrologic Unit 02070002, at double-span concrete bridge on State Highway 96 at Bard, 2.5 mi upstream from Wolf Camp Run, 9.5 mi upstream from mouth, and 11 mi southwest of Bedford.	10.2	1961-81b 1970-91*a 1992-93	10-14-93	0.42
					12-01-93	16
					3-21-94	61
					4-21-94	14
					6-08-94	.93
					8-01-94	1.7
					EVITTS CREEK BASIN	
01603500 Evitts Creek	North Branch Potomac River	Lat 39°47'23", long 78°38'48", Bedford County, Hydrologic Unit 02070003, on left bank 2.0 mi upstream from Thomas W. Koon Dam, 3.0 mi south of Center- ville and at mile 16.3.	30.2	1933-82‡ 1993 discontinued	10-13-93	5.5
					12-02-93	47
					3-02-94	58
					4-21-94	58
					6-08-94	6.7
					8-01-94	5.0
					9-24-94	4.5
POTOMAC RIVER BASIN						
LICKING CREEK BASIN						
01613500 Licking Creek	Potomac River	Lat 39°43'23", long 78°03'38", Franklin County, Hydrologic Unit 02070004, at bridge on State Highway 456, 200 feet north of PA-MD state line, 3.0 mi southwest of Sylvan, and 10 mi up- stream from mouth.	158	1930-41‡ 1983-91*a 1992-93	10-14-93	16
					12-02-93	282
					3-30-94	1,460
					6-03-94	48
					8-04-94	37
MONOCACY RIVER BASIN						
01638950 Rock Creek	Monocacy River	Lat 39°46'20", long 77°12'32", Adams County, Hydrologic Unit 02070009, at double-span concrete bridge on Town- ship Route 411 (Solomon Road), 1.2 mi west of the intersection of State Highway 134 and U.S. Highway 15, and near Barlow.	23.5	1989-93	10-04-93	15
					11-15-93	60
					2-28-94	103
					4-04-94	51
					5-27-94	27
					7-19-94	3.2
					9-16-94	2.9

‡ Operated as a continuous-record gaging station.

* Operated as a low-flow partial-record station.

a Most years during period.

b Operated as a crest-stage partial-record station.

d Water-quality data collected as part of the NAWQA program may be found on pages 277-280.

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS

Water-quality partial-record stations are particular sites where chemical-quality, biological, or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are usually collected less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

OCTORARO CREEK BASIN

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)							
OCT 1993							
19...	0930	1028	80020	7.9	308	7.2	12.0
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)							
OCT 1993							
19...	1145	1028	80020	5.9	328	7.2	12.5
DATE		OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY WAT WH TOT IT FIELD (G/L AS CACO3) (00419)	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)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)							
OCT 1993							
19...	9.8	46	0.020	9.80	0.030	0.030	
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)							
OCT 1993							
19...	11.8	66	0.040	8.10	0.340	0.090	

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES**LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT****SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND VOLATILE ORGANIC COMPOUNDS, IN STREAM BASE FLOW****CEDAR RUN BASIN**

The tables on the following pages contain data from a synoptic survey of stream base flow in the Cedar Run Basin. Cedar Run is a tributary to the Yellow Breeches Creek, about 3 mi upstream from the mouth. The survey was conducted on May 3, 1994. Water-quality samples from four stream sites were collected and analyzed for nutrients, common ions, and volatile organic compounds. The survey was designed to determine the occurrence and variability of nutrient and volatile organic compound concentrations within the basin. Figure 11, page 262, is provided to show the location of the sample sites CEDAR01 through CEDAR04, and CEDARFS. Table 3, pages 263-264, shows the complete list of volatile organic compounds analyzed and their corresponding reporting levels.

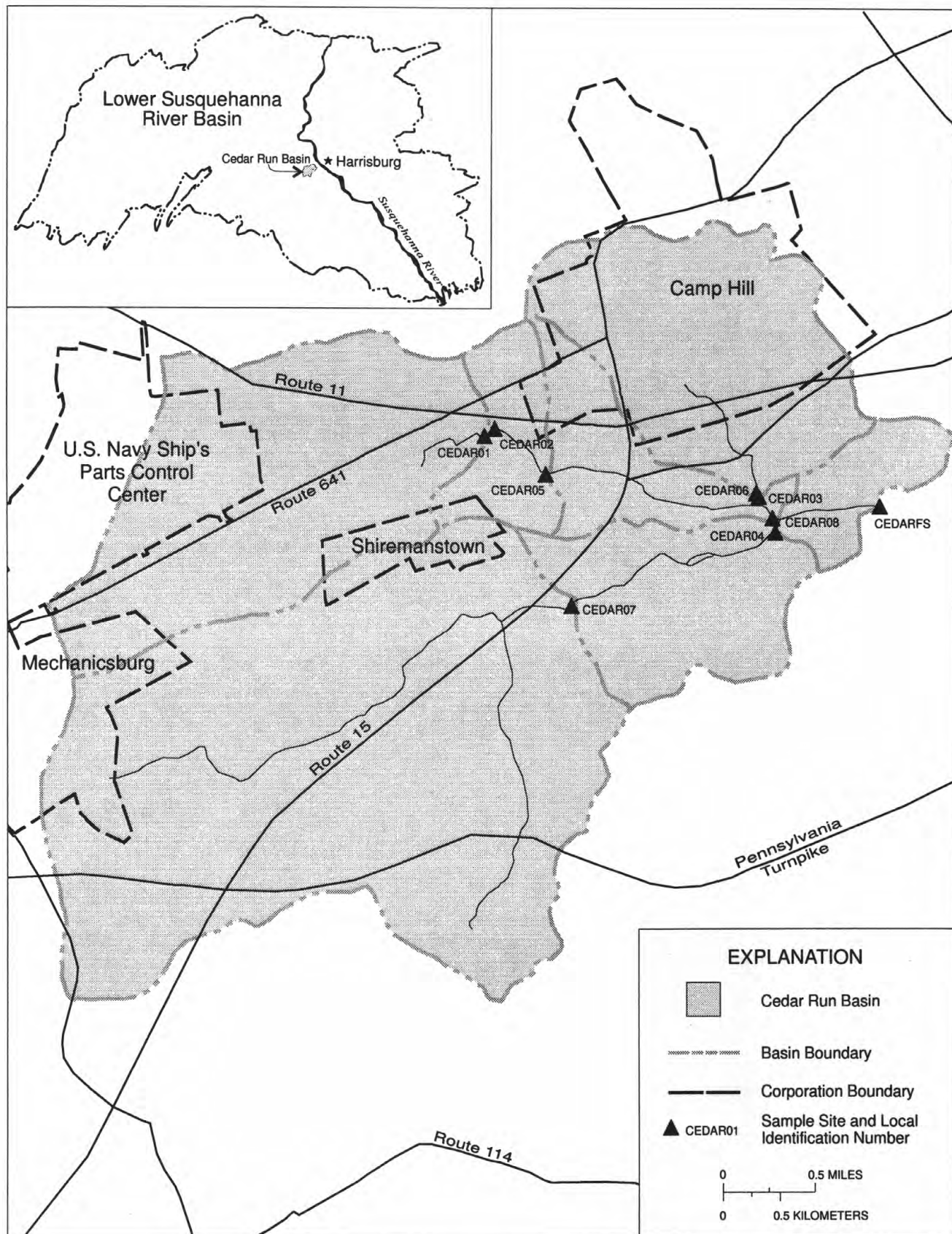


Figure 11. Location and local identification number of synoptic sample-collection sites in the Cedar Run Basin.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND VOLATILE ORGANIC COMPOUNDS, IN STREAM BASE FLOW

CEDAR RUN BASIN--Continued

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE

REMARKS.--Selected water samples from the Cedar Run Basin were analyzed for 60 volatile organic compounds. The table below lists the compounds on the Volatile Organic Compound schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. Users of these data should use the parameter code as a cross-reference to the water-quality table. Only compounds measured at or above the reporting level for one or more samples are listed in the water-quality table following this schedule.

BENZENE ($\mu\text{G/L}$) (34030)	BENZENE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77613)	BENZENE, 1,2,4,- TRICHLORO- ($\mu\text{G/L}$) (34551)	BENZENE, 1,2,4- TRIMETHYL- (PSEUDOCUMENE) ($\mu\text{G/L}$) (77222)	BENZENE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34536)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1,3,5- TRIMETHYL- (MESITYLENE) ($\mu\text{G/L}$) (77226)	BENZENE, 1,3- DICHLORO- ($\mu\text{G/L}$) (34586)	BENZENE, 1,4- DICHLORO- ($\mu\text{G/L}$) (34571)	BENZENE, 1-CHLORO- 2-METHYL- (O-CHLORO -TOLUENE) ($\mu\text{G/L}$) (77275)	BENZENE, 1-CHLORO- 4-METHYL- (TOLUENE, P-CHLOR) ($\mu\text{G/L}$) (77277)
0.2	0.2	0.2	0.2	0.2
BENZENE, ISOPROPYL ($\mu\text{G/L}$) (77223)	BENZENE, BROMO- ($\mu\text{G/L}$) (81555)	BENZENE, CHLORO- ($\mu\text{G/L}$) (34301)	BENZENE, DIMETHYL- (XYLENE) ($\mu\text{G/L}$) (81551)	BENZENE, ETHYL- ($\mu\text{G/L}$) (34371)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1-METHYL- 4-ISOPROPYL (ISOPROPYL TOLUENE) ($\mu\text{G/L}$) (77356)	BENZENE, METHYL- (TOLUENE) ($\mu\text{G/L}$) (34010)	BENZENE, n-BUTYL- ($\mu\text{G/L}$) (77342)	BENZENE, n-PROPYL- ($\mu\text{G/L}$) (77224)	BENZENE, sec-BUTYL- ($\mu\text{G/L}$) (77350)
0.2	0.2	0.2	0.2	0.2
BENZENE, tert-BUTYL- ($\mu\text{G/L}$) (77353)	ETHANE, 1,1,1,2- TETRACHLORO- ($\mu\text{G/L}$) (77562)	ETHANE, 1,1,1- TRICHLORO- ($\mu\text{G/L}$) (34506)	ETHANE, 1,1,2,2- TETRACHLORO- ($\mu\text{G/L}$) (34516)	ETHANE, 1,1,2- TRICHLORO- ($\mu\text{G/L}$) (34511)
0.2	0.2	0.2	0.2	0.2
ETHANE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34496)	ETHANE, 1,2- DIBROMO- (EDB) ($\mu\text{G/L}$) (77651)	ETHANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (32103)	ETHANE, CHLORO- ($\mu\text{G/L}$) (34311)	ETHANE, TRICHLOROTRIFLUORO- (FREON-113) ($\mu\text{G/L}$) (77652)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34501)	ETHYLENE, CHLORO- (VINYL CHLORIDE) ($\mu\text{G/L}$) (39175)	ETHYLENE, cis-1,2- DICHLORO- ($\mu\text{G/L}$) (77093)	ETHYLENE, TETRACHLORO- ($\mu\text{G/L}$) (34475)	ETHYLENE, trans-1,2 DICHLORO- ($\mu\text{G/L}$) (34546)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, TRICHLORO- ($\mu\text{G/L}$) (39180)	HEXACHLORO- BUTADIENE ($\mu\text{G/L}$) (39702)	METHANE, BROMO- ($\mu\text{G/L}$) (34413)	METHANE, BROMOCHLORO- ($\mu\text{G/L}$) (77297)	METHANE, CHLORO- (METHYL CHLORIDE) ($\mu\text{G/L}$) (34418)
0.2	0.2	0.2	0.2	0.2

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND VOLATILE ORGANIC COMPOUNDS, IN STREAM BASE FLOW

CEDAR RUN BASIN--Continued

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE--continued

METHANE, DIBROMO- ($\mu\text{G/L}$) (30217)	METHANE, DIBROMOCHLORO- ($\mu\text{G/L}$) (32105)	METHANE, DICHLORO- (METHYLENE CHLORIDE) ($\mu\text{G/L}$) (34423)	METHANE, DICHLOROBROMO- ($\mu\text{G/L}$) (32101)	METHANE DICHLORODIFLUORO- ($\mu\text{G/L}$) (34668)
0.2	0.2	0.2	0.2	0.2
METHANE, TETRACHLORO- (CARBON TETRACHLORIDE) ($\mu\text{G/L}$) (32102)	METHANE, TRIBROMO- (BROMOFORM) ($\mu\text{G/L}$) (32104)	METHANE, TRICHLORO- (CHLOROFORM) ($\mu\text{G/L}$) (32106)	METHANE, TRICHLOROFLUORO- ($\mu\text{G/L}$) (34888)	PROPENE 2-METHOXY-2-METHYL (METHYL ETHER TERT-BUTYL) ($\mu\text{G/L}$) (78032)
0.2	0.2	0.2	0.2	0.2
NAPTHELENE ($\mu\text{G/L}$) (34696)	PROPANE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77443)	PROPANE, 1,2- DIBROMO-3- CHLORO-(DBCP) ($\mu\text{G/L}$) (82625)	PROPANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34541)	PROPANE, 1,3- DICHLORO- ($\mu\text{G/L}$) (77173)
0.2	0.2	1.0	0.2	0.2
PROPANE, 2,2- DICHLORO- ($\mu\text{G/L}$) (77170)	PROPENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (77168)	PROPENE, cis-1,3- DICHLORO- ($\mu\text{G/L}$) (34704)	PROPENE, trans-1,3- DICHLORO- ($\mu\text{G/L}$) (34699)	STYRENE ($\mu\text{G/L}$) (77128)
0.2	0.2	0.2	0.2	0.2

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND VOLATILE ORGANIC COMPOUNDS IN STREAM BASE FLOW

CEDAR RUN BASIN--Continued

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; $\mu\text{S}/\text{CM}$: microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; $\mu\text{G}/\text{L}$: micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. Sites in this synoptic-survey network are shown in figure 11, page 262. For a complete list of volatile organic compounds analyzed and their corresponding reporting levels, see table 3, page 263-264.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
CEDAR01	401351076565201	05-03-94	1340	UNNAMED NORTHERN TRIBUTARY TO CEDAR RUN AT SHIREMANSTOWN, PA
CEDAR02	401353076564801	05-03-94	1440	SPRING (SP CU-35) AT SHIREMANSTOWN, PA
CEDAR03	401333076550901	05-03-94	0850	UNNAMED TRIBUTARY TO UNNAMED NORTHERN TRIBUTARY AT EBERLYS MILL, PA
CEDAR04	401323076550301	05-03-94	1110	CEDAR RUN ABOVE UNNAMED NORTHERN TRIBUTARY AT EBERLYS MILL, PA
CEDARFS	01571490	05-03-94	1310	CEDAR RUN AT EBERLYS MILL, PA (FIXED STATION)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DRAIN-AGE AREA (SQ. MI.) (81024)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE ($\mu\text{S}/\text{CM}$) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)
CEDAR01	1028	80020	2.55	390	15	8010	70	1.1	686	7.5	14.0
CEDAR02	1028	80020	--	390	15	8010	70	1.3	704	7.1	13.0
CEDAR03	1028	80020	1.78	350	15	3045	10	5.5	770	7.5	12.5
CEDAR04	1028	80020	6.73	350	15	3045	10	16	644	7.8	12.5
CEDARFS	1028	80020	12.6	350	15	3045	10	22	670	8.2	14.0

LOCAL ID	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
CEDAR01	760	6.8	66	310	17	100	14	20	12	0.5	2.2
CEDAR02	760	3.9	37	300	64	97	14	26	16	0.7	2.1
CEDAR03	764	11.1	104	310	73	99	16	32	18	0.8	2.1
CEDAR04	764	11.4	107	270	59	90	11	21	14	0.6	2.1
CEDARFS	765	11.1	107	280	61	92	12	24	16	0.6	2.0

LOCAL ID	BICAR-BONATE WAT.DIS FET FIELD HCO_3 (MG/L) (29804)	CAR-BONATE WAT.DIS FET FIELD CO_3 (MG/L) (29807)	ALKA-LINITY WAT.DIS FIX END FIELD CACO_3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO_4) (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 SiO_2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (TONS PER AC-FT) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
CEDAR01	350	0	290	13	40	0.1	8.0	391	377	0.53
CEDAR02	290	0	240	36	55	0.2	6.9	392	390	0.53
CEDAR03	290	0	240	35	69	0.1	7.7	433	417	0.59
CEDAR04	260	0	210	29	51	<0.1	7.1	359	360	0.49
CEDARFS	270	0	220	30	55	0.1	6.9	359	371	0.49

LOCAL ID	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO_3) (71851)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO_2) (71856)	NITRO-GEN, NO_2+NO_3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH_4) (71846)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
CEDAR01	1.16	0.700	3.1	0.010	0.03	0.710	0.300	0.39	0.10	0.50
CEDAR02	1.38	--	--	<0.010	--	2.70	0.030	0.04	--	<0.20
CEDAR03	6.43	--	--	<0.010	--	2.70	0.030	0.04	--	<0.20
CEDAR04	15.4	4.99	22	0.010	0.03	5.00	0.030	0.04	--	<0.20
CEDARFS	21.0	3.99	18	0.010	0.03	4.00	0.030	0.04	--	<0.20

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND VOLATILE ORGANIC COMPOUNDS IN STREAM BASE FLOW

CEDAR RUN BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHODIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHODIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
CEDAR01	0.40	1.1	0.060	<0.010	<0.010	--	860	1400	172	0.51
CEDAR02	<0.20	--	0.030	0.020	<0.010	--	<3	24	118	0.41
CEDAR03	<0.20	--	<0.010	0.020	0.010	0.03	<3	11	114	1.7
CEDAR04	<0.20	--	<0.010	<0.010	<0.010	--	6	8	49	2.1
CEDARFS	<0.20	--	0.010	<0.010	<0.010	--	3	10	92	5.4

VOLATILE ORGANIC COMPOUNDS ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	BENZENE (MG/L) (34030)	BENZENE, 1,2,4- TRIMETHYL- (PSEUDO- CUMENE) (MG/L) (77222)	BENZENE, 1,3,5- TRIMETHYL- (MESIT- YLENE) (MG/L) (77226)	BENZENE, ISO- PROPYL (MG/L) (77223)	BENZENE, DIMETHYL- (XYLENE) (MG/L) (81551)	BENZENE, ETHYL- (MG/L) (34371)	BENZENE, 1-METHYL- 4-ISO- PROPYL (ISO- PROPYL TOLUENE) (MG/L) (77356)	BENZENE, METHYL- (TOLUENE) (MG/L) (34010)	BENZENE, N-BUTYL- (MG/L) (77342)
CEDAR01	24.0	0.7	0.6	3.8	5.2	3.0	0.3	1.3	0.6
CEDAR02	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
CEDAR03	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
CEDAR04	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
CEDARFS	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

LOCAL ID	BENZENE, N-PROPYL- (MG/L) (77224)	BENZENE, SEC- BUTYL- (MG/L) (77350)	ETHYLENE, TETRA- CHLORO- (MG/L) (34475)	ETHYLENE, TRI- CHLORO- (MG/L) (39180)	METHANE DI- CHLORO- DI- FLUORO- (MG/L) (34668)	METHANE, TRI- CHLORO- (CHLORO- FORM) (MG/L) (32106)	METHANE, TRI- CHLORO- FLUORO- (MG/L) (34488)	PROPENE 2-METHOXY 2-METHYL (METHYL ETHER TERT- BUTYL) (MG/L) (78032)	NAPHTHALENE (MG/L) (34696)
CEDAR01	5.4	0.6	<0.2	0.2	<0.2	1.2	<0.2	7.8	0.6
CEDAR02	<0.2	<0.2	0.2	1.0	<0.2	6.8	<0.2	1.4	<0.2
CEDAR03	<0.2	<0.2	0.6	0.2	<0.2	2.5	0.3	<0.2	<0.2
CEDAR04	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	<0.2	<0.2
CEDARFS	<0.2	<0.2	<0.2	<0.2	0.2	0.7	<0.2	<0.2	<0.2

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM FLOW

SAMPLE-COLLECTION SITES ON THE SUSQUEHANNA RIVER, MAJOR TRIBUTARIES, AND SELECTED FIXED-STATION STREAMS

The tables on the following pages contain data from a synoptic survey of nutrients, ions, and pesticides in stream and river flow in the Lower Susquehanna River Basin. The survey was conducted from June 6 through June 10, 1994, during a period following the application of fertilizer and pesticides when concentrations of nutrients and pesticides in stream water may be elevated (termed a "high-flux" period). Water-quality samples from 20 stream and river sites were collected and analyzed for nutrients, common ions, and pesticides. The survey was designed to determine the occurrence of pesticides, the variability of nutrient and pesticide concentrations within the basin, and to attempt a preliminary mass balance of selected pesticides within the basin. Figure 12 is provided to show the location of the sample-collection sites HFLX01 through HFLX20. Table 4, page 272, shows the complete list of pesticides analyzed and their corresponding reporting levels. The pesticide reporting level table is applicable only to stream-water samples collected during 1994 water year synoptic surveys.

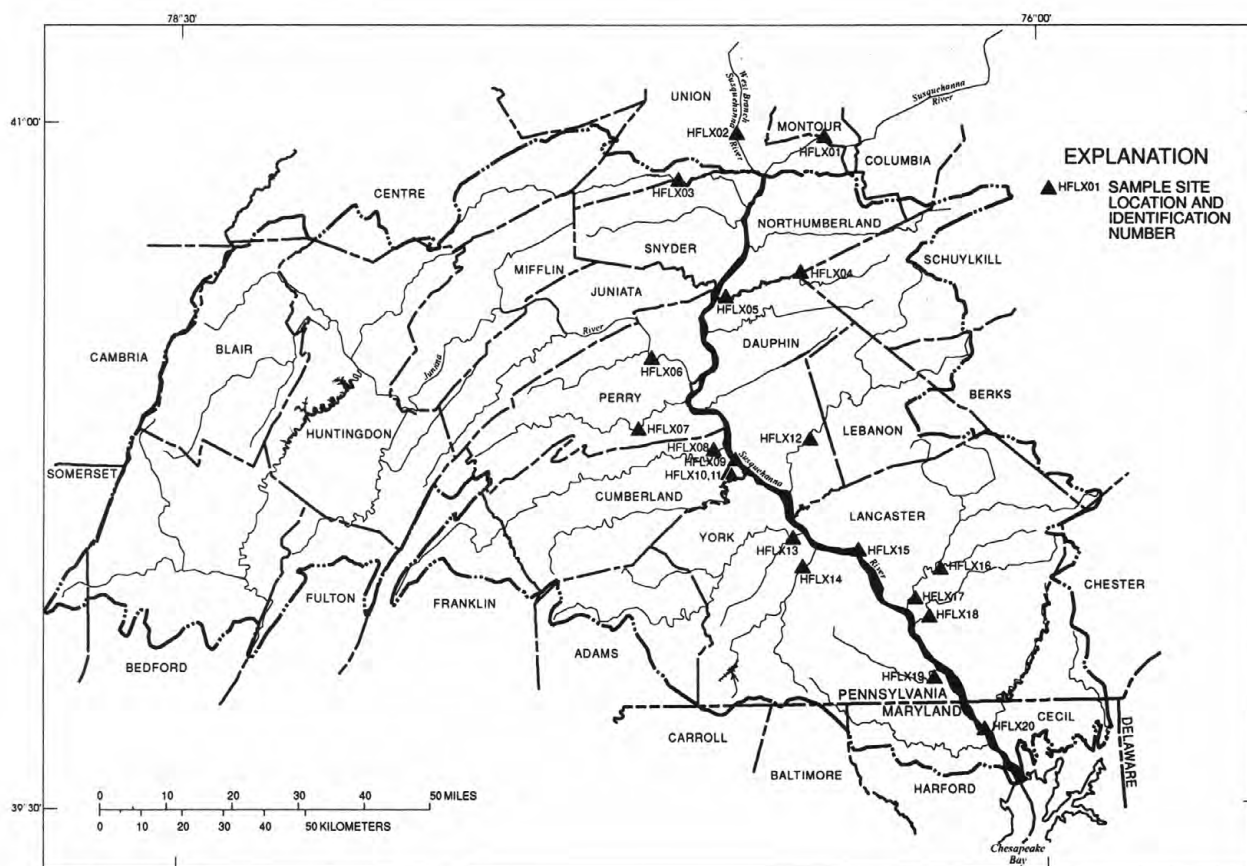


Figure 12. Location and local identification number of synoptic sample-collection sites for nutrients, ions, and pesticides on the Susquehanna River, major tributaries, and selected fixed stations.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN MAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM FLOW

SAMPLE-COLLECTION SITES ON THE SUSQUEHANNA RIVER, MAJOR TRIBUTARIES, AND SELECTED FIXED-STATION STREAMS

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream-ordered identifier for site; **µS/CM**: microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; **µG/L**: micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. Sites in this synoptic-survey network are shown in figure 12, page 267. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME	STATION TYPE
HFLX01	01540500	06-07-94	1500	SUSQUEHANNA RIVER AT DANVILLE, PA	MAIN STEM
HFLX02	01553500	06-07-94	1155	WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA	MAJOR TRIBUTARY
HFLX03	01555000	06-07-94	0935	PENNS CREEK AT PENNS CREEK, PA	MAJOR TRIBUTARY
HFLX04	01555400	06-06-94	0955	EAST MAHANTANGO CREEK AT KLINGERSTOWN, PA	FIXED STATION
HFLX05	01555500	06-06-94	1200	EAST MAHANTANGO CREEK NEAR DALMATIA, PA	MAJOR TRIBUTARY
HFLX06	01567000	06-08-94	0910	JUNIATA RIVER AT NEWPORT, PA	MAJOR TRIBUTARY
HFLX07	01568000	06-07-94	1000	SHERMAN CREEK AT SHERMANS DALE, PA	MAJOR TRIBUTARY
HFLX08	01570280	06-07-94	1120	CONODOGUINET CREEK AT ENOLA, PA	MAJOR TRIBUTARY
HFLX09	01570500	06-08-94	1215	SUSQUEHANNA RIVER AT HARRISBURG, PA	MAIN STEM
HFLX10	01571490	06-06-94	1410	CEDAR RUN AT EBERLYS MILL, PA	FIXED STATION
HFLX11	01571500	06-06-94	1330	YELLOW BREECHES CREEK NEAR CAMP HILL, PA	MAJOR TRIBUTARY
HFLX12	01573560	06-07-94	1320	SWATARA CREEK NEAR HERSHEY, PA	MAJOR TRIBUTARY
HFLX13	01574000	06-08-94	1320	WEST CONEWAGO CREEK NEAR MANCHESTER, PA	MAJOR TRIBUTARY
HFLX14	01575585	06-08-94	1140	CODORUS CREEK AT PLEASUREVILLE, PA	MAJOR TRIBUTARY
HFLX15	01576000	06-09-94	0910	SUSQUEHANNA RIVER AT MARIETTA, PA	MAIN STEM
HFLX16	01576540	06-06-94	0915	MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA	FIXED STATION
HFLX17	01576754	06-06-94	1050	CONESTOGA RIVER AT CONESTOGA, PA	MAJOR TRIBUTARY
HFLX18	01576787	06-09-94	0920	PEQUEA CREEK AT MARTIC FORGE, PA	MAJOR TRIBUTARY
HFLX19	01577500	06-08-94	0935	MUDDY CREEK AT CASTLE FIN, PA	MAJOR TRIBUTARY
HFLX20	01578310	06-10-94	1015	SUSQUEHANNA RIVER AT CONOWINGO, MD	MAIN STEM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DRAIN-AGE AREA (SQ. MI.) (81024)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)
HFLX01	1028	80020	11220	431	15	3039	10	6150	344	8.6
HFLX02	1028	80020	6847	428	15	3039	10	4560	231	7.9
HFLX03	1028	80020	301	507	15	3045	10	506	192	7.7
HFLX04	1028	80020	44.7	520	15	3045	10	14	121	7.2
HFLX05	1028	80020	162	401	15	3045	10	56	186	7.6
HFLX06	1028	80020	3354	364	15	3039	10	1530	264	8.0
HFLX07	1028	80020	200	423	15	3045	10	67	194	8.0
HFLX08	1028	80020	501	310	15	3045	10	328	473	8.3
HFLX09	1028	80020	24100	290	15	3039	40	15100	296	8.5
HFLX10	1028	80020	12.6	340	15	3045	10	14	636	7.9
HFLX11	1028	80020	216	307	15	3045	10	220	316	8.1
HFLX12	1028	80020	483	326	15	3045	30	4450	157	7.0
HFLX13	1028	80020	510	264	15	3045	10	133	257	7.9
HFLX14	1028	80020	267	330	15	3045	10	140	722	7.4
HFLX15	1028	80020	25990	201	15	3039	10	16000	278	8.0
HFLX16	1028	80020	54.2	250	15	3045	10	54	710	8.0
HFLX17	1028	80020	470	180	15	3045	10	398	648	8.1
HFLX18	1028	80020	148	228	15	3045	10	142	426	8.0
HFLX19	1028	80020	133	175	15	3045	10	126	117	7.0
HFLX20	1028	80020	27100	5.0	15	8010	30	17800	284	7.4

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM FLOW

SAMPLE-COLLECTION SITES ON THE SUSQUEHANNA RIVER, MAJOR TRIBUTARIES, AND SELECTED FIXED-STATION STREAMS--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE OF (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
HFLX01	23.5	746	9.8	118	120	52	34	8.9	21	27	0.8
HFLX02	23.0	747	7.5	90	93	70	23	8.7	5.4	11	0.2
HFLX03	19.0	744	--	--	90	14	28	4.7	2.1	5	0.1
HFLX04	18.5	748	8.3	90	40	21	9.7	3.9	3.7	16	0.3
HFLX05	22.0	752	8.3	96	73	56	17	7.5	3.8	10	0.2
HFLX06	23.0	750	7.1	84	110	22	30	8.3	7.7	13	0.3
HFLX07	22.0	748	8.7	102	94	20	29	5.2	2.2	5	0.1
HFLX08	24.0	751	9.0	109	210	47	68	10	14	12	0.4
HFLX09	24.0	753	9.4	113	110	47	31	8.7	9.3	15	0.4
HFLX10	19.5	753	9.1	100	280	70	92	11	23	15	0.6
HFLX11	19.5	753	8.9	98	150	30	41	11	6.8	9	0.2
HFLX12	19.0	750	5.5	61	58	25	17	3.8	4.1	12	0.2
HFLX13	24.5	756	7.7	93	100	21	28	7.2	11	19	0.5
HFLX14	23.0	752	5.7	68	160	67	50	9.0	74	49	3
HFLX15	22.0	758	7.5	86	110	47	28	8.5	10	17	0.4
HFLX16	18.5	757	7.7	83	280	83	66	28	29	18	0.8
HFLX17	21.0	759	8.1	91	270	91	76	19	27	18	0.7
HFLX18	18.5	761	8.3	88	190	61	46	18	7.4	8	0.2
HFLX19	20.5	756	8.3	93	38	19	8.4	4.2	4.6	20	0.3
HFLX20	25.5	764	5.5	67	110	49	29	8.7	10	16	0.4

LOCAL ID	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
HFLX01	1.6	85	--	69	46	33	<0.1	1.6	220	191	0.30
HFLX02	1.3	29	0	24	67	7.5	<0.1	3.1	135	132	0.18
HFLX03	1.3	92	0	76	12	4.3	<0.1	2.9	115	107	0.16
HFLX04	1.7	23	0	19	11	7.2	<0.1	4.5	80	68	0.11
HFLX05	1.3	21	0	17	51	5.4	<0.1	3.9	111	107	0.15
HFLX06	2.0	110	0	87	22	13	<0.1	1.7	158	143	0.21
HFLX07	1.1	90	0	74	13	4.3	<0.1	3.2	103	107	0.14
HFLX08	2.4	200	0	160	24	25	0.2	4.2	273	266	0.37
HFLX09	1.9	80	--	66	47	15	<0.1	1.7	183	159	0.25
HFLX10	2.1	250	0	210	28	50	<0.1	7.5	358	357	0.49
HFLX11	1.8	140	0	120	15	12	<0.1	7.4	179	178	0.24
HFLX12	4.1	40	0	33	17	6.5	<0.1	4.9	112	90	0.15
HFLX13	3.2	96	0	79	20	14	0.1	4.5	150	138	0.20
HFLX14	7.0	120	0	95	35	130	<0.1	6.0	429	388	0.58
HFLX15	1.9	71	0	58	50	15	<0.1	1.7	187	154	0.25
HFLX16	5.0	240	0	200	44	46	0.1	6.7	397	387	0.54
HFLX17	3.7	220	0	180	42	44	0.2	7.3	361	367	0.49
HFLX18	4.5	160	0	130	26	17	<0.1	8.4	265	234	0.36
HFLX19	1.4	23	0	19	4.1	9.8	<0.1	6.3	83	71	0.11
HFLX20	1.7	72	0	59	51	16	<0.1	6.1	167	162	0.23

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN MAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM FLOW

SAMPLE-COLLECTION SITES ON THE SUSQUEHANNA RIVER, MAJOR TRIBUTARIES, AND SELECTED FIXED-STATION STREAMS--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
HFLX01	3650	--	--	<0.010	--	0.620	0.030	0.04	--	0.30	<0.20
HFLX02	1660	0.410	1.8	0.010	0.03	0.420	0.020	0.03	--	0.60	<0.20
HFLX03	157	1.18	5.2	0.020	0.07	1.20	0.050	0.06	--	0.50	<0.20
HFLX04	3.02	3.27	14	0.030	0.10	3.30	0.050	0.06	0.15	0.40	0.20
HFLX05	16.7	1.38	6.1	0.020	0.07	1.40	0.080	0.10	0.12	0.30	0.20
HFLX06	653	1.38	6.1	0.020	0.07	1.40	0.020	0.03	--	0.50	<0.20
HFLX07	18.6	0.960	4.2	0.020	0.07	0.980	0.050	0.06	0.25	0.30	0.30
HFLX08	242	4.25	19	0.050	0.16	4.30	0.050	0.06	0.25	0.40	0.30
HFLX09	7460	0.980	4.3	0.020	0.07	1.00	0.020	0.03	0.18	0.60	0.20
HFLX10	13.5	4.38	19	0.020	0.07	4.40	0.060	0.08	0.34	0.40	0.40
HFLX11	106	2.78	12	0.020	0.07	2.80	0.040	0.05	--	0.30	<0.20
HFLX12	1350	2.72	12	0.080	0.26	2.80	0.190	0.24	1.1	2.6	1.3
HFLX13	53.9	--	--	<0.010	--	0.570	0.010	0.01	0.29	0.70	0.30
HFLX14	162	4.36	19	0.040	0.13	4.40	0.090	0.12	0.41	0.60	0.50
HFLX15	8080	0.840	3.7	0.020	0.07	0.860	0.020	0.03	0.18	0.60	0.20
HFLX16	57.9	9.72	43	0.080	0.26	9.80	0.040	0.05	0.36	0.70	0.40
HFLX17	388	9.24	41	0.060	0.20	9.30	0.080	0.10	0.22	0.40	0.30
HFLX18	102	6.49	29	0.110	0.36	6.60	0.040	0.05	0.36	0.50	0.40
HFLX19	28.2	4.59	20	0.010	0.03	4.60	0.040	0.05	--	<0.20	<0.20
HFLX20	8030	0.750	3.3	0.020	0.07	0.770	0.160	0.21	0.24	0.60	0.40

LOCAL ID	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
HFLX01	--	<0.010	<0.010	<0.010	--	6	1	140	11	183
HFLX02	--	0.040	<0.010	<0.010	--	6	170	120	3	37
HFLX03	--	0.060	0.020	0.020	0.06	25	8	250	50	68
HFLX04	3.5	0.050	0.030	0.030	0.09	43	13	40	8	0.30
HFLX05	1.6	0.020	0.020	<0.010	--	22	46	70	2	0.30
HFLX06	--	0.060	<0.010	0.010	0.03	12	1	310	16	66
HFLX07	1.3	0.040	0.020	<0.010	--	22	19	540	7	1.3
HFLX08	4.6	0.040	0.040	0.030	0.09	6	3	260	27	24
HFLX09	1.2	0.050	<0.010	<0.010	--	6	1	200	20	815
HFLX10	4.8	0.040	0.050	<0.010	--	6	13	360	115	4.3
HFLX11	--	0.040	0.020	<0.010	--	10	14	170	6	3.6
HFLX12	4.1	0.990	0.070	0.080	0.25	220	23	50	874	10500
HFLX13	0.87	0.130	0.080	0.070	0.21	13	8	130	15	5.4
HFLX14	4.9	0.070	0.070	0.050	0.15	120	160	140	22	8.3
HFLX15	1.1	0.060	<0.010	<0.010	--	9	<1	150	36	1560
HFLX16	10	0.180	0.090	0.070	0.21	6	13	190	73	11
HFLX17	9.6	0.110	0.080	0.080	0.25	<3	57	260	44	47
HFLX18	7.0	0.110	0.110	0.100	0.31	13	10	110	21	8.1
HFLX19	--	0.040	<0.010	0.010	0.03	23	22	40	7	2.4
HFLX20	1.2	0.040	0.010	<0.010	--	<3	63	170	7	336

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM FLOW

SAMPLE-COLLECTION SITES ON THE SUSQUEHANNA RIVER, MAJOR TRIBUTARIES, AND SELECTED FIXED-STATION STREAMS--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (μG/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (μG/L) (39632)	BUTYL- ATE, WATER, DISS, REC, (μG/L) (04028)	CARBO- FURAN WATER FLTRD 0.7 μ GF, REC (μG/L) (82674)	CHLOR- PYRIFOS WATER, DIS- SOLVED (μG/L) (38933)	CYANA- ZINE, WATER, DISS, REC, (μG/L) (04041)	DCPA WATER FLTRD 0.7 μ GF, REC (μG/L) (82682)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (μG/L) (04040)	DI- AZINON, DIS- SOLVED (μG/L) (39572)
HFLX01	6150	<0.009	<0.017	<0.008	<0.013	<0.008	<0.022	<0.005	<0.005	<0.008
HFLX02	4560	0.190	0.220	<0.008	<0.013	<0.008	0.038	<0.005	e 0.008	<0.008
HFLX03	506	0.570	1.20	<0.008	<0.013	<0.008	0.330	<0.005	e 0.050	<0.008
HFLX04	14	0.017	0.160	<0.008	<0.013	<0.008	0.056	<0.005	e 0.064	<0.008
HFLX05	56	0.018	0.110	<0.008	<0.013	<0.008	0.030	<0.005	e 0.029	<0.008
HFLX06	1530	0.072	0.560	<0.008	<0.013	<0.008	0.170	<0.005	e 0.048	<0.008
HFLX07	67	<0.009	0.038	<0.008	<0.013	<0.008	0.033	<0.005	e 0.014	<0.008
HFLX08	328	<0.009	0.190	<0.008	<0.013	<0.008	<0.022	<0.005	e 0.110	<0.008
HFLX09	15100	0.730	1.20	0.008	<0.013	<0.008	0.280	<0.005	e 0.025	<0.008
HFLX10	14	0.009	0.130	<0.008	<0.013	<0.008	0.023	<0.005	e 0.092	<0.008
HFLX11	220	<0.009	0.099	<0.008	<0.013	<0.008	<0.022	<0.005	e 0.089	<0.008
HFLX12	4450	3.40	10.0	<0.008	0.250	<0.008	3.90	<0.005	e 0.480	0.008
HFLX13	133	0.046	2.30	<0.008	<0.013	<0.008	0.240	<0.005	e 0.064	<0.008
HFLX14	140	0.160	1.800	<0.008	<0.013	<0.008	0.340	0.012	e 0.900	<0.008
HFLX15	16000	0.310	0.880	<0.008	<0.013	<0.008	0.390	<0.005	e 0.029	<0.008
HFLX16	54	0.010	0.250	<0.008	<0.013	0.024	0.030	<0.005	e 0.150	0.012
HFLX17	398	0.017	0.350	<0.008	<0.013	<0.008	0.064	0.006	e 0.120	0.051
HFLX18	142	0.029	0.950	<0.008	<0.013	<0.008	0.098	<0.005	e 0.093	<0.008
HFLX19	126	<0.009	0.250	<0.008	0.019	<0.008	<0.022	<0.005	e 0.230	<0.008
HFLX20	17800	0.016	0.110	<0.008	<0.013	<0.008	0.044	<0.005	e 0.016	<0.008

LOCAL ID	EPTC WATER FLTRD 0.7 μ GF, REC (μG/L) (82668)	FONOFOS WATER DISS REC (μG/L) (04095)	LIN- URON WATER FLTRD 0.7 μ GF, REC (μG/L) (82666)	METO- LACHLOR WATER DISSOLV (μG/L) (39415)	METRI- BUZIN WATER DISSOLV (μG/L) (82630)	PENDI- METH- ALIN WAT FLT 0.7 μ GF, REC (μG/L) (82683)	PRO- METON, WATER, DISS, REC (μG/L) (04037)	PROP- CHLOR, WATER, DISS, REC (μG/L) (04024)	SI- MAZINE, WATER, DISS, REC (μG/L) (04035)
HFLX01	<0.005	<0.008	<0.039	0.026	<0.012	<0.018	<0.008	<0.015	<0.008
HFLX02	<0.005	<0.008	<0.039	0.350	<0.012	<0.018	<0.008	<0.015	0.017
HFLX03	<0.005	<0.008	<0.039	0.400	<0.012	<0.018	<0.008	<0.015	0.027
HFLX04	<0.005	<0.008	<0.039	0.200	<0.012	<0.018	<0.008	<0.015	0.053
HFLX05	<0.005	<0.008	<0.039	0.130	<0.012	<0.018	<0.008	<0.015	<0.008
HFLX06	<0.005	<0.008	<0.039	0.580	<0.012	<0.018	0.022	<0.015	0.054
HFLX07	<0.005	<0.008	<0.039	0.025	<0.012	<0.018	<0.008	<0.015	<0.008
HFLX08	<0.005	<0.008	<0.039	0.110	<0.012	<0.018	0.045	<0.015	0.028
HFLX09	<0.005	<0.008	<0.039	2.30	<0.012	<0.018	0.020	<0.015	0.029
HFLX10	<0.005	<0.008	<0.039	0.046	0.032	<0.018	0.110	<0.015	0.034
HFLX11	<0.005	<0.008	<0.039	0.044	<0.012	<0.018	0.029	<0.015	0.320
HFLX12	<0.005	0.012	0.540	10.0	0.039	0.240	0.044	0.036	0.370
HFLX13	<0.005	<0.008	<0.039	2.10	<0.012	<0.018	0.039	<0.015	0.170
HFLX14	<0.005	<0.008	<0.039	2.00	<0.012	<0.018	0.580	<0.015	0.440
HFLX15	<0.005	<0.008	<0.039	1.40	<0.012	0.027	<0.008	<0.015	0.044
HFLX16	<0.005	<0.008	<0.039	0.130	<0.012	<0.018	0.220	<0.015	1.40
HFLX17	0.065	<0.008	<0.039	0.230	<0.012	<0.018	0.110	<0.015	0.220
HFLX18	<0.005	<0.008	<0.039	1.60	<0.012	0.019	0.120	<0.015	0.150
HFLX19	<0.005	<0.008	<0.039	0.210	<0.012	<0.018	<0.008	<0.015	0.280
HFLX20	<0.005	<0.008	<0.039	0.180	<0.012	<0.018	<0.008	<0.015	<0.008

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN MAWA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

CEDAR RUN BASIN

TABLE 4.--PESTICIDE SCHEDULE FOR SURFACE-WATER SYNOPTIC SURVEYS

REMARKS.--Selected water samples from the Lower Susquehanna River Basin were analyzed for 47 pesticides. The table below lists the pesticides on the schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. Users of these data should use the parameter code as a cross-reference to the water-quality tables. This pesticide schedule includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid-phase extraction and are sufficiently volatile and thermally stable for analysis by gas chromatography. Water samples are filtered through a glass-fiber filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. This pesticide reporting level table is applicable only to surface-water samples collected during 1994 water year synoptic surveys. Each sample was analyzed for all pesticides in the schedule. Only pesticides measured at or above the reporting level for one or more samples are listed in the water-quality tables.

ALACHLOR ($\mu\text{G/L}$) (46342)	ALPHA BHC ($\mu\text{G/L}$) (34253)	ATRAZINE ($\mu\text{G/L}$) (39632)	BENFLURALIN ($\mu\text{G/L}$) (82673)	BUTYLATE ($\mu\text{G/L}$) (04028)	CARBARYL ($\mu\text{G/L}$) (82680)
<0.009	<0.007	<0.017	<0.013	<0.008	<0.046
CARBOFURAN ($\mu\text{G/L}$) (82674)	CHLOR- PYRIFOS ($\mu\text{G/L}$) (38933)	CYANAZINE ($\mu\text{G/L}$) (04041)	DCPA ($\mu\text{G/L}$) (82682)	DESETHYL ATRAZINE ($\mu\text{G/L}$) (04040)	DIAZINON ($\mu\text{G/L}$) (39572)
<0.013	<0.008	<0.022	<0.005	<0.005	<0.008
DIELDRIN ($\mu\text{G/L}$) (39381)	DIETHYL- ANALINE-2,6 ($\mu\text{G/L}$) (82660)	DIMETHOATE ($\mu\text{G/L}$) (82662)	DISULFOTON ($\mu\text{G/L}$) (82677)	EPTC ($\mu\text{G/L}$) (82668)	ETHAL- FLURALIN ($\mu\text{G/L}$) (82663)
<0.008	<0.006	<0.024	<0.06	<0.005	<0.013
ETHOPROP ($\mu\text{G/L}$) (82672)	FONOFOS ($\mu\text{G/L}$) (04095)	LINDANE ($\mu\text{G/L}$) (39341)	LINURON ($\mu\text{G/L}$) (82666)	MALATHION ($\mu\text{G/L}$) (39532)	METHYL AZINPHOS ($\mu\text{G/L}$) (82686)
<0.012	<0.008	<0.011	<0.039	<0.025	<0.05
METHYL PARATHION ($\mu\text{G/L}$) (82667)	METOLACHLOR ($\mu\text{G/L}$) (39415)	METRIBUZIN ($\mu\text{G/L}$) (82630)	MOLINATE ($\mu\text{G/L}$) (82671)	NAPROP- AMIDE ($\mu\text{G/L}$) (82684)	P, P-DDE ($\mu\text{G/L}$) (34653)
<0.035	<0.009	<0.012	<0.007	<0.01	<0.01
PARATHION ($\mu\text{G/L}$) (39542)	PEBULATE ($\mu\text{G/L}$) (82669)	PENDI- METHALIN ($\mu\text{G/L}$) (82683)	PERMETHRIN- CIS ($\mu\text{G/L}$) (82687)	PHORATE ($\mu\text{G/L}$) (82664)	PROMETON ($\mu\text{G/L}$) (04037)
<0.022	<0.009	<0.018	<0.016	<0.011	<0.008
PRONAMIDE ($\mu\text{G/L}$) (82676)	PROPACHLOR ($\mu\text{G/L}$) (04024)	PROPANIL ($\mu\text{G/L}$) (82679)	PROPARGITE ($\mu\text{G/L}$) (82685)	SIMAZINE ($\mu\text{G/L}$) (04035)	TEBUTHIURON ($\mu\text{G/L}$) (82670)
<0.009	<0.015	<0.016	<0.008	<0.008	<0.015
TERBACIL ($\mu\text{G/L}$) (82665)	TERBUFOS ($\mu\text{G/L}$) (82675)	THIOBENCARB ($\mu\text{G/L}$) (82681)	TRIALATE ($\mu\text{G/L}$) (82678)	TRIFLURALIN ($\mu\text{G/L}$) (82661)	
<0.03	<0.012	<0.008	<0.008	<0.012	

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

CEDAR RUN BASIN--Continued

This synoptic survey was conducted during the period July 12 to July 14, 1994. This survey was designed to determine the occurrence and variability of nutrient and pesticide concentrations within the basin. A concurrent ecological survey of algae, invertebrates, and habitat was also conducted at three of the sites. The chlorophyll and algal biomass data collected as a part of this ecological survey are presented at the end of the tables presenting water-quality data for the survey. Sites in this synoptic-survey network are shown in figure 11, page 262. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272. The pesticide reporting level table is applicable only to stream-water samples collected during 1994 water year synoptic surveys.

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream-ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; **μS/CM**: microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; **μG/L**: micrograms per liter. Whole water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
CEDAR05	401340076562901	07-14-94	1515	UNNAMED NORTHERN TRIBUTARY TO CEDAR RUN AT SHIREMANSTOWN, PA
CEDAR06	401334076551001	07-12-94	1320	UNNAMED TRIBUTARY TO UNNAMED NORTHERN TRIBUTARY AT EBERLYS MILL, PA
CEDAR07	401303076562001	07-14-94	0850	CEDAR RUN AT SHIREMANSTOWN, PA
CEDAR08	401327076550401	07-13-94	1400	UNNAMED NORTHERN TRIBUTARY TO CEDAR RUN AT EBERLYS MILL, PA
CEDARFS-A	01571490	07-11-94	1300	CEDAR RUN AT EBERLYS MILL, PA (FIXED STATION)
CEDARFS-B	01571490	07-14-94	1535	CEDAR RUN AT EBERLYS MILL, PA (FIXED STATION)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DRAIN-AGE AREA (SQ. MI.)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SAMPLE PURPOSE CODE	SAMPLER TYPE (CODE)	SAM-PLING METHOD, CODES	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (μS/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)
	(00027)	(00028)	(81024)	(72000)	(71999)	(84164)	(82398)	(00061)	(00095)	(00400)
CEDAR05	1028	80020	3.03	380	15	8010	70	--	690	7.4
CEDAR06	1028	80020	1.78	370	15	8010	70	1.0	739	7.2
CEDAR07	1028	80020	5.64	390	15	8010	70	4.1	654	7.3
CEDAR08	1028	80020	5.46	360	15	8010	70	2.7	704	7.5
CEDARFS-A	1028	80020	12.6	350	15	3045	10	16	663	8.1
CEDARFS-B	1028	80020	12.6	350	15	3045	10	22	502	8.0

LOCAL ID	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, SATUR-ATION (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
	(00010)	(00025)	(00300)	(00301)	(00900)	(00915)	(00925)	(00930)	(00932)
CEDAR05	20.0	753	12.5	139	290	92	15	24	15
CEDAR06	14.0	758	7.9	77	300	95	16	28	17
CEDAR07	14.0	755	8.1	80	270	90	11	22	15
CEDAR08	15.0	757	9.0	90	300	95	15	27	16
CEDARFS-A	19.5	760	9.6	105	280	89	13	24	16
CEDARFS-B	20.5	756	5.3	60	200	66	9.1	18	16

LOCAL ID	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HCO3)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
	(00935)	(00440)	(00445)	(00410)	(00945)	(00940)	(00950)	(00955)	(70300)	(70301)
CEDAR05	2.7	320	0	263	24	46	0.2	7.7	398	371
CEDAR06	2.2	290	0	240	32	56	0.2	7.9	412	391
CEDAR07	2.2	250	0	208	27	47	<0.1	8.3	374	359
CEDAR08	2.3	280	0	231	32	57	0.1	7.4	408	383
CEDARFS-A	2.2	270	0	220	29	52	0.1	7.8	389	367
CEDARFS-B	2.4	200	0	160	22	36	0.1	5.7	299	269

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

CEDAR RUN BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
CEDAR05	0.54	--	--	--	<0.010	--	0.140	0.030	0.04	<0.20
CEDAR06	0.56	1.16	2.19	9.7	0.010	0.03	2.20	0.020	0.03	<0.20
CEDAR07	0.51	4.18	--	--	<0.010	--	5.90	<0.010	--	0.20
CEDAR08	0.55	2.99	--	--	<0.010	--	1.90	0.030	0.04	<0.20
CEDARFS-A	0.53	16.7	3.59	16	0.010	0.03	3.60	0.030	0.04	0.30
CEDARFS-B	0.41	18.0	2.88	13	0.020	0.07	2.90	0.130	0.17	1.6

LOCAL ID	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (MG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (MG/L AS MN) (01056)	STRON-TIUM, DIS-SOLVED (MG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
CEDAR05	<0.20	0.010	0.020	<0.010	--	6	470	210	164	--
CEDAR06	<0.20	0.040	<0.010	0.010	0.03	5	8	290	156	0.44
CEDAR07	<0.20	0.020	0.100	0.040	0.12	<3	3	400	135	1.5
CEDAR08	<0.20	0.040	0.030	<0.010	--	<3	6	280	129	0.94
CEDARFS-A	<0.20	0.030	0.020	<0.010	--	<3	7	350	--	--
CEDARFS-B	0.30	0.300	0.030	<0.010	--	10	6	260	273	16

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ATRA-ZINE, WATER, DISS. REC (MG/L) (39632)	CHLOR-PYRIFOS, DIS-SOLVED (MG/L) (38933)	DESETHYL ATRA-ZINE, WATER, DISS. REC (MG/L) (04040)	DI-ELDRIN, DIS-SOLVED (MG/L) (39381)	METO-LACHLOR, WATER DISSOLV (MG/L) (39415)	PRO-METON, WATER, DISS. REC (MG/L) (04037)	SI-MAZINE, WATER, DISS. REC (MG/L) (04035)	TEBU-THIURON, WATER FLTRD 0.7 µ GF, REC (MG/L) (82670)
CEDAR05	07-14-94	1515	--	0.083	<0.008	e 0.044	<0.008	0.030	0.360	0.190	0.062
CEDAR06	07-12-94	1320	1.0	0.073	<0.008	e 0.051	0.009	0.024	0.190	0.047	0.075
CEDAR07	07-14-94	0850	4.1	0.180	0.009	e 0.170	<0.008	0.015	0.094	0.035	<0.015
CEDAR08	07-13-94	1400	2.7	0.074	<0.008	e 0.048	<0.008	0.024	0.200	0.053	0.076
CEDARFS-A	07-11-94	1300	16	0.120	<0.008	e 0.120	<0.008	0.026	0.130	0.039	0.024
CEDARFS-B	07-14-94	1535	22	0.085	0.019	e 0.065	<0.008	0.029	0.030	0.030	0.022

ADDITIONAL REMARKS.--This data set was collected as part of an ecological survey of sites in the Cedar Run Basin. Two samples were taken at each site; one from a richest-targeted habitat, the second from a depositional-targeted habitat. Sites in this synoptic-survey network are shown in figure 11, page 262. A summary of data collected earlier in the year for the ecological survey of the Cedar Run fixed station can be found on page 168.

Explanation of abbreviations used in constituent definitions: F/S, feet per second; MG/M2, milligrams per square meter; G/SQ M, grams per square meter.

ECOLOGICAL WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DATE	TIME	STREAM VELOCITY, MEAN (F/S) (00055)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQ M) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQ M) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQ M) ()
CEDAR06 -RTH	07-12-94	1000	0.91	739	7.2	14.0	16.0	4.60	370	390	20
-DTH	07-12-94	1015	0.03	739	7.2	14.0	7.80	2.60	570	630	60
CEDAR07 -RTH	07-14-94	1100	0.64	654	7.3	14.0	28.0	1.80	290	300	10
-DTH	07-14-94	1115	0.04	654	7.3	14.0	4.40	3.00	700	820	120
CEDAR08 -RTH	07-13-94	1100	0.84	704	7.5	15.0	5.80	2.00	1000	1100	100
-DTH	07-13-94	1115	0.19	704	7.5	15.0	1.70	1.20	91	95	4

e Estimated.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

SELECTED SUBAREAS DEFINED BY LAND USE, BEDROCK LITHOLOGY, AND PHYSIOGRAPHIC PROVINCE

The tables on pages 277-297 contain data from synoptic surveys of nutrients, ions, and pesticides in stream base flow in selected subareas of the Lower Susquehanna River Basin. The subareas are defined by differences in land use, bedrock lithology, and physiographic province. The streams sampled during each synoptic survey had a majority of their drainage area within the target subarea. The surveys were conducted in July and August, 1994 during stable base flow conditions. Water-quality samples were collected from 10-17 streams within each subarea, including the fixed station selected to represent the water-quality of that subarea. Water-quality samples were collected and analyzed for nutrients, common ions, and pesticides. The survey was designed to determine the occurrence of pesticides within the Lower Susquehanna River Basin, the variability of nutrient and pesticide concentrations within the selected subareas, and to determine the transferability of water-quality data collected at the fixed station. Figure 13 is provided to show the location and extent of the subareas sampled by this set of synoptic surveys. More-detailed maps (figures 14-17, pages 276, 281, 288, and 293) showing the location of the sites sampled in each subarea are presented on the page preceding the water-quality tables for that subarea. Table 4, page 272, shows the complete list of pesticides analyzed and their corresponding minimum reporting levels. The pesticide reporting level table is applicable only to stream-water samples collected during 1994 water year synoptic surveys.

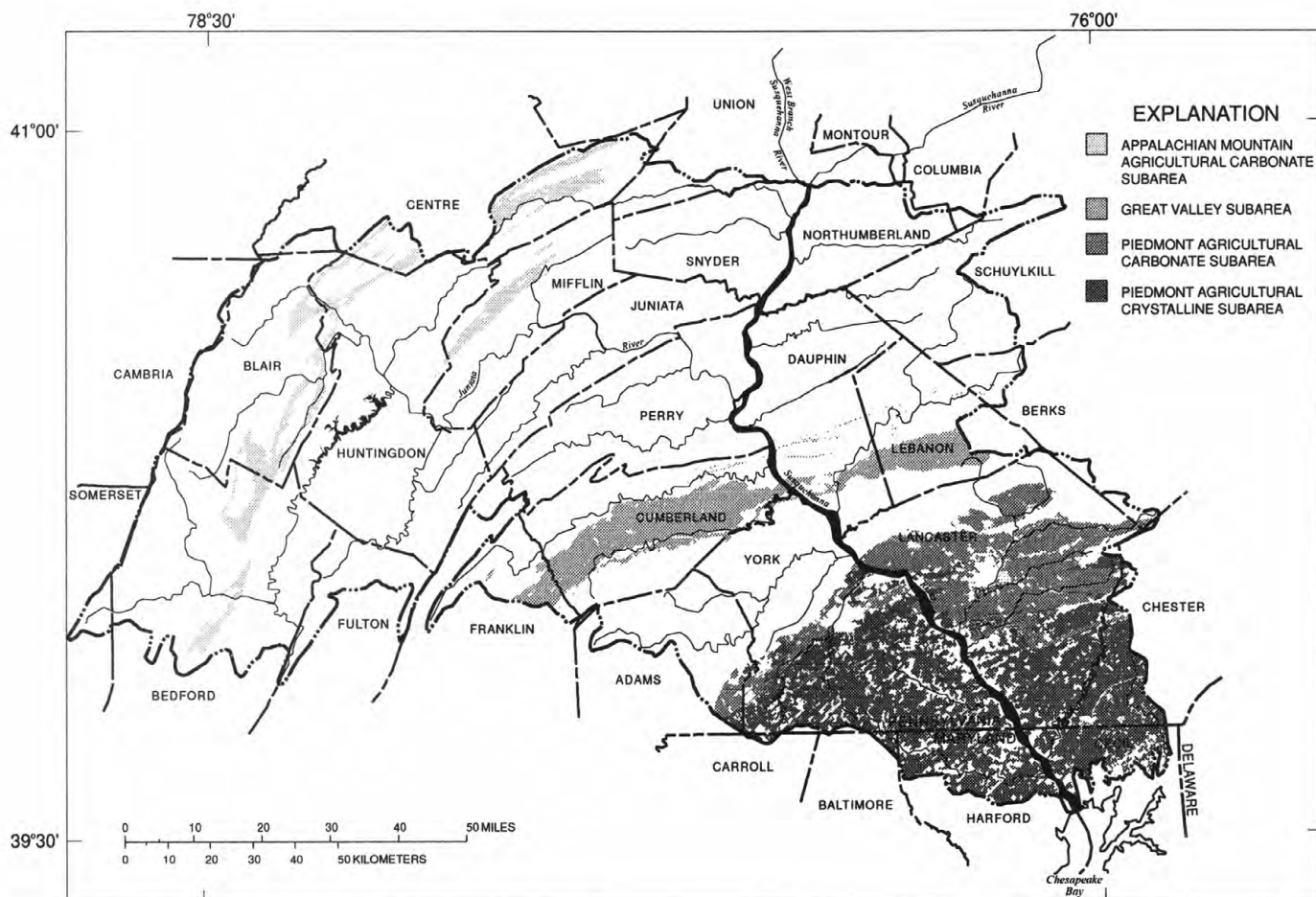


Figure 13. Location and extent of subareas sampled by synoptic surveys of nutrients, ions, and pesticides in stream base flow.

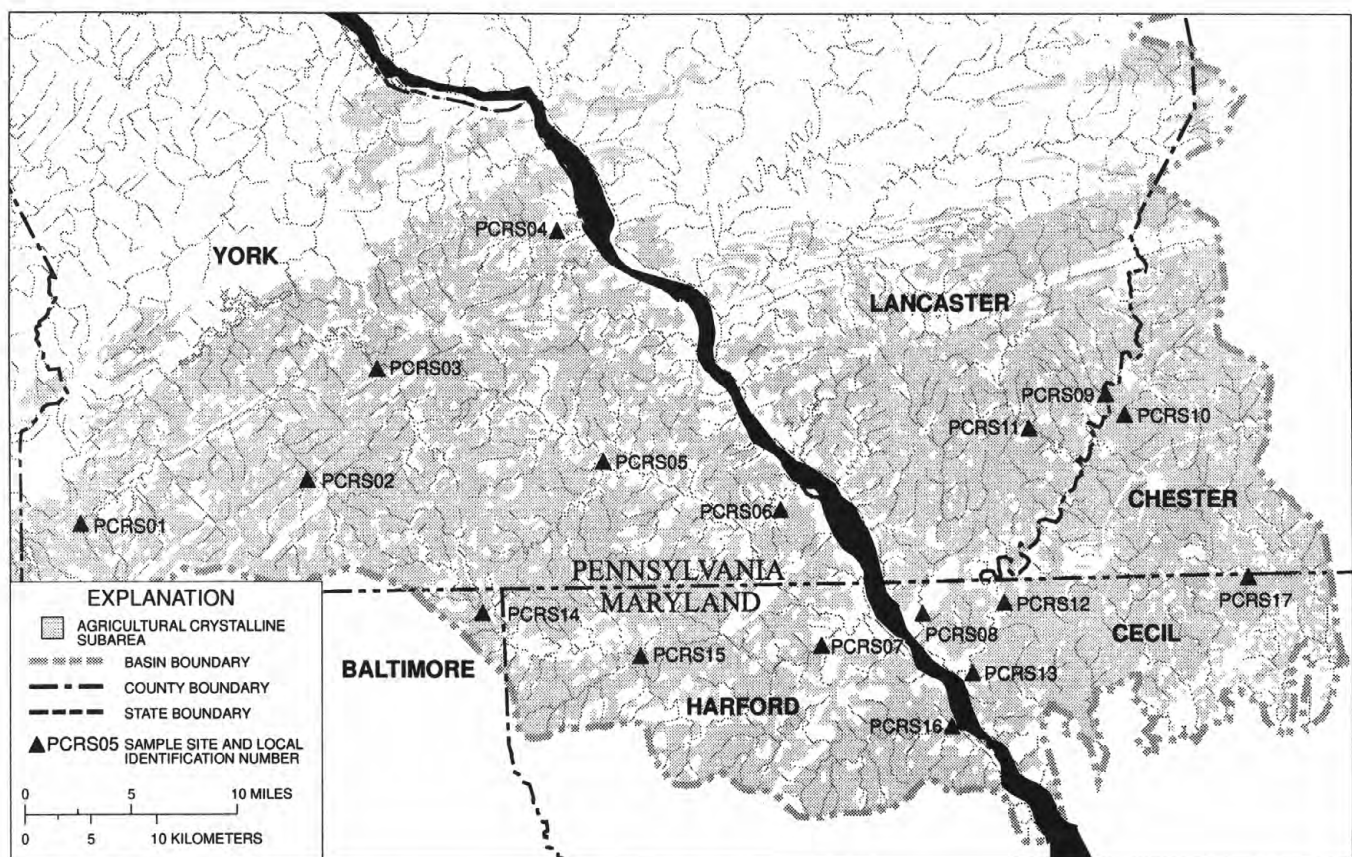


Figure 14. Location and local identification number of streams sampled in an agricultural subarea of crystalline bedrock in the Piedmont Physiographic Province, Lower Susquehanna River Basin.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream-ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; **μ S/CM**: microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; **μ G/L**: micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
PCRS01	394609076564801	07-12-94	1930	FURNACE CREEK NEAR HANOVER, PA
PCRS02	394751076443601	07-12-94	1815	CENTERVILLE CREEK AT GLEN ROCK, PA
PCRS03	395219076404401	07-12-94	0940	EAST BRANCH CODURUS CREEK AT JACOBUS, PA
PCRS04	395751076305201	07-12-94	0800	CABIN CREEK AT EAST PROSPECT, PA
PCRS05	01577300	07-12-94	1240	MUDDY CREEK AT MUDDY CREEK FORKS, PA (FIXED STATION)
PCRS06	01577500	07-12-94	1100	MUDDY CREEK AT CASTLE FIN, PA
PCRS07	394047076165201	07-12-94	1500	BROAD CREEK AT MACTON, MD
PCRS08	394201076112201	07-13-94	1210	CONOWINGO CREEK AT OAKWOOD, MD
PCRS09	395048076011401	07-14-94	0900	EAST BRANCH OCTORARO CREEK NEAR KIRKWOOD, PA
PCRS10	01578350	07-14-94	1020	MUDDY RUN AT CREAM, PA
PCRS11	01578440	07-14-94	1115	WEST BRANCH OCTORARO CREEK AT WHITE ROCK, PA
PCRS12	01578475	07-13-94	1100	OCTORARO CREEK NEAR RICHARDSMERE, MD
PCRS13	393932076084301	07-13-94	1320	BASIN RUN AT ROWLANDSVILLE, MD
PCRS14	394220076351501	07-12-94	1645	DEER CREEK AT GORSUCH MILLS, MD
PCRS15	394030076264401	07-12-94	1400	DEER CREEK NEAR ROCKS, MD
PCRS16	393723076095401	07-13-94	0915	DEER CREEK AT MOUTH NEAR CONOWINGO, MD
PCRS17	394314075535001	07-13-94	1450	LITTLE ELK CREEK NEAR BLAKE, MD

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DRAIN-AGE AREA (SQ. MI.) (81024)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)
PCRS01	1028	80020	3.40	640	15	8010	70	0.11	224	7.5
PCRS02	1028	80020	14.6	520	15	3045	10	7.3	122	8.1
PCRS03	1028	80020	31.5	480	15	3045	10	12	179	7.7
PCRS04	1028	80020	13.5	300	15	3045	10	5.4	169	7.7
PCRS05	1028	80020	71.9	360	15	3045	10	38	121	8.3
PCRS06	1028	80020	133	175	15	3045	10	76	118	7.9
PCRS07	1028	80020	25.3	180	15	3045	10	17	138	7.9
PCRS08	1028	80020	36.9	190	15	3045	10	17	205	8.6
PCRS09	1028	80020	55.3	290	15	3045	10	24	264	8.0
PCRS10	1028	80020	14.7	290	15	8010	10	7.0	209	7.8
PCRS11	1028	80020	39.6	300	15	3045	10	17	221	8.1
PCRS12	1028	80020	177	120	15	3045	10	61	219	8.5
PCRS13	1028	80020	11.3	60	15	3045	10	3.1	182	8.1
PCRS14	1028	80020	25.6	530	15	3045	10	18	274	8.8
PCRS15	1028	80020	68.0	320	15	3045	10	42	188	8.1
PCRS16	1028	80020	171	30	15	3045	10	101	165	7.9
PCRS17	1028	80020	13.2	250	15	3045	10	3.5	154	8.2

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN MAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	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 PERCENT (00932)
PCRS01	28.5	749	--	--	78	11	20	6.9	7.8	17
PCRS02	24.0	752	8.2	99	44	12	11	4.0	3.8	15
PCRS03	19.5	754	5.2	57	64	26	16	5.9	6.6	18
PCRS04	18.0	760	7.5	79	57	21	15	4.8	6.4	19
PCRS05	22.5	760	8.4	97	41	21	8.9	4.5	4.6	19
PCRS06	21.5	763	7.0	79	39	18	8.7	4.3	4.6	19
PCRS07	23.5	762	8.1	95	42	24	9.3	4.6	6.8	25
PCRS08	24.0	760	10.0	119	73	37	14	9.1	6.3	15
PCRS09	23.5	759	7.7	91	97	46	23	9.6	8.1	15
PCRS10	22.5	758	8.6	100	74	42	16	8.2	6.2	15
PCRS11	22.5	758	8.7	101	78	41	18	8.0	6.3	14
PCRS12	24.0	764	9.4	111	82	37	18	9.0	6.5	14
PCRS13	22.0	764	8.2	94	56	22	14	5.1	10	27
PCRS14	24.0	752	10.6	127	71	43	20	5.2	17	32
PCRS15	22.0	759	8.9	103	51	26	13	4.5	11	30
PCRS16	23.0	765	8.1	94	49	22	12	4.7	8.8	27
PCRS17	23.0	760	9.0	105	51	17	9.1	6.8	6.3	20

LOCAL ID	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
PCRS01	0.4	4.4	83	0	68	8.6	17	<0.1	3.0	131	118
PCRS02	0.2	1.4	39	0	32	3.6	7.7	<0.1	6.9	77	71
PCRS03	0.4	1.4	46	0	38	6.7	15	0.1	4.4	98	96
PCRS04	0.4	2.3	45	0	37	8.7	11	<0.1	8.2	99	95
PCRS05	0.3	1.4	24	0	20	3.6	10	<0.1	5.3	69	67
PCRS06	0.3	1.5	26	0	21	3.4	9.5	<0.1	5.2	79	65
PCRS07	0.5	1.4	22	0	18	5.2	16	<0.1	9.0	88	79
PCRS08	0.3	2.4	43	--	35	10	15	<0.1	7.5	128	116
PCRS09	0.4	3.3	62	0	51	21	17	<0.1	5.0	159	147
PCRS10	0.3	2.5	38	0	32	14	17	<0.1	6.5	137	120
PCRS11	0.3	2.8	45	0	37	14	14	<0.1	5.4	137	124
PCRS12	0.3	2.8	55	--	45	16	14	<0.1	6.9	123	122
PCRS13	0.6	1.7	41	0	34	18	12	<0.1	20	119	113
PCRS14	0.9	5.9	34	--	28	5.0	52	<0.1	4.9	190	146
PCRS15	0.7	3.6	30	0	25	4.2	27	<0.1	4.4	121	97
PCRS16	0.5	2.5	33	0	27	7.3	20	<0.1	6.7	94	90
PCRS17	0.4	2.5	41	0	34	5.6	12	<0.1	7.8	82	87

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN MAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
PCRS01	0.18	0.04	1.35	6.0	0.150	0.49	1.50	1.10	1.4	0.90	2.6
PCRS02	0.10	1.52	--	--	<0.010	--	3.10	<0.010	--	--	<0.20
PCRS03	0.13	3.20	3.88	17	0.020	0.07	3.90	0.030	0.04	--	0.20
PCRS04	0.13	1.44	--	--	<0.010	--	3.80	0.020	0.03	--	<0.20
PCRS05	0.09	6.39	--	--	<0.010	--	3.80	0.020	0.03	--	<0.20
PCRS06	0.11	16.2	--	--	<0.010	--	3.30	0.030	0.04	--	0.20
PCRS07	0.12	3.92	--	--	<0.010	--	3.60	0.030	0.04	--	0.20
PCRS08	0.17	5.70	6.88	30	0.020	0.07	6.90	0.020	0.03	0.18	0.30
PCRS09	0.22	10.3	6.45	29	0.050	0.16	6.50	0.020	0.03	0.28	0.50
PCRS10	0.19	2.59	6.87	30	0.030	0.10	6.90	0.020	0.03	0.28	0.50
PCRS11	0.19	6.36	7.57	34	0.030	0.10	7.60	<0.010	--	--	0.30
PCRS12	0.17	20.3	4.97	22	0.030	0.10	5.00	<0.010	--	--	0.40
PCRS13	0.16	0.98	--	--	<0.010	--	2.70	<0.010	--	--	<0.20
PCRS14	0.26	9.23	4.29	19	0.010	0.03	4.30	0.010	0.01	--	0.20
PCRS15	0.16	13.8	--	--	<0.010	--	3.30	0.020	0.03	--	0.20
PCRS16	0.13	25.6	--	--	<0.010	--	2.60	<0.010	--	--	0.20
PCRS17	0.11	0.77	3.69	16	0.010	0.03	3.70	<0.010	--	--	0.30

LOCAL ID	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
PCRS01	2.0	3.5	0.600	0.380	0.340	1.0	260	290	60	30	0.01
PCRS02	<0.20	--	0.040	<0.010	<0.010	--	83	15	30	6	0.12
PCRS03	<0.20	--	0.020	0.020	<0.010	--	31	32	40	8	0.26
PCRS04	<0.20	--	--	0.120	0.050	0.15	19	11	70	6	0.09
PCRS05	<0.20	--	<0.010	<0.010	<0.010	--	19	7	30	6	0.56
PCRS06	<0.20	--	0.020	0.010	<0.010	--	27	23	50	7	1.4
PCRS07	<0.20	--	0.020	0.020	<0.010	--	55	13	50	3	0.13
PCRS08	0.20	7.1	0.070	0.030	0.030	0.09	48	28	80	5	0.22
PCRS09	0.30	6.8	--	0.150	0.080	0.25	23	13	110	7	0.46
PCRS10	0.30	7.2	0.060	0.020	0.010	0.03	33	30	100	10	0.19
PCRS11	<0.20	--	0.060	0.050	0.040	0.12	17	16	90	6	0.28
PCRS12	0.20	5.2	0.060	0.020	0.010	0.03	13	<1	110	5	0.82
PCRS13	<0.20	--	0.040	0.030	0.030	0.09	18	5	70	3	0.02
PCRS14	<0.20	--	0.040	<0.010	<0.010	--	40	17	100	14	0.68
PCRS15	<0.20	--	0.040	0.030	0.010	0.03	63	77	60	9	1.0
PCRS16	<0.20	--	0.010	0.010	<0.010	--	51	5	60	3	0.82
PCRS17	<0.20	--	--	0.100	0.050	0.15	45	11	70	2	0.02

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN MAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	CARBO- FURAN WATER FLTRD 0.7 μ GF, REC (μ G/L) (82674)	CYANA- ZINE, WATER, DISS, REC (μ G/L) (04041)	DESETHYL ATRA- ZINE, WATER, DISS, REC (μ G/L) (04040)	EPTC WATER FLTRD 0.7 μ GF, REC (μ G/L) (82668)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	PRO- METON, WATER, DISS, REC (μ G/L) (04037)	SI- MAZINE, WATER, DISS, REC (μ G/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC (μ G/L) (82670)
PCRS01	0.11	<0.009	0.100	<0.013	<0.022	e 0.083	0.014	0.069	0.120	<0.008	<0.015
PCRS02	7.3	<0.009	0.200	<0.013	<0.022	e 0.190	<0.005	0.160	<0.008	0.009	0.015
PCRS03	12	<0.009	0.160	<0.013	<0.022	e 0.250	<0.005	0.100	0.018	0.380	0.016
PCRS04	5.4	0.009	0.160	<0.013	<0.022	e 0.200	<0.005	0.064	0.018	0.041	<0.015
PCRS05	38	0.013	0.160	<0.013	<0.022	e 0.220	<0.005	0.220	0.015	0.059	<0.015
PCRS06	76	<0.009	0.180	<0.013	<0.022	e 0.260	<0.005	0.170	0.011	0.054	<0.015
PCRS07	17	<0.009	0.190	<0.013	<0.022	e 0.320	<0.005	0.090	<0.008	0.036	<0.015
PCRS08	17	0.012	0.210	<0.013	<0.022	e 0.210	<0.005	0.067	0.054	0.160	<0.015
PCRS09	24	<0.009	0.090	<0.013	<0.022	e 0.140	<0.005	0.031	0.016	0.220	<0.015
PCRS10	7.0	<0.009	0.110	<0.013	<0.022	e 0.170	<0.005	0.090	<0.008	2.00	<0.015
PCRS11	17	<0.009	0.110	<0.013	<0.022	e 0.160	<0.005	0.033	0.009	0.072	<0.015
PCRS12	61	0.011	0.310	<0.013	0.077	e 0.180	<0.005	0.200	0.012	0.300	<0.015
PCRS13	3.1	<0.009	0.085	<0.013	<0.022	e 0.210	<0.005	0.033	<0.008	0.011	<0.015
PCRS14	18	<0.009	0.220	0.013	<0.022	e 0.310	<0.005	0.690	0.017	0.042	<0.015
PCRS15	42	<0.009	0.160	<0.013	<0.022	e 0.270	<0.005	0.300	0.012	0.050	<0.015
PCRS16	101	<0.009	0.170	<0.013	0.026	e 0.230	<0.005	0.180	0.010	0.076	<0.015
PCRS17	3.5	0.014	0.059	<0.013	<0.022	e 0.100	<0.005	0.029	<0.008	<0.008	<0.015

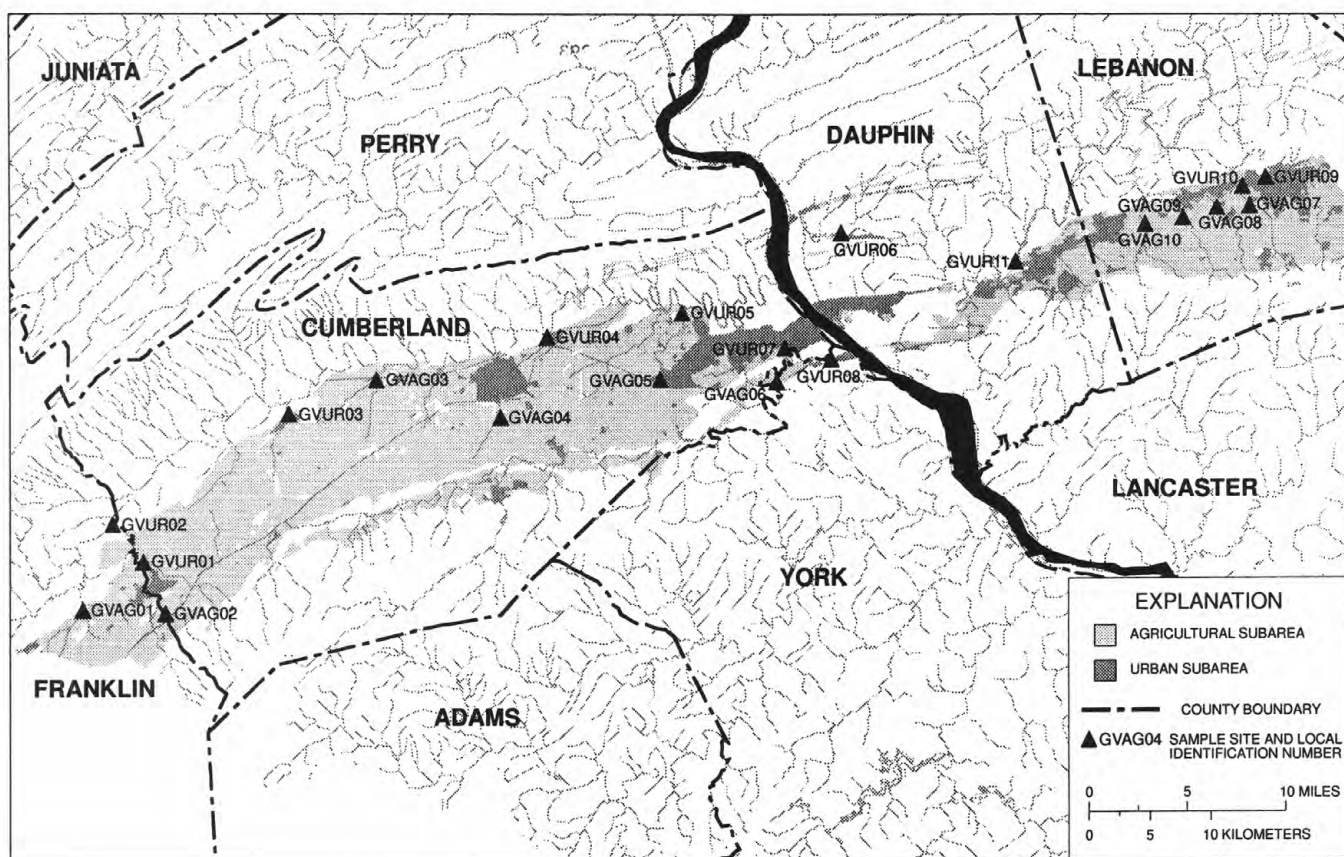


Figure 15. Location and local identification number of streams sampled in agricultural and urban subareas in the Ridge and Valley Physiographic Province, Great Valley Section, Lower Susquehanna River Basin.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

URBAN/SUBURBAN SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, GREAT VALLEY SECTION

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit one downstream-ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; **US/CM**: microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; **UG/L**: micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
GVUR01	400415077314401	07-26-94	1620	BURD RUN AT SHIPPENSBURG, PA
GVUR02	400554077334801	07-26-94	1720	MIDDLE SPRING CREEK NEAR MIDDLE SPRING, PA
GVUR03	401045077233301	07-26-94	1830	BIG SPRING CREEK AT NEWVILLE, PA
GVUR04	01569800	07-27-94	1120	LETORT SPRING RUN NEAR CARLISLE, PA
GVUR05	401505077002601	07-27-94	1250	TRINDLE SPRING RUN AT HOGESTOWN, PA
GVUR06	01571000	07-27-94	1430	PAXTON CREEK NEAR PENBROOK, PA
GVUR07	01571490	07-27-94	0810	CEDAR RUN AT EBERLYS MILL, PA (FIXED STATION)
GVUR08	401258076514101	07-27-94	0940	UNNAMED TRIBUTARY TO YELLOW BREECHES CREEK AT NEW CUMBERLAND, PA
GVUR09	402042076260801	07-26-94	1100	BRANDYWINE CREEK AT LEBANON, PA
GVUR10	402018076272901	07-26-94	1215	QUITTAHILLA CREEK NEAR CLEONA, PA
GVUR11	01573570	07-26-94	1345	SPRING CREEK AT UNION DEPOSIT, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID		AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DRAIN-AGE AREA (SQ. MI.) (81024)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	
		GVUR01	1028	80020	20.5	610	15	3045	10	3.5	534	8.2
		GVUR02	1028	80020	47.7	550	15	3045	10	25	500	8.2
		GVUR03	1028	80020	12.9	480	15	3045	10	48	480	8.0
		GVUR04	1028	80020	21.6	410	15	3045	10	42	645	8.1
		GVUR05	1028	80020	17.8	355	15	3045	10	14	610	7.6
		GVUR06	1028	80020	11.2	350	15	3045	10	3.6	401	8.3
		GVUR07	1028	80020	12.6	340	15	3045	10	12	663	8.0
		GVUR08	1028	80020	3.20	270	15	8010	40	0.71	564	8.0
		GVUR09	1028	80020	3.50	450	15	8010	40	1.8	291	7.9
		GVUR10	1028	80020	19.6	430	15	3045	10	31	646	8.0
		GVUR11	1028	80020	24.0	330	15	3045	10	39	530	8.0
LOCAL ID	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	
GVUR01	18.0	743	9.0	98	250	58	86	9.3	13	10	0.4	
GVUR02	18.5	745	--	--	220	39	67	12	13	11	0.4	
GVUR03	16.5	746	4.9	51	230	42	75	10	5.6	5	0.2	
GVUR04	15.5	751	10.4	106	290	77	92	15	18	12	0.5	
GVUR05	13.5	753	8.1	78	270	58	90	12	12	9	0.3	
GVUR06	22.0	753	8.5	99	160	27	53	7.5	15	16	0.5	
GVUR07	15.5	752	--	37	270	51	88	13	24	16	0.6	
GVUR08	19.5	755	7.6	84	210	59	67	11	34	26	1	
GVUR09	22.5	748	8.3	97	120	72	33	9.2	10	15	0.4	
GVUR10	16.5	751	9.1	95	310	110	88	21	16	10	0.4	
GVUR11	18.0	753	9.8	105	250	63	83	11	11	9	0.3	

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

URBAN/SUBURBAN SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY
PHYSIOGRAPHIC PROVINCE, GREAT VALLEY SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	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)
GVUR01	2.8	240	0	200	21	26	0.2	0.020	7.8	313	303
GVUR02	3.3	220	0	180	20	21	0.2	0.030	7.3	287	280
GVUR03	1.7	230	0	190	16	14	0.1	0.030	6.5	272	267
GVUR04	2.1	260	0	220	27	46	0.2	0.040	7.1	392	364
GVUR05	2.1	260	0	220	29	26	0.1	0.050	7.4	355	335
GVUR06	2.4	170	0	140	23	27	0.1	0.020	7.6	244	222
GVUR07	2.4	270	0	220	28	49	0.1	0.050	7.8	385	364
GVUR08	1.7	190	0	150	27	59	0.2	0.020	26	355	327
GVUR09	2.6	59	0	48	21	16	0.2	<0.010	8.5	176	135
GVUR10	6.1	240	0	200	72	25	0.2	0.040	9.2	428	382
GVUR11	2.8	230	0	190	26	22	0.1	0.030	9.5	313	310
LOCAL ID	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
GVUR01	0.43	2.94	4.48	20	0.020	0.07	4.50	<0.010	--	--	0.50
GVUR02	0.39	19.6	6.54	29	0.060	0.20	6.60	0.070	0.09	0.13	0.30
GVUR03	0.37	35.5	5.68	25	0.020	0.07	5.70	0.030	0.04	--	<0.20
GVUR04	0.53	44.7	6.16	27	0.040	0.13	6.20	0.030	0.04	0.17	<0.20
GVUR05	0.48	13.5	--	--	<0.010	--	5.90	0.020	0.03	--	<0.20
GVUR06	0.33	2.37	--	--	<0.010	--	1.00	0.020	0.03	--	0.30
GVUR07	0.52	12.9	4.09	18	0.010	0.03	4.10	0.030	0.04	--	<0.20
GVUR08	0.48	0.68	--	--	<0.010	--	2.00	0.030	0.04	0.27	0.20
GVUR09	0.24	0.86	--	--	<0.010	--	1.20	0.050	0.06	--	0.40
GVUR10	0.58	35.9	5.99	27	0.010	0.03	6.00	<0.010	--	--	<0.20
GVUR11	0.43	32.7	6.78	30	0.020	0.07	6.80	0.060	0.08	--	0.20
LOCAL ID	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
GVUR01	0.40	4.9	0.040	0.070	0.020	0.06	7	10	190	92	0.86
GVUR02	0.20	6.8	0.070	0.060	0.060	0.18	5	7	180	6	0.41
GVUR03	<0.20	--	<0.010	0.010	<0.010	--	<3	4	200	99	13
GVUR04	0.20	6.4	<0.010	<0.010	<0.010	--	<3	5	330	135	15
GVUR05	<0.20	--	<0.010	0.020	0.010	0.03	<3	2	270	109	4.1
GVUR06	<0.20	--	0.040	<0.010	0.010	0.03	12	6	160	16	0.16
GVUR07	<0.20	--	0.010	0.010	<0.010	--	<3	9	330	131	4.2
GVUR08	0.30	2.3	0.030	0.020	<0.010	--	17	88	160	25	0.05
GVUR09	<0.20	--	0.040	<0.010	<0.010	--	45	79	120	8	0.04
GVUR10	0.20	6.2	<0.010	<0.010	<0.010	--	7	9	210	93	7.8
GVUR11	<0.20	--	0.050	0.020	0.020	0.06	6	14	270	14	1.5

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

URBAN/SUBURBAN SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY
PHYSIOGRAPHIC PROVINCE, GREAT VALLEY SECTION--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (μ G/L) (39632)	CYANA- ZINE, WATER, DISS, REC, (μ G/L) (04041)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (μ G/L) (04040)	MALA- THION, DIS- SOLVED (μ G/L) (39532)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	METRI- BUZIN WATER DISSOLV (μ G/L) (82630)	PRO- METON, WATER, DISS, REC, (μ G/L) (04037)	SI- MAZINE, WATER, DISS, REC, (μ G/L) (04035)	TEBU- THIURON WATER FLTRD GF, REC (μ G/L) (82670)	TER- BACIL WATER FLTRD GF, REC (μ G/L) (82665)
GVUR01	3.5	<0.009	0.190	<0.022	e 0.220	<0.025	0.020	<0.012	0.095	0.037	<0.015	<0.030
GVUR02	25	0.053	0.220	0.120	e 0.200	<0.025	0.700	<0.012	0.087	0.032	<0.015	0.060
GVUR03	48	<0.009	0.230	0.022	e 0.230	<0.025	0.055	<0.012	0.037	0.023	<0.015	<0.030
GVUR04	42	0.033	0.310	0.054	e 0.330	<0.025	0.380	<0.012	0.100	0.047	<0.015	<0.030
GVUR05	14	<0.009	0.200	0.032	e 0.210	<0.025	0.054	<0.012	0.280	0.043	<0.015	<0.030
GVUR06	3.6	<0.009	0.027	<0.022	e 0.005	<0.025	0.016	0.013	0.029	0.014	<0.015	<0.030
GVUR07	12	<0.009	0.130	<0.022	e 0.100	<0.025	0.040	0.027	0.170	0.048	0.059	<0.030
GVUR08	0.71	<0.009	<0.017	<0.022	e 0.009	<0.025	0.011	<0.012	0.049	0.041	0.075	<0.030
GVUR09	1.8	<0.009	0.130	<0.022	e 0.027	<0.025	0.087	<0.012	0.037	<0.008	<0.015	<0.030
GVUR10	31	<0.009	0.260	0.038	e 0.170	<0.025	0.087	<0.012	0.220	0.024	0.086	<0.030
GVUR11	39	<0.009	0.220	0.034	e 0.170	0.130	0.034	<0.012	0.060	0.073	<0.015	<0.030

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, GREAT VALLEY SECTION

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream-ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; **$\mu\text{S}/\text{CM}$** : microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; **$\mu\text{G}/\text{L}$** : micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
GVAG01	400207077353201	08-25-94	1025	ROWE RUN NEAR SHIPPENSBURG, PA
GVAG02	400158077304401	08-25-94	1145	GUM RUN AT SHIPPENSBURG, PA
GVAG03	401214077182601	08-24-94	0945	MOUNT ROCK SPRING AT PLAINFIELD, PA
GVAG04	401032077111001	08-24-94	1045	LETORT SPRING RUN AT CARLISLE, PA
GVAG05	401210077014601	08-23-94	1645	TRINDLE SPRING RUN AT MECHANICSBURG, PA
GVAG06	401200076545301	08-23-94	1445	UNNAMED TRIBUTARY TO YELLOW BREECHES CREEK NEAR SHIREMANSTOWN, PA
GVAG07	401926076270601	08-24-94	1545	SNITZ CREEK AT LEBANON, PA
GVAG08	01573086	08-24-94	1435	BECK CREEK NEAR CLEONA, PA
GVAG09	01573095	08-23-94	1135	BACHMAN RUN AT ANNVILLE, PA (FIXED STATION)
GVAG10	401843076331201	08-24-94	1340	KILLINGER CREEK NEAR PALMYRA, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DRAIN-AGE AREA (SQ. MI.)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SAMPLE PURPOSE CODE	SAMPLER TYPE (CODE)	SAM-PLING METHOD, CODES	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE ($\mu\text{S}/\text{CM}$)	PH WATER WHOLE FIELD (STAND-ARD UNITS)
	(00027)	(00028)	(81024)	(72000)	(71999)	(84164)	(82398)	(00061)	(00095)	(00400)
GVAG01	1028	80020	12.9	600	15	3045	10	8.2	630	8.0
GVAG02	1028	80020	7.30	700	15	3045	10	0.55	340	7.9
GVAG03	1028	80020	23.8	460	15	3045	10	11	573	8.2
GVAG04	1028	80020	7.20	450	15	3045	10	21	532	7.8
GVAG05	1028	80020	6.90	420	15	3045	10	2.4	559	7.7
GVAG06	1028	80020	2.30	360	15	3045	10	1.6	405	8.0
GVAG07	1028	80020	12.4	440	15	3045	10	20	614	8.3
GVAG08	1028	80020	7.87	415	15	3045	10	14	565	8.1
GVAG09	1028	80020	7.30	400	15	3045	10	17	560	8.2
GVAG10	1028	80020	11.0	400	15	3045	10	8.3	483	7.8

LOCAL ID	TEMPER-ATURE OF WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
	(00010)	(00025)	(00300)	(00301)	(00900)	(00904)	(00915)	(00925)	(00930)	(00931)
GVAG01	14.0	754	10.7	105	300	66	100	11	8.8	6
GVAG02	19.0	752	8.6	94	150	22	39	13	5.0	7
GVAG03	12.5	762	10.1	94	270	46	83	16	6.9	5
GVAG04	12.0	762	9.7	90	250	40	77	15	3.1	3
GVAG05	17.0	760	10.7	111	260	52	81	15	8.3	6
GVAG06	23.0	762	7.0	82	150	42	44	8.9	20	22
GVAG07	19.0	762	9.5	103	280	95	76	21	12	8
GVAG08	17.5	762	10.3	108	280	82	85	17	6.8	5
GVAG09	15.0	760	9.8	98	280	85	83	17	7.7	6
GVAG10	18.0	763	9.9	104	240	62	78	11	6.4	5

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY
PHYSIOGRAPHIC PROVINCE, GREAT VALLEY SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	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)
GVAG01	2.8	280	0	230	42	18	0.1	0.040	7.7	367	364
GVAG02	3.6	160	0	130	14	12	0.1	<0.010	8.8	194	189
GVAG03	2.3	280	0	230	21	18	0.2	0.050	8.2	334	318
GVAG04	1.7	260	0	220	20	9.2	0.2	0.030	8.3	309	295
GVAG05	2.7	260	0	210	23	18	0.3	0.040	9.6	321	321
GVAG06	3.0	130	0	100	18	42	0.2	0.040	20	247	226
GVAG07	6.5	220	0	180	90	21	0.2	0.040	13	387	368
GVAG08	2.8	250	0	200	24	18	0.1	0.030	13	345	336
GVAG09	3.3	240	0	190	29	19	0.1	0.030	15	348	334
GVAG10	3.0	220	0	180	17	14	0.1	0.020	12	298	287

LOCAL ID	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
GVAG01	0.50	8.15	7.98	35	0.020	0.07	8.00	0.030	0.04	0.17	0.40
GVAG02	0.26	0.29	3.55	16	0.050	0.16	3.60	0.040	0.05	0.26	0.40
GVAG03	0.45	10.2	5.79	26	0.010	0.03	5.80	0.030	0.04	--	0.50
GVAG04	0.42	17.3	--	--	<0.010	--	7.00	0.030	0.04	--	<0.20
GVAG05	0.44	2.06	7.99	35	0.010	0.03	8.00	0.030	0.04	--	<0.20
GVAG06	0.34	1.08	1.31	5.8	0.090	0.30	1.40	0.070	0.09	0.53	1.1
GVAG07	0.53	20.5	4.19	19	0.010	0.03	4.20	0.030	0.04	--	0.30
GVAG08	0.47	13.2	11.0	49	0.020	0.07	11.0	0.030	0.04	0.17	0.30
GVAG09	0.47	16.0	9.78	43	0.020	0.07	9.80	0.040	0.05	0.16	0.40
GVAG10	0.41	6.71	8.47	37	0.030	0.10	8.50	0.050	0.06	0.25	0.40

LOCAL ID	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
GVAG01	0.20	8.2	0.060	0.030	<0.010	--	7	25	230	166	3.7
GVAG02	0.30	3.9	0.120	0.090	0.070	0.21	25	27	120	12	0.02
GVAG03	<0.20	--	0.080	0.030	0.020	0.06	<3	8	330	110	3.3
GVAG04	<0.20	--	0.020	0.070	0.030	0.09	<3	3	320	101	5.7
GVAG05	<0.20	--	<0.010	<0.010	<0.010	--	<3	16	360	9	0.06
GVAG06	0.60	2.0	0.160	0.080	0.050	0.15	25	13	120	14	0.06
GVAG07	<0.20	--	0.050	0.020	<0.010	--	4	20	360	75	4.0
GVAG08	0.20	11	0.050	0.020	0.020	0.06	<3	18	250	106	4.0
GVAG09	0.20	10	0.100	0.060	0.050	0.15	3	16	250	25	1.1
GVAG10	0.30	8.8	0.080	0.050	0.040	0.12	5	30	210	19	0.42

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY
PHYSIOGRAPHIC PROVINCE, GREAT VALLEY SECTION--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (μ G/L) (39632)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (μ G/L) (04040)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	PRO- METON, WATER, DISS, REC, (μ G/L) (04037)	SI- MAZINE, WATER, DISS, REC, (μ G/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC (μ G/L) (82670)
GVAG01	8.2	<0.009	0.360	e 0.270	0.220	0.048	0.044	<0.015
GVAG02	0.55	<0.009	0.056	e 0.092	0.014	0.015	0.008	0.027
GVAG03	11	<0.009	0.210	e 0.250	0.053	0.024	0.024	0.017
GVAG04	21	<0.009	0.290	e 0.300	0.028	0.021	0.044	<0.015
GVAG05	2.4	0.016	0.350	e 0.350	0.380	0.032	0.025	<0.015
GVAG06	1.6	<0.009	<0.017	e 0.015	<0.009	0.330	<0.008	<0.015
GVAG07	20	<0.009	0.120	e 0.120	0.009	0.055	0.013	<0.015
GVAG08	14	0.011	0.330	e 0.250	0.030	0.020	0.220	<0.015
GVAG09	17	0.013	0.280	e 0.150	0.140	0.020	0.200	<0.015
GVAG10	8.3	<0.009	0.270	e 0.200	<0.009	0.041	0.045	<0.015

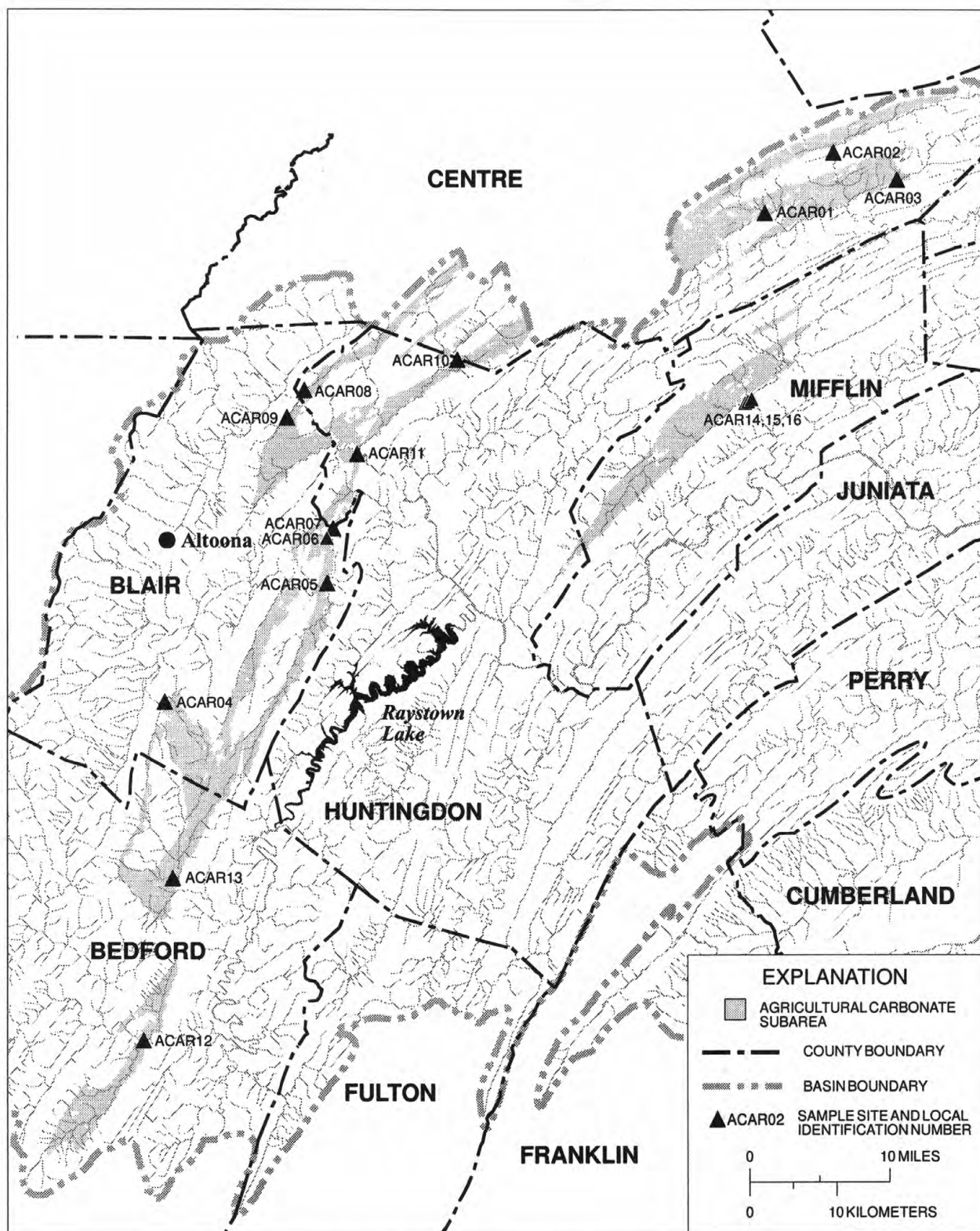


Figure 16. Location and local identification number of streams sampled in agricultural subarea of carbonate bedrock in the Ridge and Valley Physiographic Province, Appalachian Mountain Section, Lower Susquehanna River Basin.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE,
APPALACHIAN MOUNTAIN SECTION

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream-ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; $\mu\text{S}/\text{CM}$: microsiemens per centimeter at 25 degrees Celsius; **DEG C**: degrees Celsius; **MM OF HG**: millimeters of mercury; **MG/L**: milligrams per liter; $\mu\text{G}/\text{L}$: micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
ACAR01	405121077342701	08-03-94	1015	PENNS CREEK AT SPRING MILLS, PA
ACAR02	405505077284901	08-03-94	1210	ELK CREEK NEAR MILLHEIM, PA
ACAR03	405323077233601	08-03-94	1110	UNNAMED TRIBUTARY TO PINE CREEK NEAR AARONSBURG, PA
ACAR04	402115078235101	08-01-94	1130	PLUM CREEK AT ROARING SPRING, PA
ACAR05	402836078103601	08-02-94	1420	CLOVER CREEK NEAR WILLIAMSBURG, PA
ACAR06	403123078103801	08-02-94	1330	ROARING RUN AT MOUNT ETNA, PA
ACAR07	403156078100701	08-01-94	0935	FOX RUN AT MOUNT ETNA, PA
ACAR08	404026078123201	08-02-94	1020	LOGAN SPRING RUN NEAR TYRONE, PA
ACAR09	403845078135701	08-02-94	0950	ELK RUN NEAR TYRONE, PA
ACAR10	404221077595501	08-02-94	1130	SPRUCE CREEK AT PENNSYLVANIA FURNACE, PA
ACAR11	403632078080901	08-01-94	0830	SPRUCE CREEK AT SPRUCE CREEK, PA
ACAR12	400020078252201	08-01-94	1600	COVE CREEK NEAR EVERETT, PA
ACAR13	401020078230401	08-01-94	1450	THREE SPRINGS RUN NEAR LOYSBURG, PA
ACAR14	01564997	08-02-94	1715	KISHACOQUILLAS CREEK AT LUMBER CITY, PA (FIXED STATION)
ACAR15	01564996	08-03-94	0910	TEA CREEK AT REEDSVILLE, PA
ACAR16	403956077353401	08-03-94	0820	HONEY CREEK AT REEDSVILLE, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DRAIN-AGE AREA (SQ. MI.)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SAMPLE PURPOSE CODE	SAMPLER TYPE (CODE)	SAM-PLING METHOD, CODES	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE ($\mu\text{S}/\text{CM}$)	PH WATER WHOLE FIELD (STAND-ARD UNITS)
ACAR01	1028	80020	17.5	1000	15	3045	10	31	421	7.7
ACAR02	1028	80020	43.3	1180	15	3045	10	19	298	8.4
ACAR03	1028	80020	5.80	1090	15	8010	10	1.8	342	8.3
ACAR04	1028	80020	17.4	1100	15	3045	10	3.5	660	8.5
ACAR05	1028	80020	50.1	800	15	3045	10	27	387	8.5
ACAR06	1028	80020	2.70	780	15	3045	10	5.2	445	8.0
ACAR07	1028	80020	2.60	760	15	8010	10	1.1	501	8.2
ACAR08	1028	80020	7.70	940	15	8010	10	0.68	518	8.4
ACAR09	1028	80020	5.90	930	15	8010	70	0.20	437	8.3
ACAR10	1028	80020	7.90	1080	15	3045	10	3.5	414	8.3
ACAR11	1028	80020	109	760	15	3045	10	50	352	8.3
ACAR12	1028	80020	41.9	1020	15	3045	10	6.6	364	8.8
ACAR13	1028	80020	9.80	1140	15	8010	10	9.6	457	8.6
ACAR14	1028	80020	57.4	590	15	3045	10	18	494	9.0
ACAR15	1028	80020	10.9	600	15	3045	10	25	399	7.9
ACAR16	1028	80020	93.5	590	15	3045	10	19	224	7.8

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE,
APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
ACAR01	15.5	740	8.8	91	200	32	62	12	5.8	6	0.2
ACAR02	15.0	736	11.7	121	140	18	49	4.7	2.8	4	0.1
ACAR03	21.5	740	10.8	127	160	9	59	2.8	3.9	5	0.1
ACAR04	19.0	740	9.1	101	280	62	71	25	27	17	0.7
ACAR05	21.0	744	8.6	99	190	26	44	19	3.6	4	0.1
ACAR06	11.5	746	10.3	97	230	37	50	26	3.8	3	0.1
ACAR07	12.5	749	9.5	91	250	53	56	27	4.7	4	0.1
ACAR08	15.5	742	9.8	101	270	31	60	28	3.4	3	0.1
ACAR09	16.0	743	9.0	93	210	36	46	24	3.3	3	0.1
ACAR10	17.5	738	10.4	112	200	34	48	19	4.0	4	0.1
ACAR11	17.0	749	8.5	89	180	36	41	20	2.2	3	0.1
ACAR12	21.5	740	10.2	119	190	40	43	21	3.0	3	0.1
ACAR13	18.5	738	9.7	107	250	57	52	28	2.9	2	0.1
ACAR14	23.5	750	10.9	131	260	46	69	22	8.9	7	0.2
ACAR15	13.5	753	9.6	94	190	37	52	15	7.8	8	0.2
ACAR16	19.0	753	7.6	83	100	9	33	4.2	2.3	5	0.1

LOCAL ID	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
ACAR01	3.2	210	0	170	17	11	0.1	0.020	5.2	241	235
ACAR02	1.0	150	--	120	11	6.1	<0.1	<0.010	5.4	174	165
ACAR03	1.9	180	0	150	14	8.1	<0.1	<0.010	4.5	203	193
ACAR04	6.6	270	--	220	34	45	0.2	0.010	4.4	388	367
ACAR05	3.7	180	7	160	17	8.6	0.1	<0.010	7.5	254	223
ACAR06	1.0	240	0	200	14	8.9	0.1	0.030	7.3	250	242
ACAR07	1.3	240	0	200	38	10	0.1	0.030	7.2	311	277
ACAR08	1.8	280	4	230	17	10	<0.1	0.020	4.7	290	288
ACAR09	1.6	220	0	180	15	10	0.1	0.010	5.8	265	239
ACAR10	1.0	200	0	160	15	11	0.1	0.020	4.6	258	222
ACAR11	1.3	180	0	150	9.6	6.2	0.1	0.010	4.6	194	187
ACAR12	2.2	180	3	150	12	7.4	0.2	<0.010	4.4	204	200
ACAR13	1.7	220	6	190	13	9.2	0.1	0.020	7.1	265	257
ACAR14	3.8	210	29	220	20	15	0.2	0.030	1.9	298	295
ACAR15	2.1	190	0	150	22	14	0.2	0.020	6.1	227	228
ACAR16	2.9	110	0	91	14	4.1	<0.1	<0.010	3.5	131	123

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE,
APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
ACAR01	0.33	20.4	--	--	<0.010	--	3.10	0.040	0.05	--	<0.20
ACAR02	0.24	9.11	--	--	<0.010	--	2.40	0.020	0.03	--	<0.20
ACAR03	0.28	0.99	1.76	7.8	0.040	0.13	1.80	0.050	0.06	0.25	0.50
ACAR04	0.53	3.64	4.74	21	0.060	0.20	4.80	0.090	0.12	1.0	1.2
ACAR05	0.35	18.2	4.98	22	0.020	0.07	5.00	0.020	0.03	0.38	0.40
ACAR06	0.34	3.53	--	--	<0.010	--	3.00	<0.010	--	--	<0.20
ACAR07	0.42	0.92	--	--	<0.010	--	3.00	0.020	0.03	--	<0.20
ACAR08	0.39	0.54	--	--	<0.010	--	5.00	0.020	0.03	--	<0.20
ACAR09	0.36	0.15	--	--	<0.010	--	5.90	0.010	0.01	--	<0.20
ACAR10	0.35	2.40	4.59	20	0.010	0.03	4.60	0.010	0.01	--	<0.20
ACAR11	0.26	26.0	--	--	<0.010	--	2.80	0.030	0.04	--	<0.20
ACAR12	0.28	3.63	--	--	<0.010	--	3.10	0.020	0.03	--	0.20
ACAR13	0.36	6.87	6.78	30	0.020	0.07	6.80	0.030	0.04	--	0.20
ACAR14	0.41	14.5	5.09	23	0.010	0.03	5.10	0.030	0.04	0.27	0.40
ACAR15	0.31	15.4	3.29	15	0.010	0.03	3.30	0.030	0.04	0.37	0.20
ACAR16	0.18	6.72	0.870	3.9	0.010	0.03	0.880	0.030	0.04	--	0.40
LOCAL ID	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
ACAR01	<0.20	--	0.070	0.070	0.050	0.15	15	6	550	8	0.68
ACAR02	<0.20	--	0.020	<0.010	<0.010	--	35	4	310	3	0.16
ACAR03	0.30	2.1	0.070	0.030	0.030	0.09	22	40	400	10	0.05
ACAR04	1.1	5.9	0.280	0.230	0.210	0.64	14	18	420	20	0.19
ACAR05	0.40	5.4	0.110	0.080	0.070	0.21	12	3	80	21	1.5
ACAR06	<0.20	--	0.030	0.020	0.020	0.06	<3	2	90	31	0.44
ACAR07	<0.20	--	<0.010	0.070	0.030	0.09	<3	<1	250	52	0.15
ACAR08	<0.20	--	0.010	0.010	0.010	0.03	4	<1	180	56	0.10
ACAR09	<0.20	--	0.020	0.020	0.020	0.06	<3	<1	190	3	0.00
ACAR10	<0.20	--	<0.010	<0.010	<0.010	--	7	4	270	41	0.38
ACAR11	<0.20	--	0.020	<0.010	<0.010	--	7	2	80	6	0.80
ACAR12	<0.20	--	0.020	<0.010	<0.010	--	9	4	80	9	0.16
ACAR13	<0.20	--	0.020	0.030	0.030	0.09	4	3	50	12	0.31
ACAR14	0.30	5.4	0.300	0.290	0.260	0.80	5	4	520	5	0.24
ACAR15	0.40	3.7	0.050	0.050	0.030	0.09	8	5	640	16	1.1
ACAR16	<0.20	--	0.040	0.010	<0.010	--	27	16	290	14	0.72

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE,
APPALACHIAN MOUNTAIN SECTION--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (μ G/L) (39632)	CHLOR- PYRIFOS DIS- SOLVED (μ G/L) (38933)	CYANA- ZINE, WATER, DISS, REC, (μ G/L) (04041)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (μ G/L) (04040)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	PRO- METON, WATER, DISS, REC, (μ G/L) (04037)	SI- MAZINE, WATER, DISS, REC, (μ G/L) (04035)
ACAR01	31	0.014	0.150	<0.008	0.078	e 0.069	0.032	<0.008	0.029
ACAR02	19	<0.009	0.047	<0.008	<0.022	e 0.050	<0.009	<0.008	<0.008
ACAR03	1.8	<0.009	0.032	<0.008	<0.022	e 0.026	0.009	<0.008	<0.008
ACAR04	3.5	<0.009	0.320	<0.008	0.043	e 0.110	0.290	0.060	0.047
ACAR05	27	<0.009	0.280	0.008	0.086	e 0.140	0.110	0.008	0.034
ACAR06	5.2	<0.009	0.064	<0.008	<0.022	e 0.068	<0.009	0.029	<0.008
ACAR07	1.1	<0.009	0.065	<0.008	<0.022	e 0.073	<0.009	<0.008	0.017
ACAR08	0.68	<0.009	0.160	<0.008	0.044	e 0.130	0.040	<0.008	0.020
ACAR09	0.20	<0.009	0.230	<0.008	<0.022	e 0.260	<0.009	<0.008	0.028
ACAR10	3.5	<0.009	0.120	<0.008	<0.022	e 0.120	0.031	<0.008	0.012
ACAR11	50	<0.009	0.110	<0.008	0.030	e 0.110	0.011	<0.008	0.013
ACAR12	6.6	<0.009	0.120	<0.008	<0.022	e 0.130	0.011	<0.008	0.014
ACAR13	9.6	<0.009	0.160	<0.008	<0.022	e 0.150	<0.009	<0.008	0.012
ACAR14	18	0.010	0.280	<0.008	0.056	e 0.210	0.170	0.062	0.100
ACAR15	25	--	--	--	--	--	--	--	--
ACAR16	19	<0.009	0.035	<0.008	0.022	e 0.011	<0.009	<0.008	<0.008

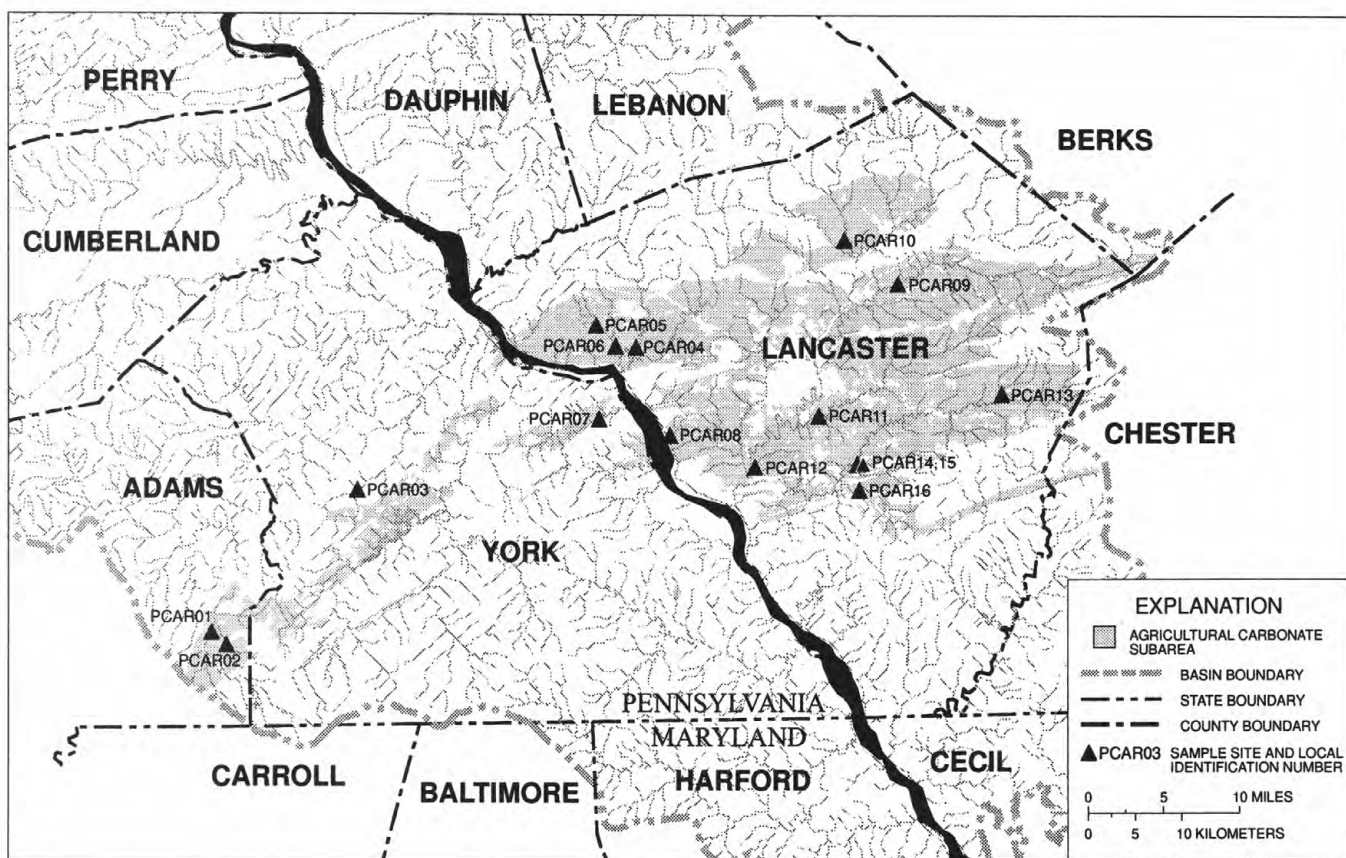


Figure 17. Location and local identification number of streams sampled in an agricultural subarea of carbonate bedrock in the Piedmont Physiographic Province, Lower Susquehanna River Basin.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

REMARKS--Explanation of column headings--**STATION NUMBER**: 7-digit unique downstream-ordered identifier for site or 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; $\mu\text{S}/\text{CM}$: microsiemens per centimeter at 25 degrees Celsius; $^{\circ}\text{C}$: degrees Celsius; MM OF HG : millimeters of mercury; MG/L : milligrams per liter; $\mu\text{G}/\text{L}$: micrograms per liter. Filtered water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate. For a complete list of pesticides analyzed and their corresponding reporting levels, see table 4, page 272.

LOCAL ID	STATION NUMBER	DATE	TIME	STATION NAME
PCAR01	394839077025101	08-31-94	0805	SOUTH BRANCH CONEWAGO CREEK AT McSHERRYSTOWN, PA
PCAR02	394757077014501	08-31-94	0900	PLUM CREEK AT McSHERRYSTOWN, PA
PCAR03	395645076514701	08-31-94	1045	LITTLE CONEWAGO CREEK NEAR WEST YORK, PA
PCAR04	400442076303201	08-29-94	1230	LITTLE CHICKIES CREEK NEAR MARIETTA, PA
PCAR05	400559076333101	08-29-94	0900	SPRING (SP LN-14) AT DONEGAL SPRINGS, PA
PCAR06	400447076320401	08-29-94	1100	DONEGAL CREEK AT MARIETTA, PA
PCAR07	400038076332301	08-31-94	1215	KREUTZ CREEK AT WRIGHTSVILLE, PA
PCAR08	395939076280001	08-31-94	1330	STAMANS RUN AT WASHINGTON BORO, PA
PCAR09	400805076102801	08-29-94	1440	CONESTOGA RIVER NEAR AKRON, PA
PCAR10	401038076143001	08-29-94	1615	MIDDLE CREEK NEAR AKRON, PA
PCAR11	01576540	08-30-94	1115	MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA (FIXED STATION)
PCAR12	395745076213401	08-31-94	1440	STEHMAN RUN AT ROCKHILL, PA
PCAR13	400139076024401	08-30-94	0920	UMBLES RUN AT NEW MILLTOWN, PA
PCAR14	395748076134701	08-30-94	1430	PEQUEA CREEK NEAR STRASBURG, PA
PCAR15	395749076132001	08-30-94	1345	WALNUT RUN NEAR STRASBURG, PA
PCAR16	395619076133901	08-30-94	1245	BIG BEAVER CREEK NEAR REFTON, PA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DRAIN-AGE AREA (SQ. MI.) (81024)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SAMPLE PURPOSE CODE (71999)	SAMPLER TYPE (CODE) (84164)	SAM-PLING METHOD, CODES (82398)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE ($\mu\text{S}/\text{CM}$) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)
PCAR01	1028	80020	33.0	510	15	3045	10	11	316	7.9
PCAR02	1028	80020	7.00	530	15	3045	10	2.8	407	7.8
PCAR03	1028	80020	7.10	410	15	3045	10	7.1	391	8.3
PCAR04	1028	80020	44.5	280	15	3045	10	65	468	8.0
PCAR05	1028	80020	1.00	340	15	3045	10	4.7	673	7.4
PCAR06	1028	80020	15.5	300	15	3045	10	1.5	670	8.0
PCAR07	1028	80020	30.2	280	15	3045	10	23	357	8.0
PCAR08	1028	80020	2.50	260	15	3045	70	1.5	626	8.2
PCAR09	1028	80020	122	300	15	3045	10	108	494	7.9
PCAR10	1028	80020	31.6	320	15	3045	10	34	428	7.8
PCAR11	1028	80020	54.2	250	15	3045	10	38	726	8.2
PCAR12	1028	80020	5.00	220	15	3045	10	2.2	635	8.3
PCAR13	1028	80020	8.40	380	15	8010	70	4.3	443	8.0
PCAR14	1028	80020	83.0	300	15	3045	10	52	511	8.1
PCAR15	1028	80020	2.70	320	15	8010	70	1.4	635	8.4
PCAR16	1028	80020	18.0	320	15	3045	10	15	338	8.5

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
PCAR01	18.0	751	7.7	83	140	34	44	7.1	5.1	7	0.2
PCAR02	17.0	750	7.8	82	190	34	62	7.4	6.4	7	0.2
PCAR03	17.5	755	10.2	108	170	38	48	13	7.3	8	0.2
PCAR04	19.0	755	8.4	92	190	73	55	12	14	14	0.4
PCAR05	13.5	752	7.9	77	310	95	99	14	9.6	6	0.2
PCAR06	15.5	754	9.3	95	300	93	91	17	13	9	0.3
PCAR07	17.5	759	8.9	94	150	13	45	9.9	9.9	12	0.3
PCAR08	17.5	759	9.1	96	280	110	88	14	9.6	7	0.3
PCAR09	22.0	755	8.6	99	210	55	56	17	13	12	0.4
PCAR10	19.0	753	9.3	102	200	53	60	12	8.0	8	0.2
PCAR11	19.5	761	8.7	95	310	86	74	31	31	17	0.8
PCAR12	18.0	759	9.2	98	310	100	100	14	9.6	6	0.2
PCAR13	16.0	758	9.9	101	210	50	47	23	6.4	6	0.2
PCAR14	22.0	760	8.3	95	230	65	54	24	8.6	7	0.2
PCAR15	23.0	760	11.2	131	300	100	77	26	8.0	5	0.2
PCAR16	20.0	760	9.9	109	150	42	45	8.1	8.3	11	0.3

LOCAL ID	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WAT.DIS FET FIELD HCO3 (MG/L) (29804)	CAR- BONATE WAT.DIS FET FIELD CO3 (MG/L) (29807)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	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)
PCAR01	2.6	130	0	110	15	14	0.1	<0.010	6.7	177	176
PCAR02	2.0	180	0	150	21	14	0.1	<0.010	8.8	243	231
PCAR03	1.7	170	0	130	28	12	<0.1	0.010	6.3	233	218
PCAR04	3.9	140	0	110	28	24	<0.1	<0.010	9.3	271	268
PCAR05	4.0	260	0	210	28	23	<0.1	0.020	7.4	407	395
PCAR06	4.3	250	0	200	29	33	<0.1	0.020	7.5	390	389
PCAR07	3.2	170	0	140	17	18	0.1	<0.010	7.5	202	217
PCAR08	5.1	210	0	170	41	23	0.1	<0.010	6.5	384	370
PCAR09	4.1	190	0	150	35	22	<0.1	<0.010	9.9	292	285
PCAR10	2.6	180	0	150	20	15	<0.1	0.020	7.6	244	249
PCAR11	7.0	280	0	230	44	47	0.1	0.020	6.9	428	421
PCAR12	3.6	250	0	210	48	23	0.2	0.020	7.0	395	382
PCAR13	3.3	200	0	160	19	15	<0.1	0.020	9.1	247	252
PCAR14	4.8	210	0	170	28	20	0.1	<0.010	7.7	289	284
PCAR15	4.0	240	--	200	47	24	0.1	0.020	5.6	371	372
PCAR16	4.5	130	--	100	19	16	0.1	<0.010	7.1	200	193

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
PCAR01	0.24	5.40	3.98	18	0.020	0.07	4.00	0.020	0.03	--	0.30
PCAR02	0.33	1.83	3.99	18	0.010	0.03	4.00	0.030	0.04	--	0.20
PCAR03	0.32	4.47	4.58	20	0.020	0.07	4.60	0.010	0.01	--	<0.20
PCAR04	0.37	47.8	12.0	53	0.010	0.03	12.0	0.020	0.03	0.38	0.30
PCAR05	0.55	5.19	19.0	84	0.020	0.07	19.0	0.030	0.04	0.17	<0.20
PCAR06	0.53	1.62	16.0	71	0.040	0.13	16.0	0.050	0.06	0.35	0.40
PCAR07	0.27	12.3	4.98	22	0.020	0.07	5.00	0.030	0.04	--	<0.20
PCAR08	0.52	1.54	18.0	79	0.050	0.16	18.0	0.060	0.08	0.64	0.80
PCAR09	0.40	85.1	7.88	35	0.020	0.07	7.90	0.030	0.04	0.57	0.40
PCAR10	0.33	22.3	8.08	36	0.020	0.07	8.10	0.020	0.03	--	0.40
PCAR11	0.58	43.9	9.87	44	0.030	0.10	9.90	0.040	0.05	0.26	0.30
PCAR12	0.54	2.37	12.0	53	0.010	0.03	12.0	0.020	0.03	--	0.20
PCAR13	0.34	2.85	7.05	31	0.050	0.16	7.10	0.050	0.06	--	0.40
PCAR14	0.39	40.9	7.84	35	0.060	0.20	7.90	0.070	0.09	0.33	0.40
PCAR15	0.50	1.42	13.9	62	0.060	0.20	14.0	0.040	0.05	0.46	0.50
PCAR16	0.27	7.99	5.08	22	0.020	0.07	5.10	0.020	0.03	0.18	0.20

LOCAL ID	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
PCAR01	<0.20	--	0.440	0.010	0.010	0.03	36	21	190	18	0.53
PCAR02	<0.20	--	0.040	0.020	0.010	0.03	15	14	290	18	0.14
PCAR03	<0.20	--	0.030	0.020	0.020	0.06	6	9	150	10	0.19
PCAR04	0.40	12	0.050	0.050	0.050	0.15	14	9	200	5	0.88
PCAR05	0.20	19	0.040	0.020	0.020	0.06	<3	6	240	54	0.68
PCAR06	0.40	16	0.070	0.030	0.030	0.09	<3	33	260	124	0.50
PCAR07	<0.20	--	0.030	0.020	0.010	0.03	18	22	130	9	0.56
PCAR08	0.70	19	0.100	0.070	0.070	0.21	4	7	360	3	0.01
PCAR09	0.60	8.5	0.110	0.090	0.080	0.25	<3	23	180	17	5.0
PCAR10	<0.20	--	0.050	0.040	0.020	0.06	11	27	110	90	8.3
PCAR11	0.30	10	0.180	0.160	0.140	0.43	5	15	210	11	1.1
PCAR12	<0.20	--	0.050	0.060	0.050	0.15	<3	3	440	99	0.59
PCAR13	<0.20	--	0.120	0.060	0.070	0.21	12	54	50	15	0.17
PCAR14	0.40	8.3	0.210	0.150	0.140	0.43	6	54	90	23	3.2
PCAR15	0.50	15	0.100	0.070	0.060	0.18	4	43	140	15	0.06
PCAR16	0.20	5.3	0.070	0.040	0.040	0.12	23	8	190	4	0.16

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEYS OF NUTRIENTS, IONS, AND PESTICIDES IN STREAM BASE FLOW

AGRICULTURAL SUBAREA OF CARBONATE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL ID	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (μ G/L) (39632)	CYANA- ZINE, WATER, DISS, REC, (μ G/L) (04041)	DESETHYL ATRA- ZINE, WATER, DISS, REC, (μ G/L) (04040)	DI- AZINON, DIS- SOLVED (μ G/L) (39572)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	PRO- METON, WATER, DISS, REC, (μ G/L) (04037)	SI- MAZINE, WATER, DISS, REC, (μ G/L) (04035)
PCAR01	11	<0.009	0.110	<0.022	e 0.077	<0.008	0.070	0.015	0.031
PCAR02	2.8	<0.009	0.059	<0.022	e 0.032	0.010	0.030	0.081	<0.008
PCAR03	7.1	0.011	0.240	0.026	e 0.120	<0.008	0.066	0.066	0.018
PCAR04	65	<0.009	0.240	<0.022	e 0.220	<0.008	0.048	0.064	0.070
PCAR05	4.7	<0.009	0.630	<0.022	e 0.390	<0.008	0.070	0.067	0.039
PCAR06	1.5	<0.009	0.500	<0.022	e 0.380	<0.008	0.060	0.065	0.048
PCAR07	23	<0.009	0.140	<0.022	e 0.160	<0.008	0.032	0.062	0.028
PCAR08	1.5	<0.009	0.120	<0.022	e 0.140	<0.008	0.011	0.100	0.018
PCAR09	108	<0.009	0.180	<0.022	e 0.120	<0.008	0.042	0.038	0.130
PCAR10	34	<0.009	0.220	<0.022	e 0.100	<0.008	0.015	0.034	0.024
PCAR11	38	<0.009	0.150	<0.022	e 0.130	<0.008	0.050	0.099	0.130
PCAR12	2.2	<0.009	0.340	<0.022	e 0.410	<0.008	0.076	0.030	0.034
PCAR13	4.3	<0.009	0.086	<0.022	e 0.082	<0.008	0.009	0.014	0.041
PCAR14	52	<0.009	0.120	0.025	e 0.140	<0.008	0.024	0.062	0.500
PCAR15	1.4	<0.009	0.140	<0.022	e 0.220	<0.008	0.018	0.051	0.025
PCAR16	15	<0.009	0.083	<0.022	e 0.087	<0.008	0.024	0.052	0.022

e Estimated.

ANALYSIS OF STREAM-FLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF TRACE ELEMENTS IN WATER

MAHANAY CREEK, NORTHUMBERLAND COUNTY

REMARKS.--Explanation of column headings--**STATION NUMBER:** 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and 2-digit sequence number suffix; **μ S/CM:** microsiemens per centimeter at 25 degrees Celsius; **DEG C:** degrees Celsius; **MM OF HG:** millimeters of mercury; **MG/L:** Milligrams per liter; **μ G/L:** micrograms per liter. Whole water and fixed-endpoint titration used for alkalinity, bicarbonate, and carbonate.

NOTE: Additional analyses for Mahanoy Creek for streambed sediments and fish livers are found on pages 309-320 and 336-337.

STATION NUMBER		DATE	TIME	STATION NAME						
404354076474001		09-07-94	1400	MAHANAY CREEK NR DORNSIFE, PA						
404334076501601		09-07-94	1200	MAHANAY CREEK NR HERNDON, PA						
WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994										
STATION	NUMBER	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)
404354076474001		1028	80020	132	832	7.4	16.5	753	10.0	103
404334076501601		1028	80020	155	809	8.0	17.0	753	10.6	112
STATION	NUMBER	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3) (00902)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)
404354076474001		410	430	96	83	54	50	9.4	10	0.2
404334076501601		400	360	77	80	47	48	8.6	10	0.2
STATION	NUMBER	BICARBONATE WATER WH FET FIELD (MG/L AS HCO3) (00440)	ALKALINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	BARIUM, TOTAL RECOVERABLE (μG/L AS BA) (01007)	BARIUM, DIS-SOLVED (μG/L AS BA) (01005)	BERYLLIUM, TOTAL RECOVERABLE (μG/L AS BE) (01012)	BERYLLIUM, DIS-SOLVED (μG/L AS BE) (01010)	CADMIUM TOTAL RECOVERABLE (μG/L AS CD) (01027)	CADMIUM DIS-SOLVED (μG/L AS CD) (01025)
404354076474001		39	32	8.6	<100	16	<10	<0.5	<1	<1.0
404334076501601		33	27	7.5	<100	18	<10	<0.5	<1	<1.0
STATION	NUMBER	CHROMIUM, DIS-SOLVED (μG/L AS CR) (01030)	COBALT, TOTAL RECOVERABLE (μG/L AS CO) (01037)	COBALT, DIS-SOLVED (μG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (μG/L AS CU) (01042)	COPPER, DIS-SOLVED (μG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (μG/L AS FE) (01045)	IRON, DIS-SOLVED (μG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (μG/L AS PB) (01051)	LEAD, DIS-SOLVED (μG/L AS PB) (01049)
404354076474001		<5	50	40	5	<10	5900	<3	<1	<10
404334076501601		<5	40	30	4	<10	3400	<3	<1	<10
STATION	NUMBER	LITHIUM TOTAL RECOVERABLE (μG/L AS LI) (01132)	LITHIUM DIS-SOLVED (μG/L AS LI) (01130)	MANGANESE, TOTAL RECOVERABLE (μG/L AS MN) (01055)	MANGANESE, DIS-SOLVED (μG/L AS MN) (01056)	MOLYBDENUM, TOTAL RECOVERABLE (μG/L AS MO) (01062)	MOLYBDENUM, DIS-SOLVED (μG/L AS MO) (01060)	NICKEL, TOTAL RECOVERABLE (μG/L AS NI) (01067)	NICKEL, DIS-SOLVED (μG/L AS NI) (01065)	SILVER, TOTAL RECOVERABLE (μG/L AS AG) (01077)
404354076474001		60	48	3700	3600	<1	<10	69	60	<1
404334076501601		60	44	3100	3100	<1	<10	58	50	<1

ANALYSIS OF STREAM-FLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF TRACE ELEMENTS IN WATER

MAHANAY CREEK, NORTHUMBERLAND COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

STATION	NUMBER	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (μ G/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (μ G/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (μ G/L AS ZN) (01092)	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
404354076474001		<1.0	710	720	<6	110	44	28	10
404334076501601		<1.0	670	690	<6	70	28	24	10

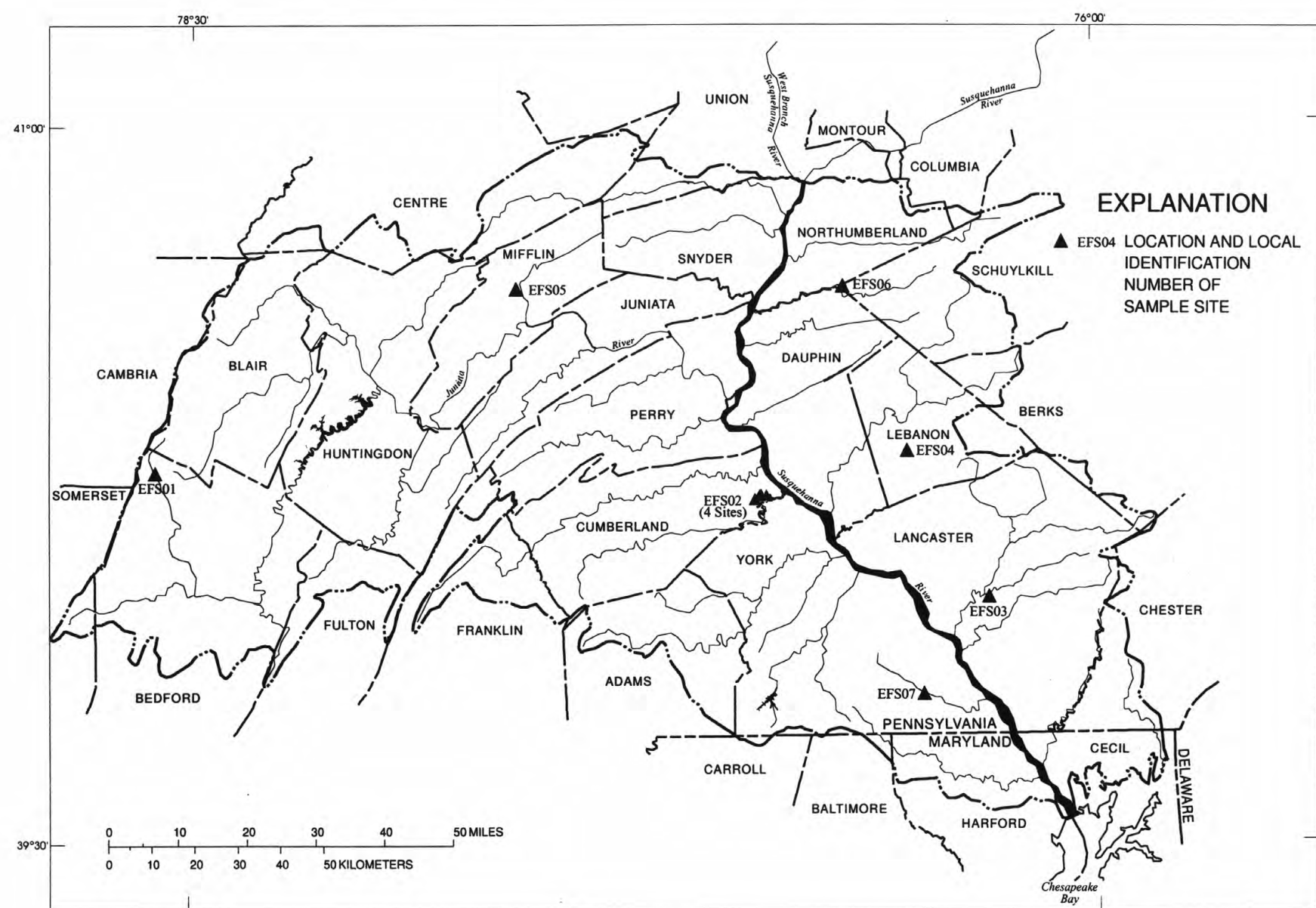


Figure 18. Location and local identification number of fixed-station ecological sites in the Lower Susquehanna River Basin NAWQA program.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

Ecological Survey of Fixed Sites--Site Descriptions

REMARKS.--The following table contains site descriptions from the fixed-site ecological survey. Samples were collected during the period May to July 1994 to determine characteristics of stream water quality, periphyton biomass, chlorophyll-A, and chlorophyll-B. These data appear in the tables on the following pages. In addition algal, invertebrate, and fish community and habitat data will be published at a later date.

<u>Local Identifier</u>	<u>Station number</u>	<u>County</u>	<u>Hydrologic Unit</u>	<u>Site Name and Location</u>
EFS01	01559795	Bedford	02050303	Bobs Creek near Pavia, Pa., Reach 3 (most downstream reach) - lat 40°16'21", long 78°35'55", approximately 0.7 mi upstream from highway bridge on SR 869 and 0.8 mi upstream from Wallacks Branch. A reference hub (lat 40°16'19", long 78°35'55") is located 136 feet downstream from the gage with the reach beginning at the hub and extending 686 feet upstream.
EFS01.1	01559795	Bedford	02050303	Bobs Creek near Pavia, Pa., Reach 2 - begins 762 feet upstream of the reference hub and extends 710 feet upstream.
EFS01.2	01559795	Bedford	02050303	Bobs Creek near Pavia, Pa., Reach 1 (most upstream reach) - begins 1472 feet upstream of the reference hub and extends 561 feet upstream.
EFS02	01571490	Cumberland	02050305	Cedar Run at Eberlys Mill, Pa. - lat 40°13'30", long 76°54'24", approximately 70 feet upstream from bridge on SR 2031.
EFS02.1	401334076551001	Cumberland	02050305	Unnamed Tributary to the Unnamed Northern Tributary to Cedar Run at Eberlys Mill, Pa. - lat 40°13'34", long 76°55'10", approximately 40 feet downstream from Orchard Road bridge at the dam.
EFS02.2	401327076550401	Cumberland	02050305	Unnamed Northern Tributary to Cedar Run at Eberlys Mill, Pa. - lat 40°13'27", long 76°55'04", approximately 50 feet above the mouth of the tributary.
EFS02.3	401303076562001	Cumberland	02050305	Cedar Run at Shiremanstown, Pa. - lat 40°13'03", long 76°56'20", approximately 40 feet upstream of a concrete foot bridge behind the 3800 block Hartzdale Drive mini-mall.
EFS03	01576540	Lancaster	02050306	Mill Creek at Eshelman Mill Road near Lyndon, Pa. - lat 40°00'36", long 76°16'39", at T-476 bridge (Eshelman Mill Road).
EFS04	01573095	Lebanon	02050305	Bachman Run at Annville, Pa. - lat 40°18'59", long 76°30'58", approximately 5 feet downstream from T-429 bridge (Louser Road).
EFS05	01564997	Mifflin	02050304	Kishacoquillas Creek at Lumber City, Pa. - lat 40°39'42", long 77°36'01", approximately 200 feet upstream from the bridge at Lumber City.
EFS06	01555400	Schuylkill	02050301	East Mahantango Creek at Klingerstown, Pa., Reach 3 (most downstream reach) - lat 40°39'48", long 76°41'30", beginning 550 feet upstream of SR 4002 bridge and extending 726 feet upstream.
EFS06.1	01555400	Schuylkill	02050301	East Mahantango Creek at Klingerstown, Pa., Reach 2 - beginning 1600 feet upstream of SR 4002 bridge and extending 954 feet upstream.
EFS06.2	01555400	Schuylkill	02050301	East Mahantango Creek at Klingerstown, Pa., Reach 1 (most upstream reach) - beginning 3293 feet upstream of SR 4002 bridge and extending 878 feet upstream.
EFS07	01577300	York	02050306	Muddy Creek at Muddy Creek Forks, Pa. - lat 39°48'27", long 76°28'34", 25 feet downstream from the SR 2069 bridge.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

Ecological Survey of Fixed Sites--Field Parameters and Chlorophyll Data

REMARKS--Explanation of column headings--STATION NUMBER: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; F/S: feet per second; μS/CM: microsiemens per centimeter at 25 degrees Celsius; DEG.C: degrees Celsius; MG/L: milligrams per liter; G/SQM: grams per square meter; MG/SQM: milligrams per square meter; MM of HG: millimeters of mercury; WH FET: alkalinity, bicarbonate, and carbonate as determined by fixed endpoint (pH 4.5) titration of unfiltered water at field site; QA: replicate sample; RTH: richest targeted habitat; DTH: depositional targeted habitat.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

				AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM VELOC- ITY, MEAN (F/S)	SPE- CIFIC CON- DUCT- ANCE (μS/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	
LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	(00027)	(00028)	(00055)	(00095)	(00400)	(00010)	(00025)	
BEDFORD COUNTY											
EFS01	-RTH	01559795	06-20-94	1400	1028	80020	.954	71	--	21.5	--
QA	-RTH		06-20-94	1430	1028	80020	.954	71	--	21.5	--
	-DTH		06-20-94	1415	1028	80020	.051	71	--	21.5	--
QA	-DTH		06-20-94	1445	1028	80020	.051	71	--	21.5	--
EFS01			06-20-94	1600	1028	1028	--	64	6.8	21.5	726
EFS01.1	-RTH		06-21-94	1200	1028	80020	.711	69	--	20.5	--
	-DTH		06-21-94	1215	1028	80020	.125	69	--	20.5	--
EFS01.1			06-21-94	1400	1028	1028	--	61	6.9	20.5	723
EFS01.2	-RTH		06-22-94	1500	1028	80020	.533	70	--	21.0	--
	-DTH		06-22-94	1515	1028	80020	.203	70	--	21.0	--
EFS01.2			06-21-94	1400	1028	1028	--	61	7.1	20.0	723
CUMBERLAND COUNTY											
EFS02	-RTH	01571490	06-02-94	1100	1028	80020	1.53	680	--	16.0	--
	-DTH		06-02-94	1115	1028	80020	.266	680	--	16.0	--
EFS02			06-02-94	0900	1028	1028	--	670	7.8	13.5	756
EFS02.1	-RTH	401334076551001	07-12-94	1000	1028	80020	.909	780	--	15.0	--
	-DTH		07-12-94	1015	1028	80020	.029	770	--	15.0	--
EFS02.1			07-12-94	1320	1028	1028	--	739	7.2	14.0	758
EFS02.2	-RTH	401327076550401	07-13-94	1100	1028	80020	.843	800	--	15.5	--
	-DTH		07-13-94	1115	1028	80020	.190	790	--	15.5	--
EFS02.2			07-13-94	1400	1028	1028	--	704	7.5	15.0	757
EFS02.3	-RTH	401303076562001	07-14-94	1100	1028	80020	.637	760	--	14.5	--
	-DTH		07-14-94	1115	1028	80020	.040	800	--	14.5	--
EFS02.3			07-14-94	0850	1028	1028	--	634	7.3	14.0	755
LANCASTER COUNTY											
EFS03	-RTH	01576540	06-08-94	1200	1028	80020	1.35	550	--	21.5	--
	-DTH		06-08-94	1215	1028	80020	.073	545	--	21.5	--
EFS03			06-08-94	1300	1028	1028	--	546	7.5	22.0	754
LEBANON COUNTY											
EFS04	-RTH	01573095	05-31-94	1200	1028	80020	1.86	530	--	17.5	--
	-DTH		05-31-94	1215	1028	80020	.554	525	--	17.5	--
EFS04			05-31-94	1925	1028	1028	--	588	7.5	13.0	763
MIFFLIN COUNTY											
EFS05	-RTH	01564997	06-27-94	1100	1028	80020	1.54	560	--	19.5	--
	-DTH		06-27-94	1115	1028	80020	.166	530	--	19.5	--
QA	-DTH		06-27-94	1130	1028	80020	.166	530	--	19.5	--
QA	-DTH		06-27-94	1135	1028	80020	.166	530	--	19.5	--
EFS05			06-27-94	1300	1028	1028	--	498	8.6	19.0	743
SCHUYLKILL COUNTY											
EFS06	-RTH	01555400	06-13-94	1200	1028	80020	.892	139	--	22.0	--
QA	-RTH		06-13-94	1235	1028	80020	.892	139	--	22.0	--
	-DTH		06-13-94	1215	1028	80020	.208	139	--	22.0	--
QA	-DTH		06-13-94	1230	1028	80020	.208	139	--	22.0	--
EFS06			06-13-94	1330	1028	1028	--	129	7.6	23.0	753
EFS06.1	-RTH		06-14-94	1000	1028	80020	1.33	141	--	22.0	--
	-DTH		06-14-94	1015	1028	80020	.037	141	--	22.0	--
EFS06.1			06-14-94	1130	1028	1028	--	134	7.8	26.0	751
EFS06.2	-RTH		06-14-94	1500	1028	80020	1.75	140	--	26.0	--
	-DTH		06-14-94	1515	1028	80020	.098	140	--	26.0	--
EFS06.2			06-14-94	1600	1028	1028	--	135	7.5	27.0	751
YORK COUNTY											
EFS07	-RTH	01577300	06-06-94	1200	1028	80020	2.02	122	--	18.0	--
	-DTH		06-06-94	1215	1028	80020	.317	122	--	18.0	--
EFS07			06-06-94	0940	1028	1028	--	114	6.3	17.5	756

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

Ecological Survey of Fixed Sites--Field Parameters and Chlorophyll Data

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	BICAR-BONATE WATER WH FET FIELD (MG/L AS HCO3) (00440)	CAR-BONATE WATER WH FET FIELD (MG/L AS CO3) (00445)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70958)	PERI-PHYTON BIOMASS ASH WEIGHT (G/SQM) (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQM) (00573)	PERI-PHYTON BIOMASS ASH FREE DRY WEIGHT (G/SQM) ()
BEDFORD COUNTY											
EFS01 -RTH	06-20-94	--	--	--	--	--	2.3	1.2	250	260	10
QA -RTH	06-20-94	--	--	--	--	--	2.2	1.3	--	--	--
-DTH	06-20-94	--	--	--	--	--	3.9	1.3	380	410	30
QA -DTH	06-20-94	--	--	--	--	--	6.1	1.9	--	--	--
EFS01	06-20-94	7.6	89	18	0	14	--	--	--	--	--
EFS01.1-RTH	06-21-94	--	--	--	--	--	6.2	2.4	180	190	10
-DTH	06-21-94	--	--	--	--	--	7.6	2.9	190	200	10
EFS01.1	06-21-94	8.8	105	15	0	13	--	--	--	--	--
EFS01.2-RTH	06-22-94	--	--	--	--	--	0.9	0.4	230	230	0
-DTH	06-22-94	--	--	--	--	--	4.4	2.1	510	580	70
EFS01.2	06-21-94	8.5	99	14	0	17	--	--	--	--	--
CUMBERLAND COUNTY											
EFS02 -RTH	06-02-94	--	--	--	--	--	44	5.1	370	380	10
-DTH	06-02-94	--	--	--	--	--	61	10	1900	2100	200
EFS02	06-02-94	9.5	91	277	0	227	--	--	--	--	--
EFS02.1-RTH	07-12-94	--	--	--	--	--	16	4.6	370	390	20
-DTH	07-12-94	--	--	--	--	--	7.8	2.6	570	630	60
EFS02.1	07-12-94	7.8	77	293	0	240	--	--	--	--	--
EFS02.2-RTH	07-13-94	--	--	--	--	--	5.8	2.0	1000	1100	100
-DTH	07-13-94	--	--	--	--	--	1.7	1.2	91	95	4
EFS02.2	07-13-94	9.0	90	282	0	231	--	--	--	--	--
EFS02.3-RTH	07-14-94	--	--	--	--	--	28	1.8	290	300	10
-DTH	07-14-94	--	--	--	--	--	4.4	3.0	700	820	120
EFS02.3	07-14-94	8.1	80	254	0	208	--	--	--	--	--
LANCASTER COUNTY											
EFS03 -RTH	06-08-94	--	--	--	--	--	6.6	3.5	300	310	10
-DTH	06-08-94	--	--	--	--	--	17	4.2	950	1000	50
EFS03	06-08-94	9.0	105	190	0	156	--	--	--	--	--
LEBANON COUNTY											
EFS04 -RTH	05-31-94	--	--	--	--	--	38	14	370	400	30
-DTH	05-31-94	--	--	--	--	--	44	3.5	1800	1900	100
EFS04	05-31-94	10.5	99	205	0	168	--	--	--	--	--
MIFFLIN COUNTY											
EFS05 -RTH	06-27-94	--	--	--	--	--	49	25	310	340	30
-DTH	06-27-94	--	--	--	--	--	24	4.3	530	600	70
QA -DTH	06-27-94	--	--	--	--	--	84	26	--	--	--
QA -DTH	06-27-94	--	--	--	--	--	--	--	1100	1300	200
EFS05	06-27-94	9.5	105	215	12	196	--	--	--	--	--
SCHUYLKILL COUNTY											
EFS06 -RTH	06-13-94	--	--	--	--	--	8.8	2.9	240	250	10
QA -RTH	06-13-94	--	--	--	--	--	13	2.2	--	--	--
-DTH	06-13-94	--	--	--	--	--	3.3	.4	370	390	20
QA -DTH	06-13-94	--	--	--	--	--	--	--	1400	1400	0
EFS06	06-13-94	9.0	106	34	0	28	--	--	--	--	--
EFS06.1-RTH	06-14-94	--	--	--	--	--	15	4.7	270	280	10
-DTH	06-14-94	--	--	--	--	--	12	2.4	1000	1100	100
EFS06.1	06-14-94	8.7	109	31	0	25	--	--	--	--	--
EFS06.2-RTH	06-14-94	--	--	--	--	--	19	3.4	230	230	0
-DTH	06-14-94	--	--	--	--	--	4.9	.9	180	190	10
EFS06.2	06-14-94	8.6	107	28	0	23	--	--	--	--	--
YORK COUNTY											
EFS07 -RTH	06-06-94	--	--	--	--	--	6.2	.9	220	230	10
-DTH	06-06-94	--	--	--	--	--	26	4.2	1600	1800	200
EFS07	06-06-94	8.8	91	24	0	19	--	--	--	--	--

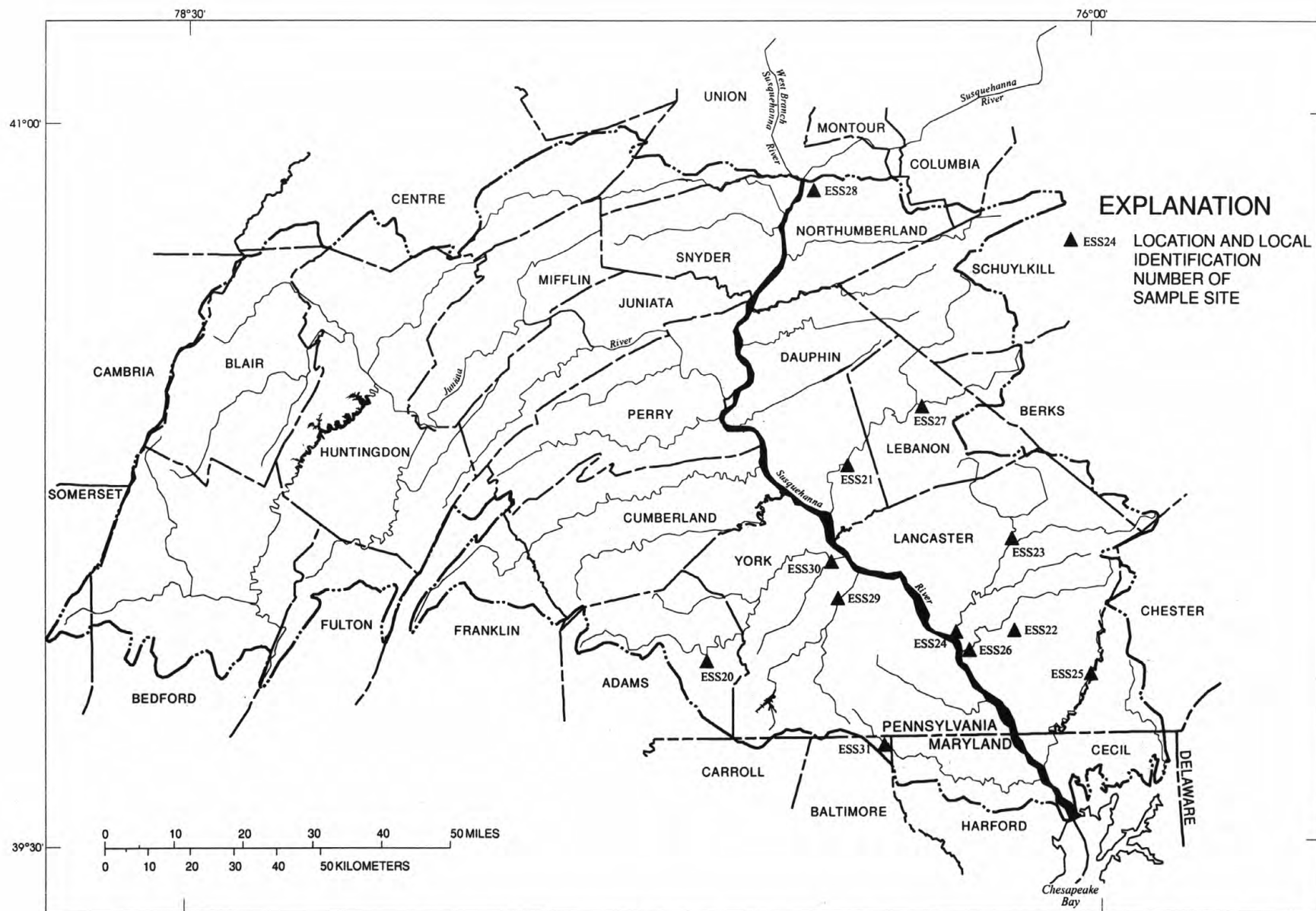


Figure 19. Location and local identification number of ecological synoptic sites in the Lower Susquehanna River Basin NAWQA program.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

Ecological Survey of Synoptic Sites--Site Descriptions

REMARKS--The following table contains site descriptions from a synoptic survey of stream ecology. Samples were collected during the period August 8 to September 12, 1994 to determine characteristics of stream water quality, periphyton biomass, chlorophyll-A, and chlorophyll-B. These data appear in the tables on the following pages. In addition, other algal, macroinvertebrate, and habitat data were collected and will be published at a later date.

<u>Local Identifier</u>	<u>Station Number</u>	<u>County</u>	<u>Hydrologic Unit</u>	<u>Site name and location</u>
ESS20	395256077041101	Adams	02050306	South Branch Conewago Creek near New Oxford, Pa., lat 39°52'56", long 77°04'11", approximately 80 ft downstream from SR 1015 bridge (Oxford Road), and 1.5 mi northwest of New Oxford.
ESS21	01573560	Dauphin	02050305	Swatara Creek at Hershey, Pa., lat 40°17'13", long 76°40'46", approximately 200 ft upstream from South Hanover Street bridge, and 1 mi west of Hershey.
ESS22	395619076133901	Lancaster	02050306	Big Beaver Creek at Refton, Pa., lat 39°56'19", long 76°13'39", approximately 170 ft upstream of the old railroad bridge beside the SR 3021 bridge (Pennsy Road), and 0.7 mi southwest of Refton.
ESS23	400749076135101	Lancaster	02050306	Cocalico Creek near Brownstown, Pa., lat 40°07'49", long 76°13'51", approximately 30 ft downstream from the covered bridge on Log Cabin Road, and 1 mi west of Brownstown.
ESS24	395614076231401	Lancaster	02050306	Conestoga River at Safe Harbor, Pa., lat 39°56'14", long 76°23'14", approximately 700 ft downstream from River Road bridge, and 0.7 mi northeast of Safe Harbor.
ESS25	395048076011401	Lancaster	02050306	East Branch Octoraro Creek near Kirkwood, Pa., lat 39°50'48", long 76°01'14", approximately 160 ft upstream from Street Road bridge, and 3 mi southeast of Kirkwood.
ESS26	395356076210501	Lancaster	02050306	Pequea Creek at PP&L recreation area at Pequea, Pa., lat 39°53'56", long 76°21'05", off of SR 324 starting at the east end of the campgrounds, and 0.5 mi east of Pequea.
ESS27	402425076282401	Lebanon	02050305	Little Swatara Creek at Jonestown, Pa., lat 40°24'25", long 76°28'24", approximately 80 ft upstream from SR 1003 bridge (Lancaster Street), and 0.4 mi south of Jonestown.
ESS28	405130076460001	Northumberland	02050301	Little Shamokin Creek at Sunbury, Pa., lat 40°51'30", long 76°46'00", approximately 20 ft upstream from T-722 bridge, and 1.5 mi southeast of Sunbury.
ESS29	400037076423701	York	02050306	Codorus Creek at Pleasureville, Pa., lat 40°00'37", long 76°42'37", approximately 1500 ft upstream from Mundis Mill Road bridge, and 1 mi northwest of Pleasureville.
ESS30	400513076433701	York	02050306	Little Conewago Creek at Conewago Heights, Pa., lat 40°05'13", long 76°43'37", approximately 10 ft upstream from SR 1004 bridge, and 0.5 mi west of Conewago Heights.
ESS31	394220076351501	Baltimore	02050306	Deer Creek at Gorsuch Mills, Md., lat 39°42'20", long 76°35'15", approximately 80 ft upstream from West Liberty Road bridge, and 0.1 mi south of Gorsuch Mills.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

Ecological Survey of Synoptic Sites--Continued

REMARKS--Explanation of column headings--STATION NUMBER: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; F/S: feet per second; μ S/CM: microsiemens per centimeter at 25 degrees Celsius; DEG.C: degrees Celsius; MG/L: milligrams per liter; G/SQM: grams per square meter; MG/SQM: milligrams per square meter; MM of HG: millimeters of mercury; WH FET: alkalinity, bicarbonate, and carbonate as determined by fixed endpoint (pH 4.5) titration of unfiltered water.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	STREAM VELOC-ITY, MEAN (F/S) (00055)	SPE-CIFIC CON-DUCT-ANCE (F/S) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)
ADAMS COUNTY										
ESS20	395256077041101	08-08-94	1130	1028	80020	.968	470	8.1	21.0	758
DAUPHIN COUNTY										
ESS21	01573560	08-16-94	1032	1028	80020	1.79	413	8.3	20.0	762
LANCASTER COUNTY										
ESS22	395619076133901	08-24-94	1145	1028	80020	1.10	344	8.0	19.5	766
ESS23	400749076135101	09-01-94	1130	1028	80020	2.52	542	7.7	20.0	759
ESS24	395614076231401	09-12-94	1158	1028	1028	1.62	669	8.2	19.0	767
ESS25	395048076011401	08-30-94	1127	1028	80020	1.53	267	8.0	20.5	762
ESS26	395316076213201	08-11-94	1155	1028	80020	1.29	445	8.3	21.0	766
LEBANON COUNTY										
ESS27	402425076282401	08-31-94	1055	1028	80020	2.26	274	7.7	19.0	755
NORTHUMBERLAND COUNTY										
ESS28	405130076460001	08-05-94	1130	1028	80020	1.68	130	6.7	20.0	752
YORK COUNTY										
ESS29	400037076423701	08-15-94	1258	1028	80020	2.05	598	7.5	23.0	758
ESS30	400513076433701	09-02-94	1114	1028	80020	1.20	366	7.8	19.0	765
BALTIMORE COUNTY, MARYLAND										
ESS31	394220076351501	08-10-94	1200	1028	80020	1.52	269	8.4	20.0	756

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN BAWQA PROJECT

Ecological Survey of Synoptic Sites--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL IDENTIFIER	DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	BICAR- BONATE WATER WH FET FIELD (MG/L AS HCO3) (00440)	CAR- BONATE WATER WH FET FIELD (MG/L AS CO3) (00445)	ALKA- LINITY WAT WH TOT FET FIELD (MG/L AS CACO3) (00410)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70958)	PERI- PHYTON BIOMASS TOTAL ASH WEIGHT (G/SQM) (00572)	PERI- PHYTON BIOMASS TOTAL ASH-FREE WEIGHT (G/SQM) (00573)	PERI- PHYTON BIOMASS TOTAL ASH-FREE WEIGHT (G/SQM) ()
ADAMS COUNTY											
ESS20	08-08-94	9.7	109	146	0	120	31	3.6	280	310	30
DAUPHIN COUNTY											
ESS21	08-16-94	9.7	107	136	0	111	11	--	240	260	20
LANCASTER COUNTY											
ESS22	08-24-94	9.4	102	133	0	109	6.3	1.4	260	270	10
ESS23	09-01-94	9.3	108	151	0	124	17	4.8	280	290	10
ESS24	09-12-94	11.6	123	201	0	205	--	--	--	--	--
ESS25	08-30-94	10.0	111	38	0	31	9.8	2.8	270	280	10
ESS26	08-11-94	9.9	112	156	6	138	19	5.5	290	300	10
LEBANON COUNTY											
ESS27	08-31-94	9.4	103	79	0	65	14	2.9	260	270	10
NORTHUMBERLAND COUNTY											
ESS28	08-05-94	8.2	92	37	0	31	22	7.4	350	380	30
YORK COUNTY											
ESS29	08-15-94	7.4	87	94	0	79	19	5.1	300	320	20
ESS30	09-02-94	8.5	91	14	0	11	10	2.5	270	280	10
BALTIMORE COUNTY, MARYLAND											
ESS31	08-10-94	10.6	118	32	1	28	13	--	330	350	20

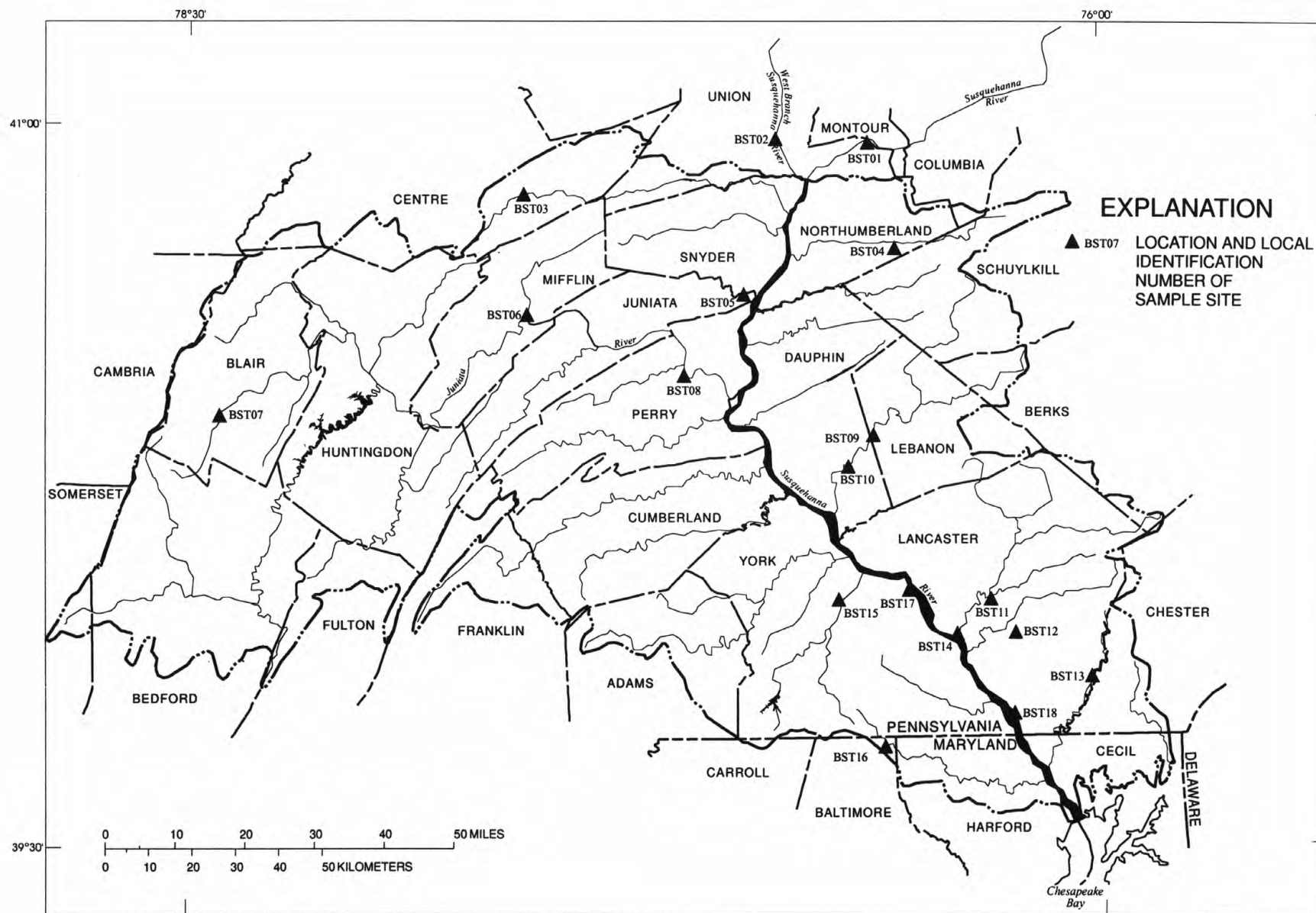


Figure 20. Location and local identification number of streambed sediments and fish tissue collection sites in the Lower Susquehanna River Basin NAWQA program.

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

Site Descriptions

REMARKS.--The tables following this list of site descriptions contain data collected and analyzed from streambed sediments and fish tissue for calendar years 1992 through 1994. Asterisks beside the local identifier in the list below indicate those sites where fish tissue was collected and analyzed annually during the three year period.

Local Identifier	Station Number	County	Hydrologic Unit	Site Name and Description
BST01*	01540500	Montour	02050107	Susquehanna River at Danville, Pa., lat 40°57'29", long 76°37'10", approximately 2500 ft upstream from SR 54 bridge, 0.7 mi south of Danville.
BST02*	01553500	Northumberland	02050206	West Branch Susquehanna River at Lewisburg, Pa., lat 40°58'05", long 76°52'25", approximately 300 ft downstream from SR 45 bridge.
BST03	405121077342701	Centre	02050301	Penns Creek at Spring Mills, Pa., lat 40°51'21", long 77°34'27", approximately 80 ft upstream from SR 45 bridge, and 0.1 mi north of Spring Mills.
BST04	404422076325401	Northumberland	02050301	Mahanoy Creek near Gowen City, Pa., lat 40°44'22", long 76°32'54", upstream from SR 125 bridge, and 1.2 mi southwest of Gowen City.
BST05	403847076575201	Snyder	02050301	West Mahantango Creek near Liverpool, Pa., lat 40°38'47", long 76°57'52", immediately upstream from SR 522 bridge, and 6 mi north of Liverpool.
BST06	403626077340401	Mifflin	02050304	Kishacoquillas Creek at Lewistown, Pa., lat 40°36'26", long 77°34'04", upstream of the Walnut Street Bridge and 0.8 mi north of Lewistown.
BST07	402549078213001	Blair	02050302	Frankstown Branch Juniata River near Hollidaysburg, Pa., lat 40°25'49", long 78°21'30", at the SR 3003 bridge, and 2.5 mi southwest of Hollidaysburg.
BST08*	01567000	Perry	02050304	Juniata River at Newport, Pa., lat 40°28'42", long 77°07'46", approximately 550 ft downstream from the SR 34 bridge, and 0.3 mi northeast of Newport.
BST09	402108076363701	Lebanon	02050305	Quittapahilla Creek near Palmyra, Pa., lat 40°21'08", long 76°36'37", approximately 350 ft upstream from the Valley Glen Road bridge, and 3.2 mi north of Palmyra.
BST10	01573560	Dauphin	02050305	Swatara Creek at Hershey, Pa., lat 40°17'13", long 76°40'46", approximately 200 ft upstream from the South Hanover Street bridge, and 1 mi west of Hershey.
BST11	01576540	Lancaster	02050306	Mill Creek at Eshelman Mill Road near Lyndon, Pa., lat 40°00'36", long 76°16'39", just downstream from Eshelman Mill Road bridge, and 1 mi northeast of Lyndon.
BST12	395619076133901	Lancaster	02050306	Big Beaver Creek at Refton, Pa., lat 39°56'19", long 76°13'39", approximately 170 ft upstream from old railroad bridge beside the SR 3021 bridge (Pennsy Road), and 0.7 mi southwest of Refton.
BST13	395048076011401	Lancaster	02050306	East Branch Octoraro Creek near Kirkwood, Pa., lat 39°50'48", long 76°01'14", approximately 160 ft upstream from Street Road bridge, and 3 mi southeast of Kirkwood.
BST14	395614076231401	Lancaster	02050306	Conestoga River at Safe Harbor, Pa., lat 39°56'14", long 76°23'14", approximately 700 ft downstream from River Road bridge, and 0.7 mi northeast of Safe Harbor.
BST15	400037076423701	York	02050306	Codorus Creek at Pleasureville, Pa., lat 40°00'37", long 76°42'37", approximately 1500 ft upstream from Mundis Mill Road bridge, and 1 mi northwest of Pleasureville.
BST16*	394220076351501	Baltimore	02050306	Deer Creek at Gorsuch Mills, Md., lat 39°42'20", long 76°35'15", approximately 80 ft upstream from West Liberty Road bridge, and 0.1 mi south of Gorsuch Mills.
BST17*	400144076310701	Lancaster	02050306	Susquehanna River at Columbia, Pa., lat 40°01'44", long 76°31'07", between the SR 30 and SR 462 bridges.
BST18	394608076150801	Lancaster	02050306	Susquehanna River at Conowingo Reservoir, Pa., lat 39°46'08", long 76°15'08", in the reservoir downstream of Mt. Johnson Island.

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--SED, BM: streambed sediment, bottom material; WS: wet sieve; DW, REC: dry weight, recoverable; µG/KG: micrograms per kilogram.

ORGANOCHLORINES IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PCB, SED, BM WS, <2MM DW, REC (µG/KG) (49459)	O, P'- DDD, SED, BM WS, <2MM DW, REC (µG/KG) (49325)	P, P'- DDD, SED, BM WS, <2MM DW, REC (µG/KG) (49326)	O, P'- DDE, SED, BM WS, <2MM DW, REC (µG/KG) (49327)	P, P'- DDE, SED, BM WS, <2MM DW, REC (µG/KG) (49328)	O, P'- DDT, SED, BM WS, <2MM DW, REC (µG/KG) (49329)
BLAIR COUNTY										
BST07	09-22-92	1030	1028	80020	<100	<1	6.3	<1	1.6	<2
CENTRE COUNTY										
BST03	09-18-92	1100	1028	80020	<100	<1	<1	<1	<1	<2
DAUPHIN COUNTY										
BST10	09-25-92	1300	1028	80020	<100	8.1	13	<1	12	3.5
LANCASTER COUNTY										
BST11	09-23-92	1000	1028	80020	<100	<1	2.0	<1	3.8	<2
BST12	09-30-92	1430	1028	80020	<100	<1	<1	<1	1.2	<2
BST13	09-30-92	1030	1028	80020	<100	<1	<1	<1	1.6	<2
BST14	09-29-92	1015	1028	80020	<100	1.1	<1	<1	2.6	<2
BST18	10-01-92	1200	1028	80020	<100	<1	<1	<1	1.3	<2
LEBANON COUNTY										
BST09	09-25-92	0900	1028	80020	<100	150	130	22	130	11
MIFFLIN COUNTY										
BST06	09-21-92	1030	1028	80020	<100	<1	<1	<2	<1	<2
MONTOUR COUNTY										
BST01	09-15-92	1115	1028	80020	<100	<1	<1	<1	3.6	<2
NORTHUMBERLAND COUNTY										
BST02	09-16-92	1010	1028	80020	<100	<1	<1	<1	2.4	<2
BST04	09-17-92	1800	1028	80020	<100	--	<1	<1	<1	<2
PERRY COUNTY										
BST08	09-14-92	1200	1028	80020	<100	<1	<1	<1	1.1	<2
SNYDER COUNTY										
BST05	09-17-92	1000	1028	80020	<100	<1	<1	<1	1.9	<2
YORK COUNTY										
BST15	09-24-92	0930	1028	80020	140	3.2	2.9	1.4	5.6	5.1
BALTIMORE COUNTY, MARYLAND										
BST16	09-28-92	1000	1028	80020	<100	<1	<1	<1	2.0	<2

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

ORGANOCHLORINES IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	P, P'-DDT, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49330)	CIS-CHLOR-DANE, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49320)	TRANS-CHLOR-DANE, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49321)	CHLORO-NEB, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49322)	CIS-NONA-CHLOR, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49316)	TRANS-NONA-CHLOR, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49317)	OXY-CHLOR-DANE, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49318)	HEPTA-CHLOR, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49341)
BLAIR COUNTY									
BST07	09-22-92	140	<1	<1	<5	<1	1.2	<1	<1
CENTRE COUNTY									
BST03	09-18-92	<2	<1	<1	<5	<1	<1	<1	<1
DAUPHIN COUNTY									
BST10	09-25-92	2.7	3.3	4.2	<5	2.9	2.7	<1	<1
LANCASTER COUNTY									
BST11	09-23-92	<2	1.1	1.1	<5	1.5	1.6	<1	<1
BST12	09-30-92	<2	<1	<1	<5	<1	<1	<1	<1
BST13	09-30-92	<2	<1	<1	<5	<1	<1	<1	<1
BST14	09-29-92	<2	2.2	2.3	<5	2.0	2.6	<1	<1
BST18	10-01-92	<2	<1	<1	<5	<1	<1	<1	<1
LEBANON COUNTY									
BST09	09-25-92	110	7	7.7	<5	4.1	7.3	<1	<1
MIFFLIN COUNTY									
BST06	09-21-92	<2	--	<1	<5	<1	<1	<1	<1
MONTOUR COUNTY									
BST01	09-15-92	2.9	<1	<2	<5	<1	<2	<1	<1
NORTHUMBERLAND COUNTY									
BST02	09-16-92	<2	<1	<1	<5	<1	<1	<1	<1
BST04	09-17-92	4.0	1.4	1.8	<5	<1	2.1	<1	<1
PERRY COUNTY									
BST08	09-14-92	2.4	1.1	1.4	<5	1.0	1.5	<1	<1
SNYDER COUNTY									
BST05	09-17-92	<2	<1	<1	<5	<1	<1	<1	<1
YORK COUNTY									
BST15	09-24-92	180	4.1	5.7	<5	2.6	2.3	<1	<1
BALTIMORE COUNTY, MARYLAND									
BST16	09-28-92	2.2	<1	<1	<5	<1	<1	<1	<1

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

ORGANOCHLORINES IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	HEPTA-CHLOR EPOXIDE SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49342)	PENTA-CHLOR ANISOLE SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49460)	ALDRIN, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49319)	DIEL-DRIN, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49331)	ENDRIN, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49335)	ISODRIN SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49344)	MIREX, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49348)	CIS-PER-METHRIN SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49349)
BLAIR COUNTY									
BST07	09-22-92	<1	<5	<1	<1	<2	<1	<1	<5
CENTRE COUNTY									
BST03	09-18-92	<1	<5	<1	<1	<2	<1	<1	<5
DAUPHIN COUNTY									
BST10	09-25-92	<1	<5	<1	3.1	<2	<1	<1	--
LANCASTER COUNTY									
BST11	09-23-92	<1	<5	<1	<1	<2	<1	<1	<7
BST12	09-30-92	<1	<5	<1	<1	<2	<1	<1	<15
BST13	09-30-92	<1	<5	<1	<1	<2	<1	<1	<5
BST14	09-29-92	<1	<5	<1	1.2	<2	<1	<1	--
BST18	10-01-92	<1	<5	<1	<1	<2	<1	<1	<5
LEBANON COUNTY									
BST09	09-25-92	1.8	<5	<1	8.3	<2	<1	<1	<5
MIFFLIN COUNTY									
BST06	09-21-92	<1	<5	<1	<1	<2	<1	<1	<6
MONTOUR COUNTY									
BST01	09-15-92	<1	<5	<1	<1	<2	<1	<1	<5
NORTHUMBERLAND COUNTY									
BST02	09-16-92	<1	<5	<1	<1	<2	<1	<1	<5
BST04	09-17-92	<1	<5	<1	<1	<2	<1	<1	<14
PERRY COUNTY									
BST08	09-14-92	<1	<5	<1	<1	<2	<1	<1	<22
SNYDER COUNTY									
BST05	09-17-92	<1	<5	<1	<1	<2	<1	<1	<5
YORK COUNTY									
BST15	09-24-92	<1	<5	<1	1.4	<2	<1	<1	<5
BALTIMORE COUNTY, MARYLAND									
BST16	09-28-92	<1	<5	<1	<1	<2	<1	<1	<5

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

ORGANOCHLORINES IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	TRANS- PER- METHRIN SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49350)	METHOXY CHLOR, O,P'-, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49347)	METHOXY CHLOR P,P'-, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49346)	ALPHA- HCH, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49338)	BETA- HCH, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49339)	LINDANE SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49345)	ENDO- SULFAN I, SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49332)	BENZENE HEXA- CHLORO- SED, BM WS, <2MM DW, REC ($\mu\text{G/KG}$) (49343)
BLAIR COUNTY									
BST07	09-22-92	<5	<5	<5	<1	<1	<1	<1	<5
CENTRE COUNTY									
BST03	09-18-92	<5	<5	<28	<1	<1	<1	<1	<5
DAUPHIN COUNTY									
BST10	09-25-92	--	<5	<5	<1	<1	<1	2.2	<5
LANCASTER COUNTY									
BST11	09-23-92	<7	<5	<5	<1	<1	<1	<1	<5
BST12	09-30-92	<5	<5	<5	<1	<1	<1	1.6	<5
BST13	09-30-92	<5	<5	<5	<1	<1	<1	<1	<5
BST14	09-29-92	--	<5	<5	<1	<1	<1	1.4	<5
BST18	10-01-92	<5	<5	<5	<1	<1	<1	<1	<5
LEBANON COUNTY									
BST09	09-25-92	<5	<5	<5	<1	<1	<1	5.8	9
MIFFLIN COUNTY									
BST06	09-21-92	<10	<5	<5	<1	<3	<2	<1	<5
MONTOUR COUNTY									
BST01	09-15-92	<5	<5	<5	<1	<1	<1	<1	<5
NORTHUMBERLAND COUNTY									
BST02	09-16-92	<5	<5	<8	<1	<1	<1	<1	<5
BST04	09-17-92	<8	<5	<5	<1	<1	<1	<1	<5
PERRY COUNTY									
BST08	09-14-92	<20	<5	<5	<1	<1	<1	<1	<5
SNYDER COUNTY									
BST05	09-17-92	<5	<5	<5	<1	<1	<1	<1	<5
YORK COUNTY									
BST15	09-24-92	<5	<5	<5	<1	<1	<1	<1	<5
BALTIMORE COUNTY, MARYLAND									
BST16	09-28-92	<5	<5	<5	<1	<1	<1	<1	<5

**ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES
LOWER SUSQUEHANNA RIVER BASIN HAWQA PROJECT**

ORGANOCHLORINES IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	DCPA, SED, BM WS, <2MM DW, REC (μ G/KG) (49324)	TOXA- PHENE SED, BM WS, <2MM DW, REC (μ G/KG) (49351)	ALPHA- HCH, D6 SURROGT SED, BM WS, <2MM DW, REC PERCENT (49275)	BIPHENL 35DICH SURROGT SED, BM WS, <2MM DW, REC PERCENT (49277)	OCTCHLR BIPHENL SURROGT SED, BM WS, <2MM DW, REC PERCENT (49276)
BLAIR COUNTY						
BST07	09-22-92	<5	<200	76	70	36
CENTRE COUNTY						
BST03	09-18-92	<5	<200	69	90	48
DAUPHIN COUNTY						
BST10	09-25-92	<5	<200	68	50	72
LANCASTER COUNTY						
BST11	09-23-92	<5	<200	85	81	37
BST12	09-30-92	<5	<200	84	53	100
BST13	09-30-92	<5	<200	72	46	93
BST14	09-29-92	<5	<200	77	51	86
BST18	10-01-92	<5	<200	81	55	30
LEBANON COUNTY						
BST09	09-25-92	<5	<200	82	58	74
MIFFLIN COUNTY						
BST06	09-21-92	<5	<200	70	73	35
MONTOUR COUNTY						
BST01	09-15-92	<5	<200	76	62	39
NORTHUMBERLAND COUNTY						
BST02	09-16-92	<5	<200	69	100	53
BST04	09-17-92	<5	<200	75	65	31
PERRY COUNTY						
BST08	09-14-92	<5	<200	74	89	43
SNYDER COUNTY						
BST05	09-17-92	<5	<200	76	73	38
YORK COUNTY						
BST15	09-24-92	<5	<200	55	110	82
BALTIMORE COUNTY, MARYLAND						
BST16	09-28-92	<5	<200	89	55	100

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS.--Analyses of sediment particle size fraction less than 63 microns, wet sieved. Concentrations reported as dry weight. Explanation of column headings--BOT MAT: bottom material; µG/G: micrograms per gram.

TRACE ELEMENTS IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	ALUM-INUM BOT MAT PERCENT (34790)	ANTI-MONY BOT MAT (µG/G) (34795)	ARSENIC BOT MAT (µG/G) (34800)	BERYL-LIUM BOT MAT (µG/G) (34810)	BISMUTH BOT MAT (µG/G) (34816)	CADMIUM BOT MAT (µG/G) (34825)	CALCIUM BOT MAT PERCENT (34830)
BLAIR COUNTY											
BST07	09-22-92	1030	1028	80020	6.3	2	11	2	<10	.80	2.4
CENTRE COUNTY											
BST03	09-18-92	1100	1028	80020	5.5	.8	5.2	2	<10	.20	2.3
DAUPHIN COUNTY											
BST10	09-25-92	1300	1028	80020	6.8	2	7.7	2	<10	.80	2.2
LANCASTER COUNTY											
BST11	09-23-92	1000	1028	80020	7.4	1	6.8	2	<10	.30	2.1
BST12	09-30-92	1430	1028	80020	8.2	2	5.3	3	<10	.30	1.2
BST13	09-30-92	1030	1028	80020	8.5	1	5.8	3	<10	.20	.40
BST14	09-29-92	1015	1028	80020	7.6	1	6.8	2	<10	.60	2.1
BST18	10-01-92	1200	1028	80020	6.0	2	12	3	<10	1.2	.34
LEBANON COUNTY											
BST09	09-25-92	0900	1028	80020	5.7	1	6.5	2	<10	1.2	7.5
MIFFIN COUNTY											
BST06	09-21-92	1030	1028	80020	5.8	1	4.8	2	<10	.90	2.8
MONTOUR COUNTY											
BST01	09-15-92	1115	1028	80020	6.8	2	15	5	<10	1.6	.35
NORTHUMBERLAND COUNTY											
BST02	09-16-92	1010	1028	80020	7.0	2	11	6	<10	1.9	.43
BST04	09-17-92	1800	1028	80020	5.8	6	23	12	<10	2.0	.41
PERRY COUNTY											
BST08	09-14-92	1200	1028	80020	6.1	1	5.7	2	<10	1.1	.65
SNYDER COUNTY											
BST05	09-17-92	1000	1028	80020	5.9	1	6.8	2	<10	.30	.48
YORK COUNTY											
BST15	09-24-92	0930	1028	80020	8.0	2	5.6	2	<10	1.6	1.8
BALTIMORE COUNTY, MARYLAND											
BST16	09-28-92	1000	1028	80020	9.1	1	5.0	3	<10	.20	.28

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	CERIUM BOT MAT ($\mu\text{G/G}$) (34835)	CHRO- MIUM BOT MAT ($\mu\text{G/G}$) (34840)	COBALT BOT MAT ($\mu\text{G/G}$) (34845)	COPPER BOT MAT ($\mu\text{G/G}$) (34850)	EURO- PIUM BOT MAT ($\mu\text{G/G}$) (34855)	GALLIUM BOT MAT ($\mu\text{G/G}$) (34860)	GOLD BOT MAT ($\mu\text{G/G}$) (34870)	HOLMIUM BOT MAT ($\mu\text{G/G}$) (34875)	IRON BOT MAT PERCENT (34880)
BLAIR COUNTY										
BST07	09-22-92	63	68	18	41	33	17	<8	<4	3.4
CENTRE COUNTY										
BST03	09-18-92	55	54	14	23	28	14	<8	<4	2.8
DAUPHIN COUNTY										
BST10	09-25-92	75	72	35	75	45	19	<8	<4	3.5
LANCASTER COUNTY										
BST11	09-23-92	86	79	18	33	56	21	<8	<4	3.8
BST12	09-30-92	150	77	29	34	81	21	<8	<4	4.9
BST13	09-30-92	120	88	24	38	78	22	<8	<4	4.6
BST14	09-29-92	94	87	19	45	59	20	<8	<4	3.9
BST18	10-01-92	85	70	64	51	46	17	<8	<4	4.0
LEBANON COUNTY										
BST09	09-25-92	63	70	46	190	40	15	<8	<4	4.1
MIFFLIN COUNTY										
BST06	09-21-92	58	150	17	81	29	14	<8	<4	3.5
MONTOUR COUNTY										
BST01	09-15-92	95	74	130	62	52	21	<8	<4	4.8
NORTHUMBERLAND COUNTY										
BST02	09-16-92	93	73	200	52	49	25	<8	<4	4.8
BST04	09-17-92	120	57	170	130	64	17	<8	<4	19
PERRY COUNTY										
BST08	09-14-92	68	69	23	49	33	16	<8	<4	3.3
SNYDER COUNTY										
BST05	09-17-92	62	62	17	19	34	14	<8	<4	3.0
YORK COUNTY										
BST15	09-24-92	96	94	22	67	52	19	<8	<4	4.1
BALTIMORE COUNTY, MARYLAND										
BST16	09-28-92	170	86	39	47	100	25	<8	<4	5.6

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	LANTHANUM BOT MAT ($\mu\text{G/G}$) (34885)	LEAD BOT MAT ($\mu\text{G/G}$) (34890)	LITHIUM BOT MAT ($\mu\text{G/G}$) (34895)	MAGNESIUM BOT MAT PERCENT ($\mu\text{G/G}$) (34900)	MANGANESE BOT MAT ($\mu\text{G/G}$) (34905)	MERCURY BOT MAT ($\mu\text{G/G}$) (34910)	MOLYBDENUM BOT MAT ($\mu\text{G/G}$) (34915)	NEODYMIUM BOT MAT ($\mu\text{G/G}$) (34920)	NICKEL BOT MAT ($\mu\text{G/G}$) (34925)
BLAIR COUNTY										
BST07	09-22-92	33	48	60	1.3	1200	.26	<2	32	37
CENTRE COUNTY										
BST03	09-18-92	28	26	40	.62	560	.08	<2	30	32
DAUPHIN COUNTY										
BST10	09-25-92	45	65	60	.86	1600	.30	<2	42	50
LANCASTER COUNTY										
BST11	09-23-92	56	35	80	1.2	1500	.08	<2	57	33
BST12	09-30-92	81	38	60	.90	1000	.08	<2	76	50
BST13	09-30-92	78	32	50	.63	910	.07	<2	70	41
BST14	09-29-92	59	52	80	1.2	1000	.20	<2	55	41
BST18	10-01-92	46	44	60	.58	2100	.08	<2	42	91
LEBANON COUNTY										
BST09	09-25-92	40	78	60	1.3	900	.30	<2	39	40
MIFFLIN COUNTY										
BST06	09-21-92	29	64	60	.83	760	.18	11	28	190
MONTOUR COUNTY										
BST01	09-15-92	52	50	60	.59	3300	.23	<2	47	120
NORTHUMBERLAND COUNTY										
BST02	09-16-92	49	45	70	.55	6500	.16	<2	51	230
BST04	09-17-92	64	70	40	.28	3900	.34	3	60	170
PERRY COUNTY										
BST08	09-14-92	33	110	60	.62	1200	.23	<2	32	51
SNYDER COUNTY										
BST05	09-17-92	34	22	60	.49	440	.05	<2	30	32
YORK COUNTY										
BST15	09-24-92	52	110	60	.96	680	.33	<2	46	42
BALTIMORE COUNTY, MARYLAND										
BST16	09-28-92	100	32	60	.49	1300	.06	<2	90	48

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	NIOBIUM BOT MAT ($\mu\text{G/G}$) (34930)	PHOS- PHORUS BOT MAT PERCENT (34935)	POTAS- SIUM BOT MAT PERCENT (34940)	SCAN- DIUM BOT MAT ($\mu\text{G/G}$) (34945)	SELE- NIUM BOT MAT ($\mu\text{G/G}$) (34950)	SILVER BOT MAT ($\mu\text{G/G}$) (34955)	SODIUM BOT MAT PERCENT (34960)	STRON- TIUM BOT MAT ($\mu\text{G/G}$) (34965)	SULFUR BOT MAT ($\mu\text{G/G}$) (34970)
BLAIR COUNTY										
BST07	09-22-92	5	.18	1.9	12	2.0	1.6	.31	130	.25
CENTRE COUNTY										
BST03	09-18-92	6	.13	1.5	10	.7	.1	.43	160	.09
DAUPHIN COUNTY										
BST10	09-25-92	9	.14	1.9	12	1.3	.3	.34	85	.14
LANCASTER COUNTY										
BST11	09-23-92	10	.18	2.6	13	1.0	.2	.47	98	.09
BST12	09-30-92	9	.21	2.2	15	1.3	.1	.34	100	.15
BST13	09-30-92	9	.17	2.0	17	1.0	.1	.58	100	.08
BST14	09-29-92	9	.18	2.5	14	1.0	2.1	.42	81	.10
BST18	10-01-92	8	.11	1.6	12	2.2	1.2	.53	79	.12
LEBANON COUNTY										
BST09	09-25-92	5	.15	1.8	11	1.3	1.9	.29	110	.15
MIFFLIN COUNTY										
BST06	09-21-92	17	.22	1.9	11	1.2	.3	.24	150	.21
MONTOUR COUNTY										
BST01	09-15-92	6	.16	1.8	13	2.7	1.3	.40	87	.15
NORTHUMBERLAND COUNTY										
BST02	09-16-92	8	.14	1.7	14	1.3	.5	.24	95	.23
BST04	09-17-92	<4	.16	1.0	12	5.5	.6	.14	120	.35
PERRY COUNTY										
BST08	09-14-92	7	.15	1.8	12	1.0	.6	.22	120	.21
SNYDER COUNTY										
BST05	09-17-92	7	.08	1.6	12	.6	.1	.28	200	.21
YORK COUNTY										
BST15	09-24-92	8	.13	2.3	14	.7	.7	.46	92	.15
BALTIMORE COUNTY, MARYLAND										
BST16	09-28-92	14	.15	1.0	20	.8	.1	.52	110	.07

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	TANTA- LUM BOT MAT ($\mu\text{G/G}$) (34975)	THORIUM BOT MAT ($\mu\text{G/G}$) (34980)	TIN BOT MAT ($\mu\text{G/G}$) (34985)	URANIUM BOT MAT ($\mu\text{G/G}$) (35000)	VANA- DIUM BOT MAT ($\mu\text{G/G}$) (35005)	YTTER- BIUM BOT MAT ($\mu\text{G/G}$) (35015)	YTTRIUM BOT MAT ($\mu\text{G/G}$) (35010)	ZINC BOT MAT ($\mu\text{G/G}$) (35020)
BLAIR COUNTY									
BST07	09-22-92	<40	10	<10	4.0	88	2	19	240
CENTRE COUNTY									
BST03	09-18-92	<40	10	<10	2.9	70	2	24	94
DAUPHIN COUNTY									
BST10	09-25-92	<40	12	<10	3.5	83	3	28	340
LANCASTER COUNTY									
BST11	09-23-92	<40	11	<10	3.5	92	5	53	190
BST12	09-30-92	<40	16	<10	5.1	94	5	56	180
BST13	09-30-92	<40	15	<10	4.9	97	4	40	140
BST14	09-29-92	<40	12	<10	4.0	100	4	46	200
BST18	10-01-92	<40	12	<10	5.0	78	3	30	320
LEBANON COUNTY									
BST09	09-25-92	<40	9	<10	2.8	70	2	26	420
MIFFLIN COUNTY									
BST06	09-21-92	<40	9	<10	3.2	78	2	22	300
MONTOUR COUNTY									
BST01	09-15-92	<40	12	<10	4.1	91	3	30	650
NORTHUMBERLAND COUNTY									
BST02	09-16-92	<40	11	<10	5.4	86	5	56	670
BST04	09-17-92	<40	10	<10	4.2	57	5	52	1200
PERRY COUNTY									
BST08	09-14-92	<40	11	<10	3.5	87	3	21	310
SNYDER COUNTY									
BST05	09-17-92	<40	11	<10	3.9	88	3	18	120
YORK COUNTY									
BST15	09-24-92	<40	13	<10	4.2	95	3	21	330
BALTIMORE COUNTY, MARYLAND									
BST16	09-28-92	<40	18	<10	4.6	120	5	55	140

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES
LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN STREAMBED SEDIMENTS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	DATE	TITANIUM BOT MAT PERCENT ()	CARBON TOTAL BOT MAT PERCENT ()	CARBON- ATE BOT MAT PERCENT ()	CARBON ORGANIC BOT MAT PERCENT ()
BLAIR COUNTY					
BST07	09-22-92	.26	5.47	.89	4.58
CENTRE COUNTY					
BST03	09-18-92	.27	2.90	.56	2.34
DAUPHIN COUNTY					
BST10	09-25-92	.32	4.40	.58	3.82
LANCASTER COUNTY					
BST11	09-18-92	.37	3.23	.52	2.71
BST12	09-30-92	.38	4.21	.22	3.99
BST13	09-30-92	.36	2.85	.02	2.83
BST14	09-29-92	.30	3.38	.56	2.82
BST18	10-01-92	.32	3.33	.09	3.24
LEBANON COUNTY					
BST09	09-25-92	.23	5.54	2.23	3.31
MIFFLIN COUNTY					
BST06	09-21-92	.26	5.49	.76	4.73
MONTOUR COUNTY					
BST01	09-15-92	.23	4.39	.06	4.33
NORTHUMBERLAND COUNTY					
BST02	09-16-92	.29	4.33	.14	4.19
BST04	09-17-92	.14	9.32	.12	9.20
PERRY COUNTY					
BST08	09-14-92	.25	4.64	.07	4.57
SNYDER COUNTY					
BST05	09-17-92	.29	2.39	.05	2.34
YORK COUNTY					
BST15	09-24-92	.31	3.76	.58	3.18
BALTIMORE COUNTY, MARYLAND					
BST16	09-28-92	.55	2.81	.02	2.79

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--WH ORG: whole organism; WW, REC: whole weight recoverable; $\mu\text{G/KG}$: micrograms per kilogram; WSU: white sucker; SMB: smallmouth bass.

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1992

LOCAL IDENTIFIER	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	PCB, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$)	O,P'-DDT, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$)	P,P'-DDT, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$)	O,P'-DDD, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$)	P,P'-DDD, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$)	O,P'-DDE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$)
BLAIR COUNTY											
BST07	WSU	09-22-92	1020	1028	80020	120	<5	<5	<5	<5	<5
CENTRE COUNTY											
BST03	WSU	09-18-92	0940	1028	80020	<50	<5	<5	<5	<5	<5
DAUPHIN COUNTY											
BST10	WSU	09-25-92	1035	1028	80020	180	<5	19	53	220	21
LANCASTER COUNTY											
BST11	WSU	09-23-92	1105	1028	80020	130	<5	6.0	<5	16	<5
BST12	WSU	09-30-92	1150	1028	80020	57	<5	<5	<5	<5	<5
BST13	WSU	09-30-92	1005	1028	80020	84	<5	7.7	<5	7.4	<5
BST14	WSU	09-29-92	1105	1028	80020	230	<5	5.7	<5	8.7	<5
BST14	SMB	09-29-92	1116	1028	80020	180	<5	<5	<5	--	<5
BST17	SMB	11-04-92	1405	1028	80020	650	<5	6.1	<5	<5	<5
LEBANON COUNTY											
BST09	WSU	09-25-92	0835	1028	80020	730	17	120	360	1200	130
MIFFLIN COUNTY											
BST06	WSU	09-21-92	0935	1028	80020	360	<5	<5	6.9	6.6	<5
MONTOUR COUNTY											
BST01	WSU	09-15-92	1005	1028	80020	250	<5	8.3	<5	--	<5
BST01	SMB	09-15-92	1020	1028	80020	190	<5	5.6	<5	--	<5
NORTHUMBERLAND COUNTY											
BST02	WSU	09-16-92	1005	1028	80020	160	<5	12	<5	--	<5
BST02	SMB	09-16-92	1016	1028	80020	190	<5	9.6	<5	--	<5
BST02	SMB	10-22-92	2005	1028	80020	130	<5	7.9	<5	--	<5
PERRY COUNTY											
BST08	WSU	09-17-92	1431	1028	80020	93	<5	<5	<5	<5	<5
BST08	SMB	10-14-92	1105	1028	80020	270	<5	<5	<5	<5	<5
SNYDER COUNTY											
BST05	WSU	09-17-92	1035	1028	80020	<50	<5	5.2	<5	--	<5
YORK COUNTY											
BST15	WSU	09-24-92	1005	1028	80020	1500	<5	20	<5	18	<5
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	09-28-92	1005	1028	80020	<50	<5	<5	<5	<5	<5

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1992

LOCAL IDENTIFIER	FISH TYPE	DATE	LINDANE WH ORG WW, REC ($\mu\text{G/KG}$) (49363)	BENZENE HEXA- CHLORO- BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49367)	DCPA, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49378)	TOXA- PHENE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49355)	LIPIDS, BIOTA, WH ORG WW, REC PERCENT (49289)	ALPHA- HCH, D6 SURROGT BIOTA, WH ORG WW, REC PERCENT (49261)	BIPHENYL 35DICHL SURROGT BIOTA, WH ORG WW, REC PERCENT (49264)	SET NUMBER SCHED- ULE 2101 (NO.) (99822)	SAMPLE WEIGHT SCHED- ULE 2101 (GRAMS) (99852)
BLAIR COUNTY											
BST07	WSU	09-22-92	<5	<5	<5	<200	4.4	56	90	93.18	11.5
CENTRE COUNTY											
BST03	WSU	09-18-92	<5	<5	<5	<200	5.3	50	100	93.22	10.1
DAUPHIN COUNTY											
BST10	WSU	09-25-92	5.6	<5	<5	<200	7.6	51	84	93.18	10.0
LANCASTER COUNTY											
BST11	WSU	09-23-92	<5	<5	<5	<200	3.0	53	82	93.18	11.1
BST12	WSU	09-30-92	<5	<5	<5	<200	4.4	40	32	93.29	10.0
BST13	WSU	09-30-92	<5	<5	<5	<200	6.4	58	87	93.18	11.3
BST14	WSU	09-29-92	<5	<5	<5	<200	5.0	46	74	93.18	11.2
BST14	SMB	09-29-92	<5	<5	<5	<200	1.3	80	76	93.22	9.9
BST17	SMB	11-04-92	<5	<5	<5	<200	3.2	48	86	93.22	10.2
LEBANON COUNTY											
BST09	WSU	09-25-92	6.7	8.8	<5	<200	6.9	57	69	93.18	11.0
MIFFLIN COUNTY											
BST06	WSU	09-21-92	<5	<5	<5	<200	5.8	130	57	93.27	10.0
MONTOUR COUNTY											
BST01	WSU	09-15-92	<5	<5	<5	<200	8.5	50	100	93.22	10.3
BST01	SMB	09-15-92	<5	<5	<5	<200	1.6	95	100	93.22	11.8
NORTHUMBERLAND COUNTY											
BST02	WSU	09-16-92	<5	<5	<5	<200	14	53	99	93.22	10.5
BST02	SMB	09-16-92	<5	<5	<5	<200	5.1	68	100	93.22	11.7
BST02	SMB	10-22-92	<5	<5	<5	<200	3.6	68	96	93.22	10.6
PERRY COUNTY											
BST08	WSU	09-17-92	<5	<5	<5	<200	12	44	100	93.22	10.2
BST08	SMB	10-14-92	<5	<5	<5	<200	3.9	59	93	93.18	10.7
SNYDER COUNTY											
BST05	WSU	09-17-92	<5	<5	<5	<200	2.9	69	96	93.22	10.1
YORK COUNTY											
BST15	WSU	09-24-92	<5	<5	<5	<200	6.0	51	68	93.18	9.5
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	09-28-92	<5	<5	<5	<200	3.1	55	96	93.18	10.8

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--WH ORG: whole organism; WW, REC: whole weight recoverable;
 $\mu\text{G/KG}$: micrograms per kilogram; WSU: white sucker; SMB: smallmouth bass.

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1993

LOCAL IDENTIFIER	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	PCB, BIOTA, WH ORG WW, REC (49354)	O,P'-DDT, BIOTA, WH ORG WW, REC (49377)	P,P'-DDT, BIOTA, WH ORG WW, REC (49376)	O,P'-DDD, BIOTA, WH ORG WW, REC (49374)	P,P'-DDD, BIOTA, WH ORG WW, REC (49375)	O,P'-DDE, BIOTA, WH ORG WW, REC (49373)
LANCASTER COUNTY											
BST17	SMB	08-10-93	1000	1028	80020	750	<5	<5	<5	<5	<5
MONTOUR COUNTY											
BST01	SMB	08-19-93	1005	1028	80020	440	<5	5.4	<5	<5	<5
BST01	WSU	08-19-93	1000	1028	80020	640	<5	16.	<5	5.4	<5
NORTHUMBERLAND COUNTY											
BST02	SMB	07-15-93	1005	1028	80020	320	<5	6.6	<5	<5	<5
BST02	WSU	07-15-93	1000	1028	80020	210	<5	9.8	<5	<5	<5
PERRY COUNTY											
BST08	SMB	07-29-93	1005	1028	80020	210	<5	<5	<5	<5	<5
BST08	WSU	07-29-93	1000	1028	80020	190	<5	<5	<5	<5	<5
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-20-93	1000	1028	80020	<50	<5	6.0	<5	<5	<5
BST16	WSU	08-20-93	1030	1028	80020	<50	<5	7.6	<5	<5	<5

LOCAL IDENTIFIER	FISH TYPE	DATE	P, P' - DDE, BIOTA, WH ORG WW, REC (μG/KG) (49372)	CIS-CHLOR-DANE, BIOTA, WH ORG WW, REC (μG/KG) (49380)	TRANS-CHLOR-BIOTA, WH ORG WW, REC (μG/KG) (49379)	CIS-NONA-CHLOR, BIOTA, WH ORG WW, REC (μG/KG) (49359)	TRANS-NONA-CHLOR, BIOTA, WH ORG WW, REC (μG/KG) (49358)	OXY-CHLOR-DANE, BIOTA, WH ORG WW, REC (μG/KG) (49357)	HEPTA-CHLOR-EPOXIDE, BIOTA, WH ORG WW, REC (μG/KG) (49369)	PENTA-CHLOROANISOLE, BIOTA, WH ORG WW, REC (μG/KG) (49356)	
LANCASTER COUNTY											
BST17	SMB	08-10-93	49	<5	<5	<5	6.3	<5	<5	<5	
MONTOUR COUNTY											
BST01	SMB	08-19-93	46	<5	<5	<5	7.6	<5	<5	<5	
BST01	WSU	08-19-93	76	<5	<5	<5	11	<5	<5	<5	
NORTHUMBERLAND COUNTY											
BST02	SMB	07-15-93	52	<5	<5	8	22	<5	<5	<5	
BST02	WSU	07-15-93	28	<5	<5	<5	8.8	<5	<5	<5	
PERRY COUNTY											
BST08	SMB	07-29-93	18	<5	<5	<5	6.5	<5	<5	<5	
BST08	WSU	07-29-93	8.9	<5	<5	<5	5.0	<5	<5	<5	
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-20-93	44	<5	<5	<5	<5	<5	<5	<5	
BST16	WSU	08-20-93	40	<5	<5	<5	6.2	<5	<5	<5	

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1993

LOCAL IDENTIFIER	FISH TYPE	DATE	ALDRIN, BIOTA, WH ORG WW, REC (μG/KG) (49353)	DIEL-DRIN, BIOTA, WH ORG WW, REC (μG/KG) (49371)	ENDRIN, BIOTA, WH ORG WW, REC (μG/KG) (49370)	MIREX, BIOTA, WH ORG WW, REC (μG/KG) (49360)	METHOXY CHLOR, O,P'-, BIOTA, WH ORG WW, REC (μG/KG) (49362)	METHOXY CHLOR, P,P'-, BIOTA, WH ORG WW, REC (μG/KG) (49361)	ALPHA-HCH, BIOTA, WH ORG WW, REC (μG/KG) (49366)	BETA-HCH, BIOTA, WH ORG WW, REC (μG/KG) (49365)	DELTA-HCH, BIOTA, WH ORG WW, REC (μG/KG) (49364)
LANCASTER COUNTY											
BST17	SMB	08-10-93	<5	<5	<5	<5	<5	<5	<5	<5	<5
MONTOUR COUNTY											
BST01	SMB	08-19-93	<5	6.2	<5	<5	<5	<5	<5	<5	<5
BST01	WSU	08-19-93	<5	<5	<5	<5	<5	<5	<5	<5	<5
NORTHUMBERLAND COUNTY											
BST02	SMB	07-15-93	<5	<5	<5	<5	<5	<5	<5	<5	<5
BST02	WSU	07-15-93	<5	<5	<5	<5	<5	<5	<5	<5	<5
PERRY COUNTY											
BST08	SMB	07-29-93	<5	<5	<5	<5	<5	<5	<5	<5	<5
BST08	WSU	07-29-93	<5	<5	<5	<5	<5	<5	<5	<5	<5
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-20-93	<5	6.1	<5	<5	<5	<5	<5	<5	<5
BST16	WSU	08-20-93	<5	8.7	<5	<5	<5	<5	<5	<5	<5
LOCAL IDENTIFIER	FISH TYPE	DATE	LINDANE BIOTA, WH ORG WW, REC (μG/KG) (49363)	BENZENE HEXA-CHLORO-BIOTA, WH ORG WW, REC (μG/KG) (49367)	DCPA, BIOTA, WH ORG WW, REC (μG/KG) (49378)	TOXA-PHENE, BIOTA, WH ORG WW, REC (μG/KG) (49355)	LIPIDS, BIOTA, WH ORG WW, REC PERCENT (49289)	ALPHA-HCH, D6 SURROGT BIOTA, WH ORG WW, REC PERCENT (49261)	BIPHENYL 35DICHL SURROGT BIOTA, WH ORG WW, REC PERCENT (49264)	SET NUMBER SCHED-ULE 2101 (NO.) (99822)	SAMPLE WEIGHT SCHED-ULE 2101 (GRAMS) (99852)
LANCASTER COUNTY											
BST17	SMB	08-10-93	<5	<5	<5	<200	5.1	44	50	93.44	10.4
MONTOUR COUNTY											
BST01	SMB	08-19-93	<5	<5	<5	<200	6.9	72	63	93.46	10.1
BST01	WSU	08-19-93	<5	<5	<5	<200	7.3	71	57	93.46	10.3
NORTHUMBERLAND COUNTY											
BST02	SMB	07-15-93	<5	<5	<5	<200	5.4	85	67	93.46	10.3
BST02	WSU	07-15-93	<5	<5	<5	<200	6.1	81	54	93.46	10.4
PERRY COUNTY											
BST08	SMB	07-29-93	<5	<5	<5	<200	9.8	40	34	93.44	9.7
BST08	WSU	07-29-93	<5	<5	<5	<200	7.4	48	35	93.46	9.9
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-20-93	<5	<5	<5	<200	5.8	57	49	93.44	10.1
BST16	WSU	08-20-93	<5	<5	<5	<200	3.3	69	67	93.46	10.2

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--WH ORG: whole organism; WW, REC: whole weight recoverable; $\mu\text{G/KG}$: micrograms per kilogram; WSU: white sucker; SMB: smallmouth bass.

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1994

LOCAL IDENTIFIER	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	PCB, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49354)	O, P'-DDT, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49377)	P, P'-DDT, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49376)	O, P'-DDD, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49374)	P, P'-DDD, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49375)	O, P'-DDE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49373)	
LANCASTER COUNTY												
BST17	SMB	08-04-94	1030	1028	80020	1200	<5	7.4	<5	<5	5.4	
BST17	SMB	08-04-94	1100	1028	80020	880	<5	6.8	<5	<5	<5	
MONTGOUR COUNTY												
BST01	WSU	08-02-94	1200	1028	80020	400	<5	10	<5	<5	<5	
BST01	SMB	08-02-94	1230	1028	80020	460	<5	11	<5	<5	<5	
NORTHUMBERLAND COUNTY												
BST02	WSU	07-28-94	2130	1028	80020	180	<5	12	<5	6.6	5.4	
BST02	SMB	07-28-94	2200	1028	80020	200	<5	6.2	<5	<5	<5	
PERRY COUNTY												
BST08	WSU	08-11-94	2330	1028	80020	290	<5	<5	<5	<5	<5	
BST08	SMB	08-11-94	2345	1028	80020	260	<5	<5	<5	<5	<5	
BALTIMORE COUNTY, MARYLAND												
BST16	WSU	08-03-94	1000	1028	80020	<50	<5	7.1	<5	5.3	<5	
LOCAL IDENTIFIER	FISH TYPE	DATE		P, P'-DDE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49372)	CIS-CHLOR-DANE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49380)	TRANS-CHLOR-DANE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49379)	CIS-NONA-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49359)	TRANS-NONA-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49358)	OXY-CHLOR-DANE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49357)	HEPTA-CHLOR, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49369)	HEPTA-CHLOR EPOXIDE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49368)	PENTA-CHLORO ANISOLE, BIOTA, WH ORG WW, REC ($\mu\text{G/KG}$) (49356)
LANCASTER COUNTY												
BST17	SMB	08-04-94	62	<5	<5	<5	14	<5	<5	<5	<5	
BST17	SMB	08-04-94	58	<5	<5	<5	13	<5	<5	<5	<5	
MONTGOUR COUNTY												
BST01	WSU	08-02-94	51	5.6	<5	<5	11	<5	<5	<5	<5	
BST01	SMB	08-02-94	68	<5	<5	<5	13	<5	<5	<5	<5	
NORTHUMBERLAND COUNTY												
BST02	WSU	07-28-94	35	5.8	<5	<5	10	<5	<5	<5	<5	
BST02	SMB	07-28-94	37	<5	<5	<5	9.1	<5	<5	<5	<5	
PERRY COUNTY												
BST08	WSU	08-11-94	24	5.3	<5	<5	12	<5	<5	<5	<5	
BST08	SMB	08-11-94	14	<5	<5	<5	8.3	<5	<5	<5	<5	
BALTIMORE COUNTY, MARYLAND												
BST16	WSU	08-03-94	33	<5	<5	<5	6.7	<5	<5	<5	<5	

**ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES
LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT**

ORGANOCHLORINES IN WHOLE FISH, CALENDAR YEAR 1994

LOCAL IDENTIFIER	FISH TYPE	DATE	ALDRIN, BIOTA, WH ORG WW, REC (μG/KG) (49353)	DIEL-DRIN, BIOTA, WH ORG WW, REC (μG/KG) (49371)	ENDRIN, BIOTA, WH ORG WW, REC (μG/KG) (49370)	MIREX, BIOTA, WH ORG WW, REC (μG/KG) (49360)	METHOXY CHLOR, O,P'-, BIOTA, WH ORG WW, REC (μG/KG) (49362)	METHOXY CHLOR, P,P'-, BIOTA, WH ORG WW, REC (μG/KG) (49361)	ALPHA-HCH, BIOTA, WH ORG WW, REC (μG/KG) (49366)	BETA-HCH, BIOTA, WH ORG WW, REC (μG/KG) (49365)	DELTA-HCHR, BIOTA, WH ORG WW, REC (μG/KG) (49364)
LANCASTER COUNTY											
BST17	SMB	08-04-94	<5	6.0	<5	<5	<5	<5	<5	<10	<5
BST17	SMB	08-04-94	<5	5.1	<5	<5	<5	<5	<5	<10	<5
MONTOUR COUNTY											
BST01	WSU	08-02-94	<5	6.4	<5	<5	<5	<5	<5	<5	<5
BST01	SMB	08-02-94	<5	<5	<5	<5	<5	<5	<5	E 6.0	<5
NORTHUMBERLAND COUNTY											
BST02	WSU	07-28-94	<5	<5	<5	<5	<5	<5	<5	<5	<5
BST02	SMB	07-28-94	<5	<5	<5	<5	<5	<5	<5	E 5.1	<5
PERRY COUNTY											
BST08	WSU	08-11-94	<5	7.7	<5	<5	<5	<5	<5	<5	<5
BST08	SMB	08-11-94	<5	<5	<5	<5	<5	<5	<5	<5	<5
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-03-94	<5	7.8	<5	<5	<5	<5	<5	<5	<5

LOCAL IDENTIFIER	FISH TYPE	DATE	LINDANE, BIOTA, WH ORG WW, REC (μG/KG) (49363)	BENZENE HEXA-CHLORO-, BIOTA, WH ORG WW, REC (μG/KG) (49367)	DCPA, BIOTA, WH ORG WW, REC (μG/KG) (49378)	TOXA-PHENE, BIOTA, WH ORG WW, REC (μG/KG) (49355)	LIPIDS, BIOTA, WH ORG WW, REC PERCENT (49289)	ALPHA-HVH,D6 SURROGT, BIOTA, WH ORG WW, REC PERCENT (49261)	BIPHENYL 35DICHL SURROGT, BIOTA, WH ORG WW, REC PERCENT (49264)	SET NUMBER SCHED-ULE 2101 (NO.) (99822)	SAMPLE WEIGHT SCHED-ULE 2101 (GRAMS) (99852)
LANCASTER COUNTY											
BST17	SMB	08-04-94	<5	<5	<5	<200	5.9	123	85	94339.01	10.2
BST17	SMB	08-04-94	<5	<5	<5	<200	5.4	133	82	94339.01	10.2
MONTOUR COUNTY											
BST01	WSU	08-02-94	<5	<5	<5	<200	8.9	119	88	94339.01	10
BST01	SMB	08-02-94	<5	<5	5.7	<200	3.4	136	87	94339.01	10.1
NORTHUMBERLAND COUNTY											
BST02	WSU	07-28-94	<5	<5	<5	<200	5.7	124	83	94339.01	10
BST02	SMB	07-28-94	<5	<5	<5	<200	3.6	146	110	94339.01	10
PERRY COUNTY											
BST08	WSU	08-11-94	<5	<5	<5	<200	9.4	98	89	94339.01	10
BST08	SMB	08-11-94	<5	<5	<5	<200	6.7	113	89	94339.01	10
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-03-94	<5	<5	8.2	<200	4.6	110	82	94339.01	10.1

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--BIO TIS: biota tissue; DRY WGT REC: dry weight recoverable;
μG/G: micrograms per gram; WSU: white sucker; SMB: smallmouth bass.

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	ALUMI-NUM, BIO TIS LIVER, DRY WGT REC (μG/G) (49237)	ANTI-MONY, BIO TIS LIVER, DRY WGT REC (μG/G) (49246)	ARSENIC, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49247)	BARIUM, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49238)	BERYL-LIUM-, BIO TIS LIVER, DRY WGT REC (μG/G) (49248)	BORON, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49239)
BLAIR COUNTY											
BST07	WSU	09-22-92	1015	1028	80020	<1.0	<.2	<.2	<.1	<.2	1.3
CENTRE COUNTY											
BST03	WSU	09-18-92	0936	1028	80020	<1.0	<.2	<.2	<.1	<.2	1.8
DAUPHIN COUNTY											
BST10	WSU	09-25-92	1031	1028	80020	<1.0	<.2	.5	<.1	<.2	.7
LANCASTER COUNTY											
BST11	WSU	09-23-92	1101	1028	80020	<1.0	<.3	<.3	<.1	<.3	.7
BST12	WSU	09-30-92	1146	1028	80020	<1.0	<.3	<.3	<.1	<.3	1.9
BST13	WSU	09-30-92	1001	1028	80020	<1.0	<.3	1.0	<.1	<.3	1.6
BST14	WSU	09-29-92	1101	1028	80020	<1.0	<.3	.7	<.1	<.3	1.7
BST17	SMB	11-04-92	1401	1028	80020	8.5	<.2	1.1	<.1	<.2	.7
LEBANON COUNTY											
BST09	WSU	09-25-92	0831	1028	80020	<1.0	<.1	<.1	<.1	<.1	.9
MIFFLIN COUNTY											
BST06	WSU	09-21-92	0931	1028	80020	<1.0	<.2	.2	<.1	<.2	1.1
MONTOUR COUNTY											
BST01	WSU	09-15-92	1001	1028	80020	<1.0	<.3	.3	<.1	<.3	1.4
BST01	SMB	09-15-92	1016	1028	80020	8.5	<.2	.6	<.1	<.2	.9
NORTHUMBERLAND COUNTY											
BST02	WSU	09-16-92	1001	1028	80020	<1.0	<.2	<.2	<.1	<.2	.8
BST02	SMB	10-22-92	2000	1028	80020	7.8	<.2	.8	<.1	<.2	1.6
PERRY COUNTY											
BST08	SMB	10-14-92	1100	1028	80020	<1.0	<.2	.4	<.1	<.2	1.1
SNYDER COUNTY											
BST05	WSU	09-17-92	1031	1028	80020	<1.0	<.2	.3	.2	<.2	2.1
YORK COUNTY											
BST15	WSU	09-24-92	1001	1028	80020	<1.0	<.2	.3	<.1	<.2	1.2
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	09-28-92	1001	1028	80020	<1.0	<.2	<.2	<.1	<.2	.6

**ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES
LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT**

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	FISH TYPE	DATE	CADMIUM BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49249)	CHROM- IUM- BIO TIS LIVER, DRY WGT REC ($\mu\text{G/G}$) (49240)	COBALT, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49250)	COPPER, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49241)	IRON, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49242)	LEAD, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49251)	MANGAN- ESE, BIO TIS LIVER, DRY WGT REC ($\mu\text{G/G}$) (49243)	MERCURY BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49258)	MOLYB- DENUM, BIO TIS LIVER, DRY WGT REC ($\mu\text{G/G}$) (49252)
BLAIR COUNTY											
BST07	WSU	09-22-92	.3	.6	<.2	46.1	537	.9	11.0	.6	1.5
CENTRE COUNTY											
BST03	WSU	09-18-92	.4	.7	<.2	35.1	209	<.2	7.3	.2	1.4
DAUPHIN COUNTY											
BST10	WSU	09-25-92	.5	.6	.6	25.8	321	<.2	10.8	.1	1.0
LANCASTER COUNTY											
BST11	WSU	09-23-92	.4	.8	.7	30.4	488	<.3	9.7	.2	1.3
BST12	WSU	09-30-92	.3	.8	.6	43.2	566	<.3	6.8	<.1	1.3
BST13	WSU	09-30-92	.3	.7	.7	40.6	509	<.3	7.5	.3	1.3
BST14	WSU	09-29-92	.6	.7	.5	27.7	696	<.3	8.7	.1	1.4
BST17	SMB	11-04-92	6.1	.7	3.3	20.2	557	.3	3.6	<.1	.7
LEBANON COUNTY											
BST09	WSU	09-25-92	1.8	.5	.6	50.8	154	.2	4.6	.1	1.5
MIFFLIN COUNTY											
BST06	WSU	09-21-92	.6	<.5	.2	28.5	195	.3	5.2	<.1	.8
MONTOUR COUNTY											
BST01	WSU	09-15-92	4.2	<.5	2.4	40.0	247	.3	6.8	.1	1.4
BST01	SMB	09-15-92	4.6	.6	2.8	9.7	649	.4	4.7	.5	1.1
NORTHUMBERLAND COUNTY											
BST02	WSU	09-16-92	4.0	.5	1.7	27.3	173	<.2	8.8	<.1	1.1
BST02	SMB	10-22-92	2.1	.6	2.5	6.4	201	.4	2.9	.2	.7
PERRY COUNTY											
BST08	SMB	10-14-92	.7	.6	.7	5.4	247	.6	4.2	<.1	.7
SNYDER COUNTY											
BST05	WSU	09-17-92	.3	.7	.2	23.4	268	.7	9.8	.1	1.4
YORK COUNTY											
BST15	WSU	09-24-92	.7	.6	.5	74.8	760	.4	10.2	.5	1.5
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	09-28-92	.3	.7	.8	29.3	226	<.2	10.4	<.1	1.1

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1992

LOCAL IDENTIFIER	FISH TYPE	DATE	NICKEL, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49253)	SELENIUM, BIO TIS, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49254)	SILVER, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49255)	STRONTIUM, BIO TIS, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49244)	URANIUM, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49257)	VANADIUM, BIO TIS, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49465)	WATER, PRESENT BIO TIS, LIVER, DRY WGT REC (PERCENT) (49273)	ZINC, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49245)
BLAIR COUNTY										
BST07	WSU	09-22-92	<.2	9.2	1.3	.4	<.2	.4	77.8	121
CENTRE COUNTY										
BST03	WSU	09-18-92	.2	3.8	<.2	.4	<.2	<.2	76.3	99.0
DAUPHIN COUNTY										
BST10	WSU	09-25-92	.5	3.8	.2	.2	<.2	.2	75.6	81.3
LANCASTER COUNTY										
BST11	WSU	09-23-92	<.3	6.7	<.3	.3	<.3	.9	80.6	110
BST12	WSU	09-30-92	<.3	5.3	.3	.3	<.3	.3	80.3	122
BST13	WSU	09-30-92	<.3	4.9	<.3	.3	<.3	.6	81.1	110
BST14	WSU	09-29-92	.5	5.2	.7	.2	<.3	.4	76.6	91.9
BST17	SMB	11-04-92	.5	5.9	.4	.6	<.2	.9	77.7	88.9
LEBANON COUNTY										
BST09	WSU	09-25-92	<.1	4.0	.3	.1	<.1	.2	75.1	107
MIFFLIN COUNTY										
BST06	WSU	09-21-92	<.2	2.9	.2	.5	<.2	<.2	73.3	62.3
MONTOUR COUNTY										
BST01	WSU	09-15-92	.6	3.4	1.1	.1	<.3	<.3	75.5	74.7
BST01	SMB	09-15-92	.5	7.2	<.2	1.6	<.2	.6	78.3	77.3
NORTHUMBERLAND COUNTY										
BST02	WSU	09-16-92	.9	2.8	.4	.2	<.2	<.2	75.3	78.0
BST02	SMB	10-22-92	.4	4.1	<.2	.9	<.2	.2	75.0	60.2
PERRY COUNTY										
BST08	SMB	10-14-92	<.2	4.2	<.2	2.5	<.2	<.2	77.3	74.1
SNYDER COUNTY										
BST05	WSU	09-17-92	<.2	1.9	<.2	1.6	<.2	<.2	79.3	72.0
YORK COUNTY										
BST15	WSU	09-24-92	.2	4.2	.6	.1	<.2	1.6	78.0	129
BALTIMORE COUNTY, MARYLAND										
BST16	WSU	09-28-92	.2	2.2	<.2	.3	<.2	.2	80.7	94.9

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--BIO TIS: biota tissue; DRY WGT REC: dry weight recoverable; μG/G: micrograms per gram; WSU: white sucker; SMB: smallmouth bass.

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1993

LOCAL IDENTIFIER	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	ALUMI-NUM, BIO TIS DRY WGT REC (μG/G) (49237)	ANTI-MONY, BIO TIS DRY WGT REC (μG/G) (49246)	ARSENIC BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49247)	BARIUM, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49238)	BERYL-LIUM, BIO TIS DRY WGT REC (μG/G) (49248)	BORON, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49239)
LANCASTER COUNTY											
BST17	SMB	08-10-93	1015	1028	80020	3.2	<.3	.5	<.1	<.3	1.9
MONTGOMERY COUNTY											
BST01	WSU	08-19-93	1020	1028	80020	5.7	<.3	<.3	<.1	<.3	1.6
BST01	SMB	08-19-93	1015	1028	80020	9.2	<.2	<.3	<.1	<.2	.9
NORTHUMBERLAND COUNTY											
BST02	WSU	07-15-93	1020	1028	80020	7.0	<.3	<.3	.1	<.3	1.1
BST02	SMB	07-15-93	1015	1028	80020	31	<.3	.4	<.1	<.3	1.3
PERRY COUNTY											
BST08	WSU	07-29-93	1015	1028	80020	<1.0	<.1	.2	<.1	<.1	1.5
BST08	SMB	07-29-93	1020	1028	80020	4.9	<.3	<.3	.1	<.3	1.6
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-20-93	1015	1028	80020	2.4	<.2	<.2	.1	<.2	1.2
LOCAL IDENTIFIER	FISH TYPE	DATE	CADMIUM BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49249)	CHROMIUM, BIO TIS DRY WGT REC (μG/G) (49240)	COBALT, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49250)	COPPER, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49241)	IRON, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49242)	LEAD, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49251)	MANGANESE, BIO TIS DRY WGT REC (μG/G) (49243)	MERCURY BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49258)	MOLYBDENUM, BIO TIS DRY WGT REC (μG/G) (49252)
LANCASTER COUNTY											
BST17	SMB	08-10-93	2.1	.6	2.3	19.0	863	<.3	6.6	.2	.7
MONTGOMERY COUNTY											
BST01	WSU	08-19-93	4.2	.7	2.3	35.7	758	<.3	7.9	.2	.7
BST01	SMB	08-19-93	4.5	.7	4.2	9.7	895	<.2	7.3	.4	1
NORTHUMBERLAND COUNTY											
BST02	WSU	07-15-93	4.2	.6	3.0	37.6	511	<.3	5.6	.2	.8
BST02	SMB	07-15-93	3.2	.7	6.1	22.0	601	<.3	6.6	.5	.9
PERRY COUNTY											
BST08	WSU	07-29-93	.3	<.5	.4	28.7	456	<.1	5.9	<.1	.5
BST08	SMB	07-29-93	1.4	.6	1.4	17.3	655	<.3	6.3	.4	.7
BALTIMORE COUNTY, MARYLAND											
BST16	WSU	08-20-93	.4	.6	.9	51.7	395	<.2	9.7	.2	1

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1993

LOCAL IDENTIFIER	FISH TYPE	DATE	NICKEL, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49253)	SELEN- IUM, BIO TIS TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49254)	SILVER, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49255)	STRON- TIUM, BIO TIS TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49244)	URANIUM BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49257)	VANA- DIUM BIO TIS TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49465)	WATER, PRESENT BIO TIS TISSUE, LIVER, DRY WGT REC (PERCENT) (49273)	ZINC, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49245)
LANCASTER COUNTY										
BST17	SMB	08-10-93	<.3	4.6	<.3	.7	<.3	<.3	77.8	92.9
MONTOUR COUNTY										
BST01	WSU	08-19-93	.5	2.8	.5	.2	<.3	<.3	72.3	97.1
BST01	SMB	08-19-93	.5	8.8	<.2	1.0	<.2	.5	78.1	89.1
NORTHUMBERLAND COUNTY										
BST02	WSU	07-15-93	2.2	4.7	.4	.6	<.3	<.3	77.5	109
BST02	SMB	07-15-93	.9	6.6	<.3	1.8	<.3	.5	79.9	98.4
PERRY COUNTY										
BST08	WSU	07-29-93	.2	2.3	.2	.8	<.1	<.1	74.3	73.5
BST08	SMB	07-29-93	<.3	5.6	<.3	3.8	<.3	.4	78.8	89.9
BALTIMORE COUNTY, MARYLAND										
BST16	WSU	08-20-93	<.2	3.1	.3	.6	<.2	<.2	79.5	112

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

REMARKS--Explanation of column headings--BIO TIS: biota tissue; DRY WGT REC: dry weight recoverable;
μG/G: micrograms per gram; WSU: white sucker; SMB: smallmouth bass.

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1994

LOCAL IDENTIFIER	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	ALUMI-NUM, BIO TIS LIVER, DRY WGT REC (μG/G) (49237)	ANTI-MONY, BIO TIS LIVER, DRY WGT REC (μG/G) (49246)	ARSENIC, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49247)	BARIUM, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49238)	BERYL-LIUM-, BIO TIS LIVER, DRY WGT REC (μG/G) (49248)	BORON, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49239)	
LANCASTER COUNTY												
BST17	SMB	08-04-94	1035	1028	80020	27.3	<.3	.4	.4	<.3	.8	
BST17	SMB	08-04-94	1105	1028	80020	13.3	<.2	.3	<.1	<.2	.7	
MONTGOUR COUNTY												
BST01	WSU	08-02-94	1205	1028	80020	<1	<.2	.3	<.1	<.2	.5	
BST01	SMB	08-02-94	1235	1028	80020	51.8	<.3	.3	<.1	<.3	.7	
NORTHUMBERLAND COUNTY												
BST02	WSU	07-28-94	2135	1028	80020	1.7	<.2	<.2	<.1	<.2	.6	
BST02	SMB	07-28-94	2205	1028	80020	34.4	<.3	<.3	<.2	<.3	.6	
PERRY COUNTY												
BST08	WSU	08-11-94	2335	1028	80020	<1	<.2	.3	<.1	<.2	.8	
BST08	SMB	08-11-94	2350	1028	80020	3.1	<.3	.4	.2	<.3	1.4	
BALTIMORE COUNTY, MARYLAND												
BST16	WSU	08-03-94	1005	1028	80020	1.3	<.3	<.3	<.2	<.3	1.7	
LOCAL IDENTIFIER	FISH TYPE	DATE		CADMIUM BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49249)	CHROM-IUM-, BIO TIS LIVER, DRY WGT REC (μG/G) (49240)	COBALT, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49250)	COPPER, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49241)	IRON, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49242)	LEAD, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49251)	MANGAN-ESE, BIO TIS LIVER, DRY WGT REC (μG/G) (49243)	MERCURY, BIOTA, TISSUE, LIVER, DRY WGT REC (μG/G) (49258)	MOLYB-DENUM, BIO TIS LIVER, DRY WGT REC (μG/G) (49252)
LANCASTER COUNTY												
BST17	SMB	08-04-94	5.3	<.5	3.3	25.5	1140	.5	8.5	.2	1	
BST17	SMB	08-04-94	4.2	<.5	3.4	24.2	1270	<.2	6.0	.2	.9	
MONTGOUR COUNTY												
BST01	WSU	08-02-94	2.2	<.5	.9	40.7	463	<.2	8.7	.1	.7	
BST01	SMB	08-02-94	4.6	<.5	3.9	9.4	1090	<.3	4.8	.7	.8	
NORTHUMBERLAND COUNTY												
BST02	WSU	07-28-94	3.2	<.5	2.0	37.1	432	<.2	7.4	.1	.9	
BST02	SMB	07-28-94	5.2	<.5	4.3	12.2	645	.4	5.6	.3	.8	
PERRY COUNTY												
BST08	WSU	08-11-94	1.4	<.5	.3	36.4	446	<.2	8.1	.1	.8	
BST08	SMB	08-11-94	.9	<.5	1.2	21.1	856	<.3	5.2	.3	.8	
BALTIMORE COUNTY, MARYLAND												
BST16	WSU	08-03-94	<.3	<.5	.7	59.4	516	<.3	17.2	.1	1	

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL-STUDY SITES
LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

TRACE ELEMENTS IN FISH LIVERS, CALENDAR YEAR 1994

LOCAL IDENTIFIER	FISH TYPE	DATE	NICKEL, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49253)	SELEN- IUM, BIO TIS TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49254)	SILVER, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49255)	STRON- TIUM, BIO TIS TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49244)	URANIUM BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49257)	VANA- DIUM BIO TIS TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49465)	WATER, PRESENT BIO TIS TISSUE, LIVER, DRY WGT REC (PERCENT) (49273)	ZINC, BIOTA, TISSUE, LIVER, DRY WGT REC ($\mu\text{G/G}$) (49245)
LANCASTER COUNTY										
BST17	SMB	08-04-94	.5	6.3	.5	1.2	<.3	.9	80.4	100
BST17	SMB	08-04-94	.8	7.6	.3	1.0	<.2	1.2	80.4	94.5
MONTOUR COUNTY										
BST01	WSU	08-02-94	.7	2.6	.6	.3	<.2	<.2	73.6	81.8
BST01	SMB	08-02-94	.9	6.5	<.3	1.5	<.3	1.4	79.7	83.8
NORTHUMBERLAND COUNTY										
BST02	WSU	07-28-94	1.3	3.8	.4	.3	<.2	<.2	77.0	115
BST02	SMB	07-28-94	1.6	7.0	<.3	1.4	<.3	.6	80.6	90.8
PERRY COUNTY										
BST08	WSU	08-11-94	.3	2.3	.3	.9	<.2	<.2	76.8	89.2
BST08	SMB	08-11-94	<.3	3.9	.4	8.0	<.3	.4	79.4	82.9
BALTIMORE COUNTY, MARYLAND										
BST16	WSU	08-03-94	<.3	3.1	.4	.5	<.3	<.3	78.8	115

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

MAHANAY CREEK, NORTHUMBERLAND COUNTY

REMARKS.--Analyses of sediment particle-size fraction less than 63 microns, wet sieved. Concentrations reported as dry weight. Results of fish-tissue analyses reported as dry weight. Explanation of column headings--BOT MAT: bottom material; μG/G: micrograms per gram; REC: recoverable; BIO TIS: biota, tissue.

NOTE: Additional analyses for Mahanoy Creek for organochlorines in streambed sediments can be found on pages 309-320, and analyses for trace elements in streamflow may be found on pages 298-299.

STATION NUMBER	DATE	TIME	STATION NAME
404354076474001	09-07-94	1410	MAHANAY CREEK NR DORNSIFE, PA
404328076485701	09-07-94	1400	MAHANAY CREEK AT KNEASS, PA
404334076501601	09-07-94	1000	MAHANAY CREEK NR HERNDON, PA

TRACE ELEMENTS IN STREAMBED SEDIMENTS AND FISH LIVERS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

STATION NUMBER	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-SAMPLE SAMPLE (CODE NUMBER)	ALUM-INUM BOT MAT PERCENT (34790)	ANTI-MONY BOT MAT (μG/G) (34795)	ARSENIC BOT MAT (μG/G) (34800)	BARIUM BOT MAT (μG/G) (34805)	BERYL-LIUM BOT MAT (μG/G) (34810)	BISMUTH BOT MAT (μG/G) (34816)	CADMIUM BOT MAT (μG/G) (34825)	CALCIUM BOT MAT PERCENT (34830)
404354076474001	1028	80020	5.4	1	19	340	12	<10	2.0	0.43
404328076485701	1028	80020	--	--	--	--	--	--	--	--
404334076501601	1028	80020	4.8	1	17	340	13	<10	3.1	0.64

STATION NUMBER	CERIUM BOT MAT (μG/G) (34835)	CHRO-MIUM BOT MAT (μG/G) (34840)	COBALT BOT MAT (μG/G) (34845)	COPPER BOT MAT (μG/G) (34850)	EURO-PIUM BOT MAT (μG/G) (34855)	GALLIUM BOT MAT (μG/G) (34860)	GOLD BOT MAT (μG/G) (34870)	HOLMIUM BOT MAT (μG/G) (34875)	IRON BOT MAT PERCENT (34880)	LANTHA-NUM BOT MAT (μG/G) (34885)
404354076474001	110	54	410	110	2	36	<8	<4	12	60
404328076485701	--	--	--	--	--	--	--	--	--	--
404334076501601	110	36	590	100	2	44	<8	<4	13	59

STATION NUMBER	LEAD BOT MAT (μG/G) (34890)	LITHIUM BOT MAT (μG/G) (34895)	MAGNE-SIUM BOT MAT PERCENT (34900)	MANGA-NESE BOT MAT (μG/G) (34905)	MERCURY BOT MAT (μG/G) (34910)	MOLYB-DENUM BOT MAT (μG/G) (34915)	NEODYM-IUM BOT MAT (μG/G) (34920)	NICKEL BOT MAT (μG/G) (34925)	NIOBIUM BOT MAT (μG/G) (34930)
404354076474001	85	60	0.37	19000	0.12	<2	57	300	11
404328076485701	--	--	--	--	--	--	--	--	--
404334076501601	40	60	0.39	29000	0.06	<2	60	530	9

STATION NUMBER	PHOS-PHORUS BOT MAT PERCENT (34935)	POTAS-SIUM BOT MAT PERCENT (34940)	SCAN-DIUM BOT MAT (μG/G) (34945)	SELE-NIUM BOT MAT (μG/G) (34950)	SILVER BOT MAT (μG/G) (34955)	SODIUM BOT MAT PERCENT (34960)	STRON-TIUM BOT MAT (μG/G) (34965)	SULFUR BOT MAT (μG/G) (34970)	TANTA-LUM BOT MAT (μG/G) (34975)
404354076474001	0.09	1.0	11	2.5	0.3	0.21	95	0.28	<40
404328076485701	--	--	--	--	--	--	--	--	--
404334076501601	0.11	1.0	10	1.8	0.2	0.16	120	0.36	<40

STATION NUMBER	THORIUM BOT MAT (μG/G) (34980)	TIN BOT MAT (μG/G) (34985)	TITA-NIUM, SED, BOT MAT (PERCENT) (49274)	URANIUM BOT MAT (μG/G) (35000)	VANA-DIUM BOT MAT (μG/G) (35005)	YTTER-BIUM BOT MAT (μG/G) (35015)	YTTRIUM BOT MAT (μG/G) (35010)	ZINC BOT MAT (μG/G) (35020)	CARBON ORGANIC BOT MAT (PERCENT) (49266)
404354076474001	10	<10	0.240	5.5	57	5	58	1200	6.2
404328076485701	--	--	--	--	--	--	--	--	--
404334076501601	10	<10	0.150	4.1	41	5	63	1700	6.5

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

MAHANOY CREEK, NORTHUMBERLAND COUNTY--Continued

TRACE ELEMENTS IN STREAMBED SEDIMENTS AND FISH LIVERS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

STATION NUMBER	CARBON, ORG +INORG, BOT MAT DW, REC (PERCENT) (49267)	CARBON, INORG , SED, BOT MAT (PERCENT) (49269)	ALUMI- NUM, BIO TIS LIVER, (μG/G) (49237)	ANTI- MONY, BIO TIS LIVER, (μG/G) (49246)	BARIUM, BIOTA, TISSUE, LIVER, (μG/G) (49238)	BERYL- LIUM- BIO TIS LIVER, (μG/G) (49248)	BORON, BIOTA, TISSUE, LIVER, (μG/G) (49239)	CADMIUM BIOTA, TISSUE, LIVER, (μG/G) (49249)	CHROM- IUM- BIO TIS LIVER, (μG/G) (49240)
404354076474001	6.6	0.35	--	--	--	--	--	--	--
404328076485701	--	--	4.4	<0.2	<0.1	<0.2	0.4	3.9	<0.5
404334076501601	7.2	0.72	--	--	--	--	--	--	--

STATION NUMBER	COBALT, BIOTA TISSUE, LIVER (μG/G) (49250)	COPPER, BIOTA, TISSUE, LIVER (μG/G) (49241)	IRON, BIOTA, TISSUE, LIVER, (μG/G) (49242)	LEAD, BIOTA, TISSUE, LIVER, (μG/G) (49251)	MANGAN- ESE, BIO TIS LIVER, (μG/G) (49243)	MERCURY BIOTA, TISSUE, LIVER, (μG/G) (49258)	MOLYB- DENUM, BIO TIS LIVER, (μG/G) (49252)	NICKEL, BIOTA, TISSUE, LIVER, (μG/G) (49253)	SELEN- IUM, BIO TIS LIVER, (μG/G) (49254)
404354076474001	--	--	--	--	--	--	--	--	--
404328076485701	2.5	85	740	<0.2	10	0.1	0.9	1.4	3.4
404334076501601	--	--	--	--	--	--	--	--	--

STATION NUMBER	SILVER, BIOTA, TISSUE, LIVER, (μG/G) (49255)	STRON- TIUM, BIO TIS LIVER, (μG/G) (49244)	URANIUM BIOTA, TISSUE, LIVER, (μG/G) (49257)	VANA- DIUM, BIO TIS LIVER (μG/G) (49465)	WATER, PRESENT BIO TIS LIVER, (μG/G) (49273)	ZINC, BIOTA, TISSUE, LIVER, (μG/G) (49245)
404354076474001	--	--	--	--	--	--
404328076485701	0.4	0.4	<0.2	<0.2	78	140
404334076501601	--	--	--	--	--	--

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

POTOMAC RIVER BASIN NAWQA PROJECT

REMARKS.--The data in the following table are from samples collected by personnel from the Towson Maryland office of the U.S. Geological Survey as part of the National Water-Quality Assessment Program (NAWQA) in the Potomac River Basin, Franklin County, Pennsylvania. An explanation of selected parameter code abbreviations may be found on pages 341-342. The location of these sites may be found on figure 8, page 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
AUG 1994 25...	1130	01638740	MUMMASBURG RUN	NEAR	GETTYSBURG, PA	(LAT 39 51 49N LONG 077 17 23W)						
AUG 1994 25...	1345	01638895	WHITES RUN	NEAR	TWO TAVERNS, PA	(LAT 39 48 07N LONG 077 10 44W)						
AUG 1994 25...	1510	01638920	LITTLES RN NR	GETTYSBURG, PA	(LAT 39 46 53N LONG 077 11 44W)							
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 (00932) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LITY LAB TOT IT FIELD (MG/L AS CACO3) (90410)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
AUG 1994 25...	42	01638740	MUMMASBURG RUN	NEAR	GETTYSBURG, PA	(LAT 39 51 49N LONG 077 17 23W)						
AUG 1994 25...	40	01638895	WHITES RUN	NEAR	TWO TAVERNS, PA	(LAT 39 48 07N LONG 077 10 44W)						
AUG 1994 25...	24	01638920	LITTLES RUN	NEAR	GETTYSBURG, PA	(LAT 39 46 53N LONG 077 11 44W)						
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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
AUG 1994 25...	0.10	01638740	MUMMASBURG RUN	NEAR	GETTYSBURG, PA	(LAT 39 51 49N LONG 077 17 23W)						
AUG 1994 25...	0.10	01638895	WHITES RUN	NEAR	TWO TAVERNS, PA	(LAT 39 48 07N LONG 077 10 44W)						
AUG 1994 25...		01638920	LITTLES RUN	NEAR	GETTYSBURG, PA	(LAT 39 46 53N LONG 077 11 44W)						

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

POTOMAC RIVER BASIN NAWQA PROJECT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	ALA- CHLOR, WATER, DISS, REC, (MG/L) (46342)	ALPHA BHC DIS- SOLVED (MG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (MG/L) (39632)
	01638740 MUMMASBURG RUN NEAR GETTYSBURG, PA (LAT 39 51 49N LONG 077 17 23W)										
AUG 1994 25...	0.030	--	<0.20	--	0.060	0.050	80	23	<0.01	<0.01	<0.02
	01638895 WHITES RUN NEAR TWO TAVERNS, PA (LAT 39 48 07N LONG 077 10 44W)										
AUG 1994 25...	0.030	0.47	0.50	2.3	0.410	0.370	54	34	<0.01	<0.01	2.4
	01638920 LITTLES RUN NEAR GETTYSBURG, PA (LAT 39 46 53N LONG 077 11 44W)										
AUG 1994 25...	0.020	0.28	0.30	1.2	0.070	0.060	44	18	<0.01	<0.01	0.25
DATE	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µG/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µG/L) (04040)	DI- AZINON, DIS- SOLVED (µG/L) (39572)	DI- ELDRIN DIS- SOLVED (µG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µG/L) (82660)
	01638740 MUMMASBURG RUN NEAR GETTYSBURG, PA (LAT 39 51 49N LONG 077 17 23W)										
AUG 1994 25...	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00	<0.00	<0.01	<0.01	<0.01
	01638895 WHITES RUN NEAR TWO TAVERNS, PA (LAT 39 48 07N LONG 077 10 44W)										
AUG 1994 25...	<0.01	<0.01	<0.05	<0.01	<0.01	0.48	<0.00	0.08	<0.01	<0.01	<0.01
	01638920 LITTLES RUN NEAR GETTYSBURG, PA (LAT 39 46 53N LONG 077 11 44W)										
AUG 1994 25...	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00	0.10	<0.01	<0.01	<0.01
DATE	DIMETH- OATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82662)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µG/L) (82677)	EPIC WATER FLTRD 0.7 µ GF, REC (µG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µG/L) (82672)	FONOFOS WATER DISS REC (µG/L) (04095)	LINDANE DIS- SOLVED (µG/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µG/L) (82666)	MALA- THION, DIS- SOLVED (µG/L) (39532)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µG/L) (82667)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µG/L) (82686)
	01638740 MUMMASBURG RUN NEAR GETTYSBURG, PA (LAT 39 51 49N LONG 077 17 23W)										
AUG 1994 25...	<0.02	<0.06	<0.00	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.03	<0.05
	01638895 WHITES RUN NEAR TWO TAVERNS, PA (LAT 39 48 07N LONG 077 10 44W)										
AUG 1994 25...	<0.02	<0.06	<0.00	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.03	<0.05
	01638920 LITTLES RUN NEAR GETTYSBURG, PA (LAT 39 46 53N LONG 077 11 44W)										
AUG 1994 25...	<0.02	<0.06	<0.00	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.03	<0.05

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

POTOMAC RIVER BASIN NAWQA PROJECT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	METRI- BUZIN WATER DISSOLV (μ G/L) (82630)	MOL- INATE WATER FLTRD 0.7 μ (μ G/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 μ (μ G/L) (82684)	P, P' DDE DISSOLV (μ G/L) (34653)	PARA- THION, DIS- SOLVED (μ G/L) (39542)	PEB- ULATE WATER FILTRD 0.7 μ (μ G/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 μ (μ G/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 μ (μ G/L) (82687)	PHORATE WATER FLTRD 0.7 μ (μ G/L) (82664)	PRO- METON, WATER, DISS, REC (μ G/L) (04037)
	01638740	MUMMASBURG RUN NEAR GETTYSBURG, PA	(LAT 39 51 49N LONG 077 17 23W)								
AUG 1994 25...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01
	01638895	WHITES RUN NEAR TWO TAVERNS, PA	(LAT 39 48 07N LONG 077 10 44W)								
AUG 1994 25...	5.9	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	0.07
	01638920	LITTLES RUN NEAR GETTYSBURG, PA	(LAT 39 46 53N LONG 077 11 44W)								
AUG 1994 25...	0.14	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	0.01
DATE	PRON- AMIDE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82676)	PROP- CHLOR, WATER, DISS, REC (μ G/L) (04024)	PRO- PANIL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82685)	SI- MAZINE, WATER, DISS, REC (μ G/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC (μ G/L) (82670)	TER- BACIL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82665)	TER- BUFOS WATER FLTRD 0.7 μ GF, REC (μ G/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 μ GF, REC (μ G/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 μ GF, REC (μ G/L) (82661)
	01638740	MUMMASBURG RUN NEAR GETTYSBURG, PA	(LAT 39 51 49N LONG 077 17 23W)								
AUG 1994 25...	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.03	<0.01	<0.01	<0.01	<0.01
	01638895	WHITES RUN NEAR TWO TAVERNS, PA	(LAT 39 48 07N LONG 077 10 44W)								
AUG 1994 25...	<0.01	<0.02	<0.02	<0.01	0.03	<0.02	<0.03	<0.01	<0.01	<0.01	<0.01
	01638920	LITTLES RUN NEAR GETTYSBURG, PA	(LAT 39 46 53N LONG 077 11 44W)								
AUG 1994 25...	<0.01	<0.02	<0.02	<0.01	0.10	<0.02	<0.03	<0.01	<0.01	<0.01	<0.01

WATER RESOURCES DATA - PENNSYLVANIA, 1994

SPECIAL NOTES, REMARK CODES, AND SELECTED CONSTITUENT DEFINITIONS

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

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

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

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

where:

MBASCOR = corrected MBAS concentration, in mg/L;

M = reported MBAS concentration, in mg/L;

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

C = dissolved chloride concentration, in mg/L.

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

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

PRINTED OUTPUTREMARK

E,e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
ND	Material specifically analyzed for but not detected

EXPLANATION OF CODES USED TO DEFINE SAMPLE COLLECTION PROCEDURES (partial listing)(71999) SAMPLE PURPOSE CODES:

10--Routine
15--NAWQA
20--NASQAN
30--Benchmark

(84164) SAMPLER TYPE: (partial list)

3035--DH-76 Trace metal sampler with
teflon gasket and nozzle
3045--DH-81 with Teflon cap and
nozzle
8010--Other (other than a defined
sampler type)

(82398) SAMPLE METHOD CODES:

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

WATER RESOURCES DATA - PENNSYLVANIA, 1994

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

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

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

(00027) AGENCY COLLECTING SAMPLE CODES:

1028--U.S. Geological Survey
42011--Susquehanna River Basin Commission

(00028) AGENCY ANALYZING SAMPLE CODES:

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

GROUND-WATER-LEVEL AND GROUND-WATER-QUALITY STATION RECORDS

ADAMS COUNTY

395846077040601. Local number, AD 146.

LOCATION.--Lat 39°58'46", long 77°04'06", Hydrologic Unit 02050306, at State Game Land No. 249, and near York Springs.

Owner: U.S. Geological Survey.

AQUIFER.--Gettysburg Formation, Late Triassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 100 ft, cased to 17 ft, open hole.

INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Satellite telemetry at station.

DATUM.--Elevation of land surface is 540 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Water-quality records for 1973-75 are available in files of the District Office.

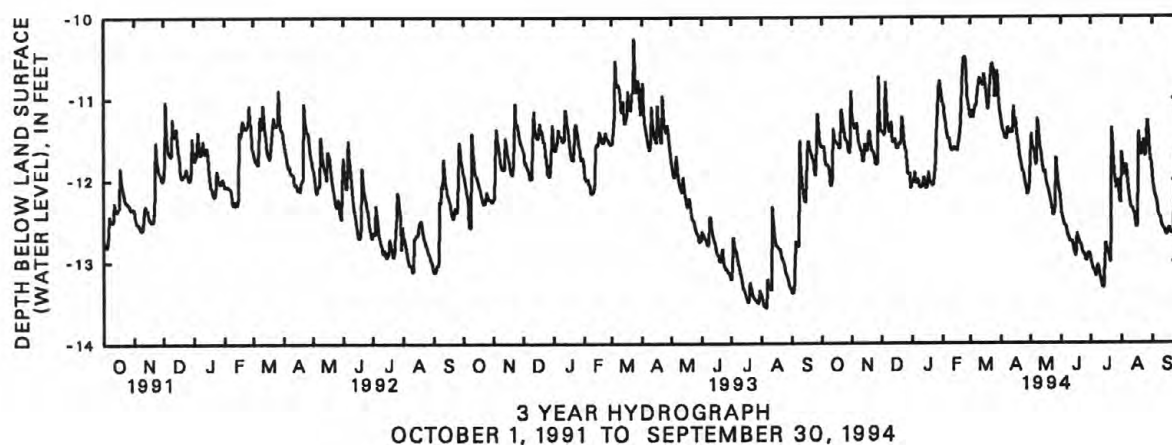
PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.87 ft below land-surface datum, June 21, 1972; lowest, 14.02 ft below land-surface datum, July 16-18, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.59	11.18	11.40	12.02	11.06	11.22	11.22	11.70	12.30	12.97	11.66	11.96
2	11.60	11.29	11.41	12.00	11.06	11.23	11.31	11.43	12.42	13.03	11.77	12.07
3	11.58	11.34	11.43	12.03	11.21	11.14	11.38	11.58	12.47	13.08	11.87	12.15
4	11.63	11.37	11.45	11.90	11.27	11.23	11.41	11.61	12.53	13.11	11.94	12.20
5	11.79	11.36	10.79	12.04	11.40	11.16	11.47	11.64	12.56	13.12	11.81	12.24
6	11.82	11.30	11.05	12.01	11.46	11.09	11.49	11.77	12.56	13.18	11.84	12.31
7	11.81	11.46	11.26	11.98	11.50	11.09	11.49	11.82	12.61	13.09	11.99	12.41
8	11.83	11.54	11.36	12.01	11.48	10.96	11.35	11.24	12.68	13.04	12.11	12.44
9	11.88	11.59	11.41	12.08	11.59	10.86	11.40	11.34	12.69	13.09	12.21	12.46
10	12.03	11.63	11.38	12.09	11.63	10.75	11.43	11.51	12.75	13.17	12.31	12.53
11	12.07	11.66	11.28	12.08	11.63	10.75	11.38	11.62	12.75	13.22	12.35	12.57
12	12.00	11.77	11.53	12.08	11.62	10.79	11.42	11.67	12.74	13.28	12.34	12.59
13	11.37	11.76	11.53	11.96	11.59	10.82	11.40	11.80	12.78	13.32	12.39	12.60
14	11.46	11.55	11.53	11.98	11.63	10.84	11.09	11.88	12.86	13.31	12.41	12.65
15	11.53	11.62	11.49	12.08	11.60	10.70	11.24	11.92	12.91	12.98	12.53	12.67
16	11.53	11.64	11.60	12.10	11.64	10.78	11.24	11.88	12.93	12.77	12.58	12.63
17	11.55	11.62	11.61	12.05	11.55	10.90	11.38	12.00	12.65	12.84	12.54	12.60
18	11.56	11.40	11.60	11.90	11.47	11.03	11.49	12.05	12.70	12.86	11.41	12.58
19	11.61	11.41	11.54	11.99	11.37	11.13	11.56	12.10	12.73	12.91	11.52	12.64
20	11.60	11.54	11.56	12.04	11.09	11.03	11.68	12.15	12.78	12.97	11.65	12.65
21	11.13	11.62	11.51	12.04	10.73	10.80	11.75	12.21	12.78	13.01	11.70	12.65
22	11.19	11.65	11.22	12.06	10.50	10.63	11.82	12.27	12.85	11.36	11.61	12.66
23	11.32	11.66	11.36	12.05	10.50	10.57	11.89	12.34	12.90	11.52	11.50	12.21
24	11.39	11.72	11.52	11.93	10.50	10.62	11.90	12.43	12.90	11.78	11.66	12.06
25	11.49	11.80	11.60	11.78	10.66	10.66	11.98	12.41	12.93	11.94	11.71	12.10
26	11.51	11.81	11.64	11.41	10.98	10.98	12.05	12.34	12.99	12.01	11.44	12.12
27	11.52	11.79	11.78	11.16	11.04	10.90	12.08	11.72	12.97	12.11	11.27	11.71
28	11.61	10.73	11.92	10.86	11.13	10.66	12.18	11.88	12.90	11.99	11.40	11.70
29	11.66	11.21	11.92	10.78	---	10.75	12.14	12.01	12.90	12.09	11.61	11.87
30	11.67	11.39	11.91	10.88	---	11.02	12.05	12.11	12.90	12.23	11.76	11.97
31	10.90	---	12.10	10.96	---	11.14	---	12.16	---	12.28	11.79	---
MEAN	11.59	11.51	11.51	11.82	11.25	10.91	11.59	11.89	12.75	12.70	11.89	12.33
MAX	12.07	11.81	12.10	12.10	11.64	11.23	12.18	12.43	12.99	13.32	12.58	12.67
MIN	10.90	10.73	10.79	10.78	10.50	10.57	11.09	11.24	12.30	11.36	11.27	11.70

WTR YR 1994: HIGHEST 10.50, FEBRUARY 22-24; LOWEST 13.32, JULY 13.



BEDFORD COUNTY

400217078281901. Local number, BD 150.

LOCATION.--Lat 40°02'17", long 78°28'19", Hydrologic Unit 02050303, at Bedford.

Owner: U.S. Geological Survey.

AQUIFER.--Onondaga Formation, Middle Devonian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 150 ft, cased to 47 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 1,160 ft above sea level, from topographic map. Measuring point: Top of casing, 3.1 ft above land-surface datum.

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

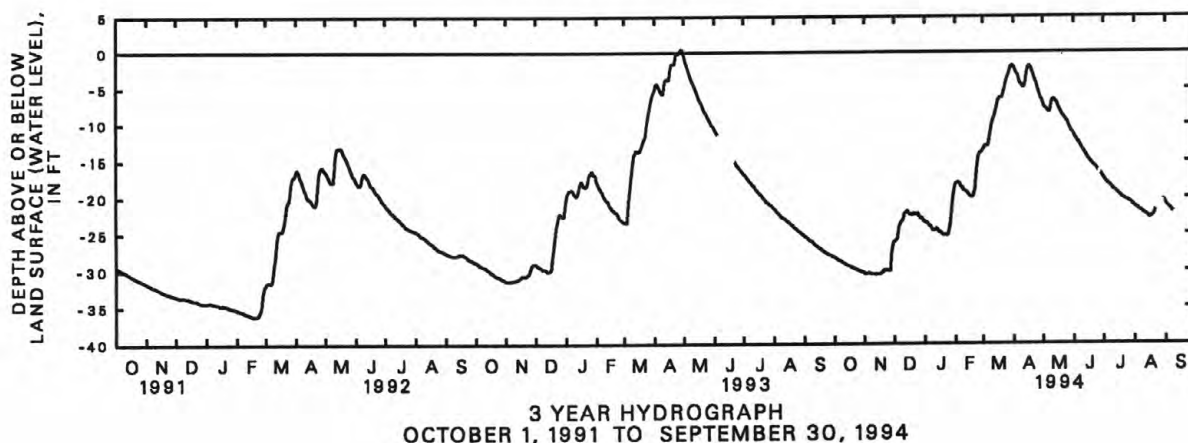
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.02 ft above land-surface datum, July 28, 1989; lowest, 41.42 ft below land-surface datum, Feb. 12, 13, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.18	30.44	26.13	23.24	18.24	13.52	2.08	7.17	11.46	17.40	21.21	20.83
2	28.26	30.47	25.94	23.43	18.11	13.40	2.28	7.54	11.78	17.60	21.32	21.07
3	28.36	30.43	25.84	23.49	17.98	12.98	2.60	7.79	12.02	17.78	21.45	21.26
4	28.41	30.39	25.70	23.51	18.01	13.02	2.97	7.90	12.22	17.98	21.49	21.40
5	28.59	30.33	24.73	23.85	18.01	13.07	3.19	8.05	12.41	18.11	21.67	21.48
6	28.63	30.35	23.96	23.87	18.24	12.97	3.45	8.29	12.52	18.20	21.81	21.59
7	28.68	30.43	23.65	23.88	18.56	12.50	4.11	8.38	12.75	18.34	21.86	21.82
8	28.69	30.47	23.36	24.21	18.56	11.61	4.42	8.24	13.09	18.49	21.93	21.96
9	28.78	30.45	23.24	24.51	18.86	10.84	4.53	7.47	13.33	18.64	22.05	---
10	28.97	30.44	23.00	24.56	19.11	9.99	4.78	6.80	13.56	18.79	22.17	---
11	29.00	30.45	22.38	24.51	19.13	9.49	4.91	6.67	13.74	18.93	22.25	---
12	29.02	30.52	22.13	24.41	19.21	9.22	4.84	6.54	13.97	19.04	22.35	---
13	29.17	30.51	22.05	24.26	19.32	8.78	4.34	6.78	14.16	19.17	22.44	---
14	29.25	30.49	21.88	24.33	19.54	8.22	3.15	6.94	14.43	19.27	22.50	---
15	29.33	30.49	21.98	24.70	19.66	7.56	2.46	7.07	14.68	19.41	22.67	---
16	29.36	30.49	22.28	24.81	19.90	6.90	2.08	7.44	14.82	19.58	22.82	---
17	29.40	30.41	22.31	24.70	19.93	6.62	1.97	7.84	15.02	19.69	22.87	---
18	29.53	30.34	22.32	24.90	19.93	6.40	2.12	8.12	15.12	19.79	22.59	---
19	29.59	30.21	22.38	25.03	19.87	6.36	2.26	8.40	15.32	19.96	22.56	---
20	29.62	29.97	22.37	25.17	19.51	6.37	2.74	8.64	15.47	20.08	22.35	---
21	29.72	29.99	22.22	25.17	18.76	6.21	3.15	8.92	15.59	20.15	22.07	---
22	29.77	29.97	22.24	25.18	17.24	5.54	3.57	9.04	15.79	20.20	21.76	---
23	29.84	29.96	22.35	25.18	15.90	5.04	3.96	9.26	15.89	20.32	---	---
24	29.88	29.94	22.35	25.22	14.68	4.46	4.33	9.44	16.00	20.37	---	---
25	29.98	30.06	22.15	24.98	14.30	3.76	4.73	9.61	16.26	20.43	---	---
26	30.03	30.07	22.50	24.31	13.92	3.46	5.20	9.80	---	20.50	---	---
27	30.05	30.07	22.74	23.44	13.91	3.15	5.69	10.26	---	20.60	---	24.33
28	30.13	27.92	22.82	22.15	13.78	2.54	6.21	10.56	16.82	20.69	---	24.37
29	30.19	26.93	22.80	20.69	---	2.17	6.56	10.85	16.93	20.83	---	24.54
30	30.21	26.20	23.05	19.61	---	1.98	6.73	11.10	17.20	21.00	20.32	24.68
31	30.23	---	23.23	18.82	---	1.96	---	11.21	---	21.11	20.52	---
MEAN	29.32	29.97	23.10	23.87	17.93	7.74	3.85	8.46	14.37	19.43	21.96	22.44
MAX	30.23	30.52	26.13	25.22	19.93	13.52	6.73	11.21	17.20	21.11	22.87	24.68
MIN	28.18	26.20	21.88	18.82	13.78	1.96	1.97	6.54	11.46	17.40	20.32	20.83

WTR YR 1994: HIGHEST 1.96, MARCH 31; LOWEST 30.52, NOVEMBER 12.

Gap indicates missing record.



BLAIR COUNTY

402452078271301. Local number, RA 74.

LOCATION.--Lat 40°24'52", long 78°27'13", Hydrologic Unit 02050302, at Allegheny Portage Railroad National Historic Site, and southwest of Duncansville.

Owner: U.S. Geological Survey.

AQUIFER.--Brallier Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 150 ft, cased to 14 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 1,130 ft above sea level, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.

PERIOD OF RECORD.--August 1969 to current year.

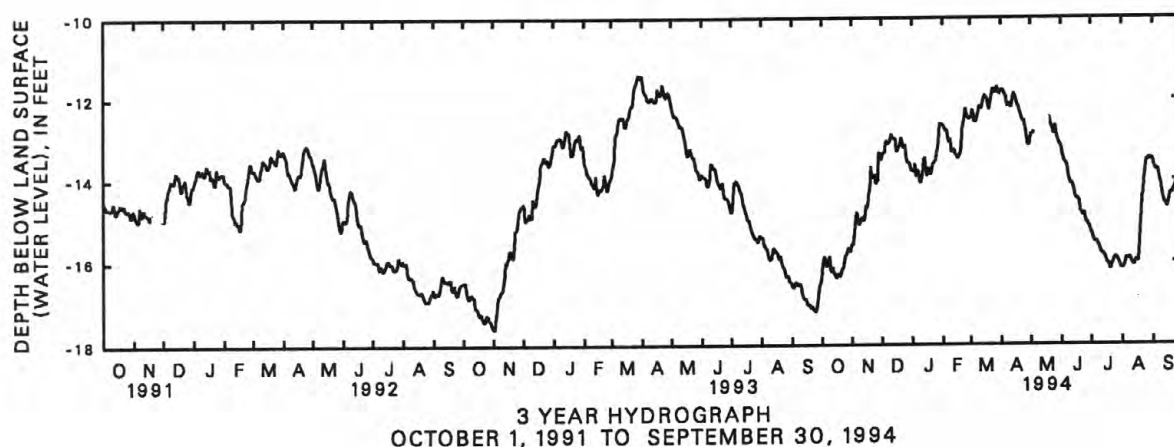
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.65 ft below land-surface datum, May 11, 1989; lowest, 18.65 ft below land-surface datum, Oct. 29, 30, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.33	15.57	13.48	13.79	12.66	12.48	11.80	12.88	13.19	15.30	16.15	13.53
2	16.05	15.58	13.38	13.79	12.69	12.44	11.82	12.88	13.38	15.34	16.16	13.67
3	15.92	15.37	13.33	13.81	12.76	12.28	11.80	12.88	13.47	15.44	16.10	13.73
4	15.87	15.08	13.35	13.62	12.80	12.37	11.87	12.82	13.54	15.50	16.00	13.79
5	16.04	14.86	13.09	13.91	12.77	12.57	11.91	---	13.60	15.53	15.91	13.78
6	16.11	14.80	13.05	13.91	12.88	12.58	11.95	---	13.61	15.51	15.96	13.75
7	16.05	15.01	13.13	13.76	13.06	12.54	12.14	---	13.69	15.54	15.92	13.91
8	15.95	15.09	13.10	13.88	13.08	12.43	12.19	---	13.90	15.60	15.90	14.03
9	15.86	15.07	13.09	14.06	13.01	12.36	12.12	---	13.99	15.64	15.92	14.13
10	16.18	14.98	12.98	14.07	13.31	12.18	12.15	---	14.08	15.73	16.01	14.30
11	16.25	14.92	12.89	13.95	13.32	12.23	12.22	---	14.11	15.80	16.05	14.44
12	16.13	14.99	12.99	13.77	13.28	12.25	12.14	---	14.11	15.80	16.08	14.55
13	16.25	15.00	12.98	13.51	13.26	12.18	11.96	---	14.18	15.82	16.08	14.59
14	16.29	14.87	13.00	13.47	13.39	12.04	11.88	---	14.30	15.86	15.99	14.63
15	16.33	14.63	13.00	13.74	13.40	11.96	11.93	---	14.42	15.90	15.96	14.68
16	16.38	14.68	13.30	13.92	13.47	11.92	12.00	---	14.45	15.99	16.01	14.60
17	16.29	14.59	13.30	13.81	13.47	12.01	12.11	---	14.47	16.05	15.98	14.48
18	16.29	14.30	13.24	13.71	13.39	11.98	12.20	---	14.50	16.04	15.64	14.34
19	16.34	14.21	13.17	13.87	13.36	12.16	12.20	---	14.54	16.13	15.21	14.34
20	16.33	13.69	13.10	13.87	13.20	12.27	12.33	12.46	14.79	16.20	14.86	14.36
21	16.20	13.92	12.98	13.76	12.74	12.14	12.40	12.60	14.79	16.12	14.41	14.25
22	16.17	13.95	13.07	13.64	12.62	11.98	12.49	12.68	14.84	16.05	14.35	14.24
23	16.11	13.93	13.22	13.61	12.47	11.88	12.56	12.73	14.89	15.98	13.98	14.16
24	15.97	13.88	13.22	13.54	12.25	11.76	12.53	12.87	14.80	15.92	13.77	14.08
25	15.85	14.10	13.15	13.55	12.35	11.81	12.65	12.76	14.95	15.91	13.60	14.04
26	15.83	14.04	13.39	13.33	12.43	11.87	12.78	12.67	15.06	15.89	13.49	13.93
27	15.74	14.02	13.57	13.26	12.51	11.79	12.96	12.88	15.04	15.95	13.52	13.94
28	15.66	13.35	13.59	13.00	12.50	11.72	13.13	12.97	15.13	15.98	13.53	13.99
29	15.74	13.34	13.58	12.62	---	11.81	13.16	13.05	15.12	16.05	13.47	14.10
30	15.75	13.52	13.65	12.66	---	11.90	13.11	13.12	15.23	16.11	13.53	14.22
31	15.62	---	13.76	12.64	---	11.84	---	13.15	---	16.17	13.49	---
MEAN	16.06	14.51	13.23	13.61	12.94	12.12	12.28	12.84	14.34	15.83	15.13	14.15
MAX	16.38	15.58	13.76	14.07	13.47	12.58	13.16	13.15	15.23	16.20	16.16	14.68
MIN	15.62	13.34	12.89	12.62	12.25	11.72	11.80	12.46	13.19	15.30	13.47	13.53

WTR YR 1994: HIGHEST 11.72, MARCH 28; LOWEST 16.38, OCTOBER 16.

Gap indicates missing record.



BRADFORD COUNTY

414330076280501. Local number, BR 92.

LOCATION.--Lat 41°43'30", long 76°28'05", Hydrologic Unit 02050106, at Monroeton.

Owner: U.S. Geological Survey.

AQUIFER.--Lock Haven Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 117 ft, cased to 55 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 750 ft above sea level, from topographic map. Measuring point: Top of casing, 3.0 ft above land-surface datum.

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

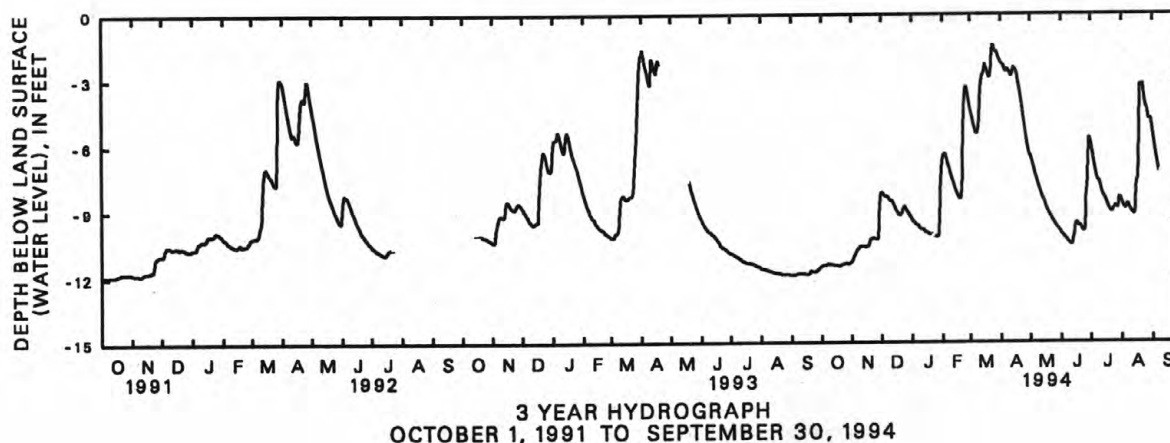
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.33 ft below land-surface datum, Apr. 6, 1984; lowest, 11.99 ft below land-surface datum, Sept. 20, 24, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.50	11.27	8.12	9.35	6.62	4.31	2.23	6.44	9.99	5.87	8.57	5.37
2	11.47	11.18	8.13	9.45	6.44	4.47	2.27	6.58	10.05	6.13	8.69	5.71
3	11.45	11.04	8.23	9.47	6.36	4.66	2.32	6.75	10.09	6.43	8.81	6.00
4	11.44	10.97	8.28	9.52	6.39	4.87	2.39	6.93	10.15	6.72	8.86	6.33
5	11.43	10.85	8.31	9.59	6.54	5.11	2.52	7.10	10.22	7.01	8.86	6.59
6	11.43	10.78	8.30	9.60	6.70	5.31	2.63	7.33	10.26	7.25	8.70	6.86
7	11.40	10.71	8.33	9.63	6.91	5.45	2.51	7.46	10.32	7.46	8.66	7.09
8	11.37	10.67	8.36	9.66	7.00	5.45	2.50	7.64	10.39	7.59	8.76	---
9	11.39	10.60	8.45	9.79	7.24	5.25	2.63	7.77	10.43	7.59	8.88	---
10	11.41	10.57	8.49	9.79	7.39	4.90	2.64	7.94	10.48	7.74	8.97	---
11	11.41	10.57	8.51	9.81	7.54	3.73	2.80	8.04	10.51	7.92	9.06	---
12	11.39	10.59	8.52	9.81	7.64	3.10	2.83	8.22	10.49	8.10	9.10	---
13	11.43	10.58	8.64	9.83	7.79	2.84	2.63	8.35	10.25	8.25	9.13	---
14	11.43	10.58	8.71	9.88	7.96	2.76	2.42	8.47	10.08	8.34	9.05	---
15	11.43	10.61	8.81	9.95	8.08	2.62	2.53	8.50	9.63	8.40	7.92	---
16	11.43	10.61	8.95	9.97	8.21	2.28	2.55	8.69	9.52	8.50	7.56	---
17	11.44	10.56	9.01	9.97	8.30	2.43	2.67	8.82	9.52	8.62	7.55	---
18	11.46	10.54	9.07	10.02	8.39	2.57	2.87	8.93	9.58	8.74	5.88	---
19	11.46	10.36	9.16	10.04	8.43	2.72	3.18	9.03	9.68	8.87	3.28	---
20	11.47	10.25	9.18	10.04	8.32	2.86	3.40	9.12	9.64	8.92	3.20	9.33
21	11.42	10.26	9.14	10.04	7.62	2.87	3.69	9.21	9.71	9.00	3.31	9.43
22	11.42	10.22	9.06	---	5.09	2.60	4.01	9.27	9.81	9.04	3.19	9.47
23	11.39	10.21	8.86	---	3.96	1.75	4.32	9.37	9.90	8.94	3.55	9.47
24	11.38	10.23	8.80	10.14	3.40	1.42	4.66	9.44	9.92	8.85	3.93	9.49
25	11.37	10.25	8.78	10.14	3.30	1.51	5.00	9.52	9.74	8.78	4.20	9.54
26	11.36	10.25	8.90	10.16	3.50	1.71	5.31	9.60	8.14	8.75	4.22	9.55
27	11.35	10.26	8.98	10.15	3.74	1.72	5.63	9.67	7.88	8.83	4.52	8.79
28	11.37	10.20	9.04	10.09	4.03	1.76	5.92	9.73	6.79	8.83	4.80	7.74
29	11.37	8.79	9.10	9.40	---	1.87	6.16	9.78	5.63	8.39	4.79	7.62
30	11.36	8.27	9.21	7.80	---	2.02	6.37	9.85	5.70	8.35	4.74	7.72
31	11.32	---	9.25	7.02	---	2.10	---	9.91	---	8.45	5.03	---
MEAN	11.41	10.43	8.73	9.66	6.53	3.19	3.45	8.50	9.48	8.09	6.64	7.89
MAX	11.50	11.27	9.25	10.16	8.43	5.45	6.37	9.91	10.51	9.04	9.13	9.55
MIN	11.32	8.27	8.12	7.02	3.30	1.42	2.23	6.44	5.63	5.87	3.19	5.37

WTR YR 1994: HIGHEST 1.42, MARCH 24; LOWEST 11.50, OCTOBER 1.

Gap indicates missing record.



CAMERON COUNTY

412732078034201. Local number, CM 13.

LOCATION.--Lat 41°27'32", long 78°03'42", Hydrologic Unit 02050202, at Sinnemahoning State Park.

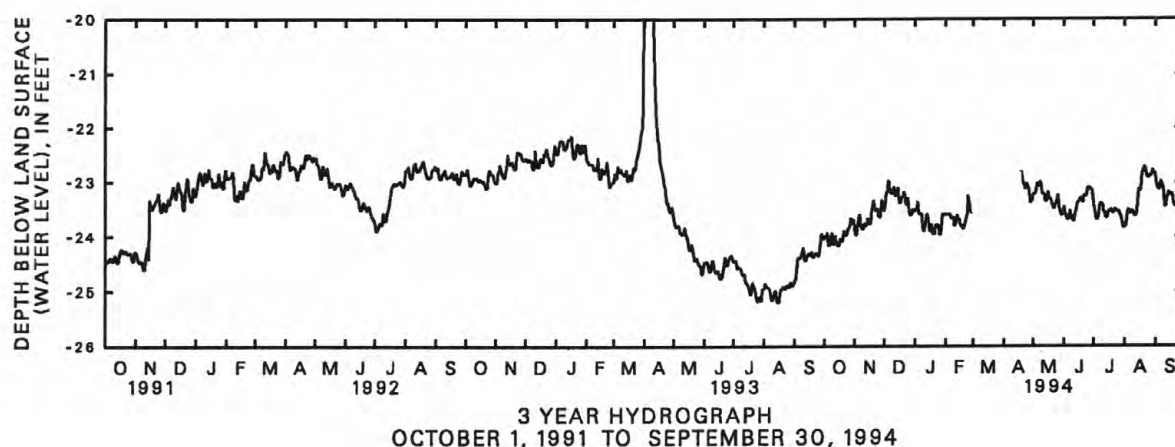
Owner: U.S. Geological Survey.

AQUIFER.--Catskill Formation, Late Devonian age.**WELL CHARACTERISTICS.**--Drilled observation well, diameter 6 in., depth 102 ft, cased to 57 ft, open hole.**INSTRUMENTATION.**--Digital recorder with 60-minute recording interval. Satellite telemetry at station.**DATUM.**--Elevation of land surface is 1,010 ft above sea level, from topographic map. Measuring point: Top of casing, 3.0 ft above land-surface datum.**REMARKS.**--Water levels reported Apr. 1-8, 1993 affected by surface-water impounded by George B. Stevenson Dam. Wellhead submerged April 3.**PERIOD OF RECORD.**--October 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 3.21 ft above land-surface datum, Apr. 3, 1993 (see Remarks); lowest, 25.98 ft below land-surface datum, Sept. 10, 1972.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.03	23.89	23.51	23.54	23.60		---	23.21	23.45	23.44	23.81	22.90
2	23.98	23.98	23.41	23.49	23.60		---	23.22	23.57	23.52	23.80	23.04
3	24.02	23.91	23.19	23.50	23.60		---	23.21	23.62	23.65	23.63	23.10
4	23.92	23.76	23.18	23.36	23.60		---	23.14	23.67	23.69	23.52	23.13
5	24.13	23.64	22.98	23.57	23.60		---	23.02	23.69	23.64	23.50	23.13
6	24.17	23.59	23.00	23.58	23.60		---	23.06	23.65	23.58	23.57	22.98
7	24.08	23.79	23.18	23.58	23.67		---	23.08	23.52	23.39	23.56	23.03
8	23.97	23.86	23.20	23.59	23.67		---	22.99	23.62	23.41	23.53	23.06
9	23.93	23.86	23.20	23.83	23.64		---	23.05	23.67	23.40	23.54	23.17
10	24.14	23.83	23.14	23.90	23.80		---	23.20	23.71	23.43	23.60	23.44
11	24.14	23.75	23.08	23.83	23.78		---	23.23	23.70	23.57	23.62	23.45
12	23.98	23.79	23.24	23.71	23.70		---	23.21	23.57	23.55	23.61	23.30
13	24.12	23.79	23.26	23.59	23.60		---	23.33	23.51	23.66	23.54	23.25
14	24.13	23.66	23.21	23.59	23.69		---	23.36	23.40	23.64	23.32	23.18
15	24.17	23.71	23.09	23.72	23.67		---	23.30	23.37	23.59	23.12	23.23
16	24.14	23.77	23.33	23.91	23.79		---	23.18	23.36	23.52	23.16	23.24
17	24.03	23.74	23.38	23.83	23.79		---	23.30	23.31	23.54	23.14	23.21
18	24.06	23.52	23.34	23.77	23.82		---	23.31	23.29	23.50	22.89	23.26
19	24.08	23.44	23.26	23.93	23.86		22.82	23.33	23.30	23.52	22.80	23.39
20	24.00	23.33	23.28	23.95	23.80		22.96	23.40	23.37	23.57	22.77	23.43
21	23.89	23.46	23.18	23.95	23.74		23.01	23.45	23.25	23.55	22.72	23.44
22	23.94	23.52	23.24	23.78	23.65		23.07	23.49	23.24	23.49	22.77	23.40
23	23.98	23.53	23.40	23.78	23.60		23.13	23.39	23.27	23.51	22.89	23.36
24	23.93	23.48	23.40	23.78	23.25		23.03	23.40	23.18	23.53	22.92	23.37
25	23.85	23.62	23.29	23.80	23.37		23.05	23.29	23.09	23.53	22.91	23.37
26	23.85	23.64	23.48	23.96	23.48		23.11	23.24	23.15	23.53	22.88	23.32
27	23.78	23.64	23.60	23.96	23.56		23.18	23.46	23.10	23.59	22.89	23.31
28	23.66	23.34	23.61	23.80	---		23.37	23.52	23.14	23.62	22.86	23.31
29	23.75	23.33	23.58	23.59	---		23.36	23.58	23.13	23.70	22.78	23.39
30	23.77	23.52	23.50	23.59	---		23.32	23.61	23.27	23.79	22.85	23.47
31	23.68	---	23.54	23.60	---		---	23.57	---	23.84	22.82	---
MEAN	23.98	23.66	23.30	23.72	23.65		23.12	23.29	23.41	23.56	23.20	23.26
MAX	24.17	23.98	23.61	23.96	23.86		23.37	23.61	23.71	23.84	23.81	23.47
MIN	23.66	23.33	22.98	23.36	23.25		22.82	22.99	23.09	23.39	22.72	22.90

WTR YR 1994: HIGHEST 22.72, AUGUST 21; LOWEST 24.17, OCTOBER 6, 15.

Gap indicates missing record.



CENTRE COUNTY

404518077575501. Local number, CE 118.

LOCATION.--Lat 40°45'18", long 77°57'55", Hydrologic Unit 02050302, at State Game Land No. 176, and near Fairbrook.

Owner: U.S. Geological Survey.

AQUIFER.--Gatesburg Formation, Late Cambrian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 130 ft, cased to 40 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 1,150 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

PERIOD OF RECORD.--January 1968 to June 1981, July 1984 to current year.

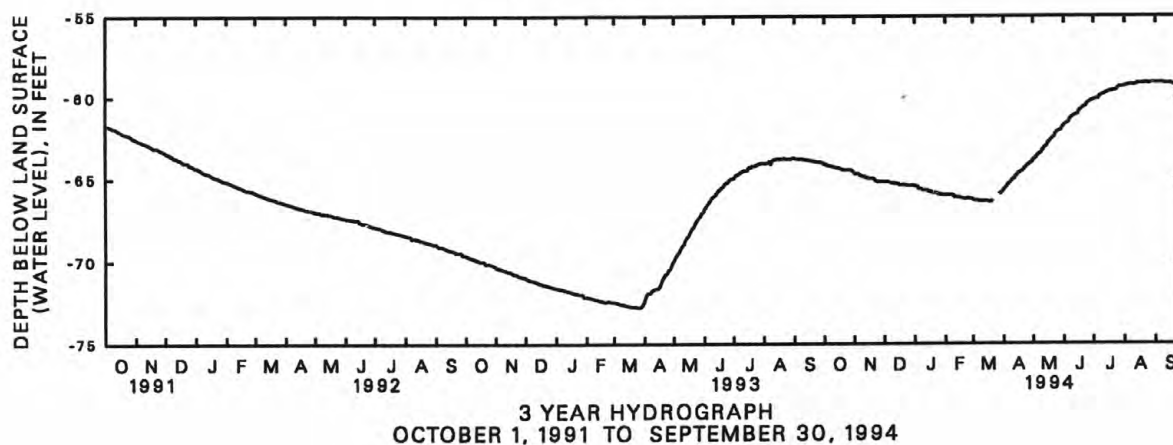
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 51.91 ft below land-surface datum, Sept. 8, 12, 16, 1978; lowest, 80.14 ft below land-surface datum, Mar. 26, 1970.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.15	64.67	65.17	65.42	65.94	66.26	65.68	63.84	61.73	60.15	59.31	59.10
2	64.15	64.70	65.17	65.43	65.94	66.29	65.63	63.83	61.69	60.12	59.30	59.10
3	64.15	64.70	65.17	65.43	65.95	66.30	65.54	63.79	61.65	60.11	59.27	59.11
4	64.16	64.70	65.16	65.43	65.95	66.30	65.52	63.72	61.59	60.09	59.27	59.11
5	64.21	64.70	65.16	65.59	65.95	66.30	65.35	63.64	61.56	60.08	59.23	59.11
6	64.23	64.75	65.18	65.59	65.95	66.30	65.31	63.55	61.55	60.08	59.23	59.11
7	64.22	64.80	65.24	65.59	65.96	66.34	65.27	63.52	61.33	59.90	59.23	59.11
8	64.22	64.84	65.24	65.62	65.96	66.36	65.20	63.49	61.29	59.90	59.23	59.11
9	64.23	64.85	65.25	65.67	65.96	66.36	65.16	63.49	61.23	59.86	59.22	59.11
10	64.27	64.86	65.25	65.68	66.10	66.36	65.03	63.32	61.20	59.83	59.21	59.13
11	64.28	64.87	65.25	65.68	66.10	66.36	65.03	63.26	61.15	59.81	59.21	59.15
12	64.28	64.91	65.28	65.69	66.09	66.36	65.02	63.12	61.10	59.78	59.20	59.16
13	64.32	64.92	65.28	65.68	66.10	66.36	64.84	63.09	61.08	59.74	59.18	59.15
14	64.34	64.92	65.28	65.68	66.11	66.36	64.82	63.04	61.06	59.71	59.15	59.15
15	64.36	64.96	65.28	65.75	66.12	66.36	64.76	63.01	61.06	59.68	59.14	59.16
16	64.36	64.97	65.35	65.78	66.13	66.37	64.68	62.82	60.87	59.65	59.14	59.16
17	64.36	64.97	65.37	65.77	66.16	66.37	64.65	62.77	60.81	59.63	59.14	59.16
18	64.41	64.98	65.36	65.80	66.17	66.38	64.62	62.70	60.75	59.62	59.13	59.17
19	64.43	64.98	65.37	65.82	66.18	66.38	64.54	62.64	60.70	59.61	59.13	59.21
20	64.44	64.99	65.38	65.83	66.19	66.38	64.54	62.56	60.65	59.60	59.13	59.22
21	64.45	64.99	65.34	65.84	66.19	66.31	64.52	62.51	60.59	59.59	59.12	59.23
22	64.46	65.14	65.36	65.84	66.22	---	64.34	62.50	60.57	59.59	59.12	59.23
23	64.47	65.14	65.38	---	66.15	---	64.34	62.30	60.57	59.58	59.12	59.23
24	64.47	65.15	65.39	---	66.20	---	64.28	62.24	60.38	59.58	59.13	59.24
25	64.47	65.17	65.39	65.91	66.15	---	64.18	62.14	60.34	59.40	59.12	59.24
26	64.47	65.18	65.41	65.93	66.20	---	64.16	62.12	60.33	59.38	59.13	59.24
27	64.47	65.18	65.41	65.94	66.20	---	64.11	62.08	60.24	59.34	59.12	59.26
28	64.47	65.17	65.42	65.93	66.20	65.92	64.07	62.07	60.24	59.34	59.12	59.28
29	64.49	65.17	65.41	65.94	---	65.88	64.02	62.06	60.20	59.33	---	59.30
30	64.49	65.17	65.42	65.94	---	65.83	64.01	61.87	60.16	59.33	59.10	59.32
31	64.63	---	65.42	65.94	---	65.77	---	61.84	---	59.33	59.09	---
MEAN	64.35	64.95	65.31	65.73	66.09	66.26	64.77	62.87	60.92	59.70	59.17	59.18
MAX	64.63	65.18	65.42	65.94	66.22	66.38	65.68	63.84	61.73	60.15	59.31	59.32
MIN	64.15	64.67	65.16	65.42	65.94	65.77	64.01	61.84	60.16	59.33	59.09	59.10

WTR YR 1994: HIGHEST 59.09, AUGUST 31; LOWEST 66.38, MARCH 18-20.

Gap indicates missing record.



CLINTON COUNTY

411424077462201. Local number, CN 1.

LOCATION.--Lat 41°14'24", long 77°46'22", Hydrologic Unit 02050203, at Sproul State Forest, and at State Camp.
 Owner: Commonwealth of Pennsylvania.

AQUIFER.--Huntley Mountain Formation, Early Mississippian-Late Devonian age.

WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 78 ft, cased to 38 ft, open hole.

INSTRUMENTATION.--Digital recorder with 60-minute recording interval.

DATUM.--Elevation of land surface is 2,050 ft above sea level, from topographic map. Measuring point: Top of platform, 3.2 ft above land-surface datum.

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

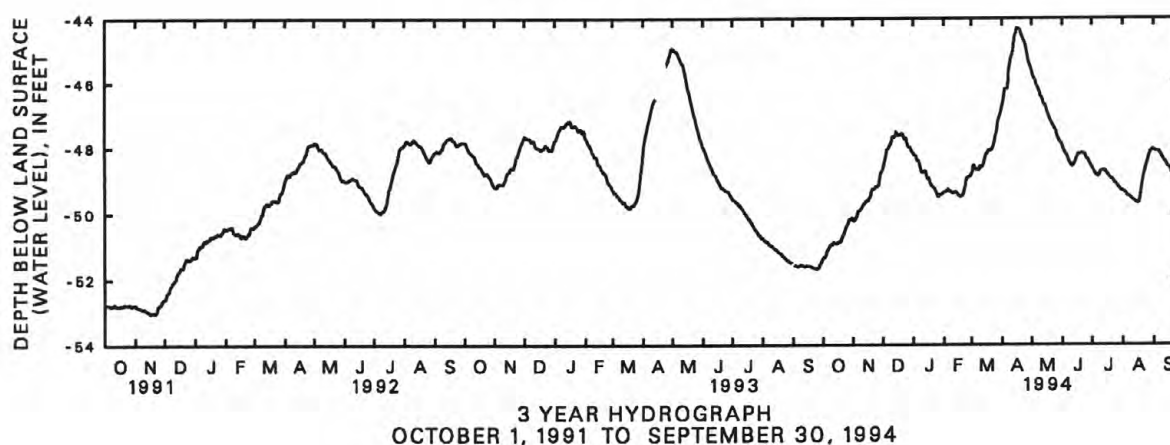
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 44.00 ft below land-surface datum, Jan. 13, 1951; lowest, 57.24 ft below land-surface datum, Dec. 21, 1964.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.37	50.20	48.67	48.13	49.35	48.80	46.71	45.61	47.91	48.59	49.31	48.05
2	51.33	50.22	48.53	48.22	49.35	48.75	46.60	45.74	48.01	48.66	49.33	48.08
3	51.31	50.16	48.38	48.25	49.33	48.55	46.38	45.83	48.08	48.72	49.36	48.09
4	51.30	50.11	48.28	48.23	49.33	48.54	46.19	45.87	48.15	48.77	49.36	48.11
5	51.14	50.02	48.08	48.39	49.26	48.64	46.17	45.93	48.20	48.80	49.44	48.10
6	51.11	49.92	48.04	48.39	49.26	48.67	46.17	46.08	48.24	48.85	49.46	48.09
7	51.04	49.90	48.00	48.40	49.35	48.64	46.17	46.10	48.32	48.87	49.47	48.17
8	50.98	49.88	47.92	48.53	49.32	48.68	45.57	46.18	48.42	48.84	49.48	48.19
9	50.91	49.85	47.88	48.68	49.34	48.67	45.43	46.27	48.47	48.76	49.53	48.26
10	50.94	49.79	47.79	48.75	49.39	48.55	45.22	46.39	48.52	48.71	49.55	48.32
11	50.93	49.73	47.65	48.76	49.36	48.60	45.15	46.43	48.57	48.70	49.58	48.37
12	50.85	49.69	47.68	48.73	49.37	48.60	45.04	46.50	48.55	48.68	49.60	48.42
13	50.90	49.67	47.68	48.70	49.32	48.51	44.76	46.61	48.47	48.69	49.62	48.44
14	50.90	49.62	47.60	48.73	49.38	48.42	44.53	46.66	48.43	48.70	49.65	48.50
15	50.91	49.61	47.49	48.89	49.39	48.30	44.47	46.67	48.34	48.73	49.66	48.56
16	50.89	49.61	47.61	48.97	49.45	48.18	44.32	46.77	48.28	48.78	49.67	48.59
17	50.84	49.54	47.63	48.91	49.45	48.17	44.31	46.90	48.20	48.81	49.66	48.61
18	50.84	49.52	47.58	49.04	49.48	48.11	44.35	46.96	48.17	48.85	49.51	48.70
19	50.85	49.38	47.58	49.11	49.48	48.06	44.34	47.05	48.17	48.90	49.33	48.76
20	50.78	49.27	47.61	49.17	49.44	48.09	44.44	47.12	48.17	48.94	49.12	48.79
21	50.67	49.27	47.54	49.18	49.38	48.07	44.52	47.21	48.15	48.94	48.94	48.82
22	50.64	49.25	47.62	49.22	49.26	48.03	44.61	47.25	48.18	48.97	48.79	48.85
23	50.54	49.22	47.72	49.22	49.15	47.98	44.68	47.32	48.19	49.02	48.69	48.86
24	50.46	49.16	47.72	49.35	48.93	47.85	44.73	47.38	48.17	49.07	48.57	48.87
25	50.36	49.20	47.68	49.37	48.93	47.70	44.84	47.43	48.29	49.08	48.45	48.87
26	50.33	49.15	47.85	49.48	48.90	47.58	45.00	47.49	48.33	49.13	48.37	48.86
27	50.25	49.12	47.95	49.49	48.88	47.43	45.17	47.63	48.36	49.16	48.25	48.87
28	50.17	48.91	47.99	49.42	48.87	47.17	45.33	47.70	48.43	49.22	48.16	48.87
29	50.16	48.76	47.97	49.41	---	47.07	45.44	47.77	48.47	49.25	48.08	48.90
30	50.17	48.72	48.06	49.42	---	46.98	45.50	47.82	48.56	49.29	48.09	48.92
31	50.10	---	48.13	49.39	---	46.88	---	47.84	---	49.31	48.03	---
MEAN	50.77	49.55	47.87	48.90	49.28	48.14	45.20	46.79	48.29	48.90	49.10	48.53
MAX	51.37	50.22	48.67	49.49	49.48	48.80	46.71	47.84	48.57	49.31	49.67	48.92
MIN	50.10	48.72	47.49	48.13	48.87	46.88	44.31	45.61	47.91	48.59	48.03	48.05

WTR YR 1994: HIGHEST 44.31, APRIL 17; LOWEST 51.37, OCTOBER 1.

Gap indicates missing record.



CUMBERLAND COUNTY

400209077183301. Local number, CU 2.

LOCATION.--Lat 40°02'09", long 77°18'33", Hydrologic Unit 02050305, at Michaux State Forest, and at Pine Grove Furnace.

Owner: Commonwealth of Pennsylvania.

AQUIFER.--Metarhyolite, Precambrian age.

WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 37 ft, cased to 19 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 955 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

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

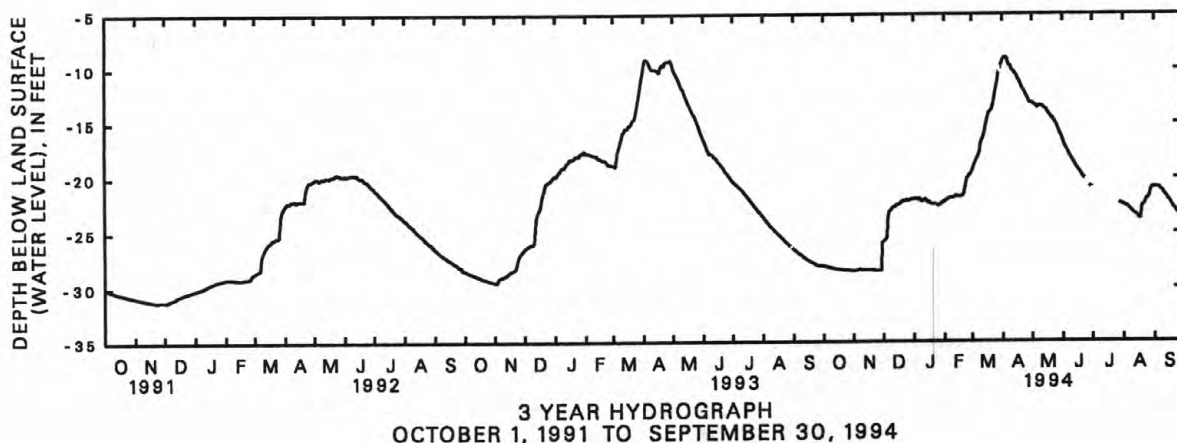
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.99 ft below land-surface datum, Apr. 3, 1994; lowest, 33.50 ft below land-surface datum, Feb. 3, 1955.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.03	28.49	25.84	21.97	22.18	19.47	9.25	13.15	16.55	---	22.47	20.87
2	28.05	28.48	25.76	21.92	22.16	19.30	9.21	13.24	16.84	---	22.52	20.89
3	28.06	28.46	25.65	21.92	22.06	18.92	8.99	13.32	17.07	---	22.56	20.88
4	28.09	28.43	25.59	21.88	22.05	18.74	9.04	13.33	17.27	---	22.61	20.92
5	28.12	28.40	25.38	22.00	21.92	18.56	9.06	13.40	17.42	---	22.68	20.93
6	28.15	28.38	23.65	21.98	21.88	18.37	9.21	13.58	17.59	---	22.79	20.96
7	28.16	28.38	23.13	21.89	21.88	18.17	9.65	13.61	17.76	---	22.87	21.07
8	28.17	28.38	23.00	22.01	21.87	17.95	9.74	13.43	17.99	---	22.95	21.16
9	28.20	28.39	22.94	22.13	21.82	17.73	9.72	13.42	18.14	---	23.04	21.25
10	28.24	28.39	22.84	22.16	21.86	16.92	10.04	13.46	18.30	---	23.13	21.39
11	28.26	28.38	22.66	22.08	21.80	16.69	10.27	13.48	18.44	---	23.21	21.52
12	28.28	28.39	22.65	22.02	21.75	16.48	10.28	13.48	18.61	---	23.31	21.63
13	28.30	28.40	22.67	21.97	21.67	16.22	10.33	13.63	18.73	---	23.37	21.73
14	28.31	28.39	22.56	22.04	21.69	15.91	10.55	13.67	18.91	---	23.44	21.87
15	28.32	28.41	22.44	22.22	21.69	15.33	10.60	13.68	19.07	---	23.51	22.02
16	28.33	28.43	22.42	22.28	21.73	14.89	10.80	13.85	19.20	---	23.66	22.13
17	28.33	---	22.42	22.17	21.73	14.56	11.04	14.02	19.34	---	23.74	22.22
18	28.34	---	22.35	22.31	21.71	14.16	11.15	14.13	19.42	---	23.75	22.41
19	28.36	---	22.24	22.35	21.69	14.05	11.34	14.27	19.62	---	22.86	22.59
20	28.38	28.44	22.24	22.38	21.63	13.90	11.58	14.41	19.73	---	22.54	22.72
21	28.39	28.42	22.11	22.38	21.47	13.79	11.78	14.54	19.85	---	22.48	22.86
22	28.41	28.44	22.13	22.37	21.00	13.50	11.97	14.61	20.02	---	22.43	22.95
23	28.42	28.44	22.12	22.37	20.55	13.16	12.07	14.77	20.06	---	22.16	23.10
24	28.41	28.45	22.11	---	20.09	12.61	12.23	14.90	---	---	22.01	23.19
25	28.42	28.45	21.98	22.44	20.04	11.99	12.44	15.05	---	---	21.94	23.28
26	28.43	28.48	22.08	22.56	19.82	11.67	12.62	15.21	---	---	21.86	23.33
27	28.43	28.48	22.09	22.56	19.77	11.11	12.81	15.46	---	---	21.67	23.09
28	28.47	28.49	22.08	22.44	19.66	10.42	13.03	15.67	20.75	22.34	21.20	22.87
29	28.49	28.48	21.98	22.34	---	---	13.12	15.91	20.85	22.36	21.05	22.90
30	28.49	25.84	21.98	22.31	---	9.79	13.17	16.14	---	22.39	20.92	22.92
31	28.50	---	21.98	22.26	---	9.57	---	16.27	---	22.44	20.88	---
MEAN	28.30	28.33	22.94	22.19	21.40	15.13	10.90	14.23	18.70	22.38	22.57	22.06
MAX	28.50	28.49	25.84	22.56	22.18	19.47	13.17	16.27	20.85	22.44	23.75	23.33
MIN	28.03	25.84	21.98	21.88	19.66	9.57	8.99	13.15	16.55	22.34	20.88	20.87

WTR YR 1994: HIGHEST 8.99, APRIL 3; LOWEST 28.50, OCTOBER 31.

Gap indicates missing record.



DAUPHIN COUNTY

402118076462201. Local number, DA 350.

LOCATION.--Lat 40°21'18", long 76°46'22", Hydrologic Unit 02050305, at R. D. 1, Linglestown.

Owner: William R. Miller.

AQUIFER.--Hamburg sequence, Early-Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused well, diameter 6 in., depth 225 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Data collection platform. Satellite telemetry at station.

DATUM.--Elevation of land surface is 450 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

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

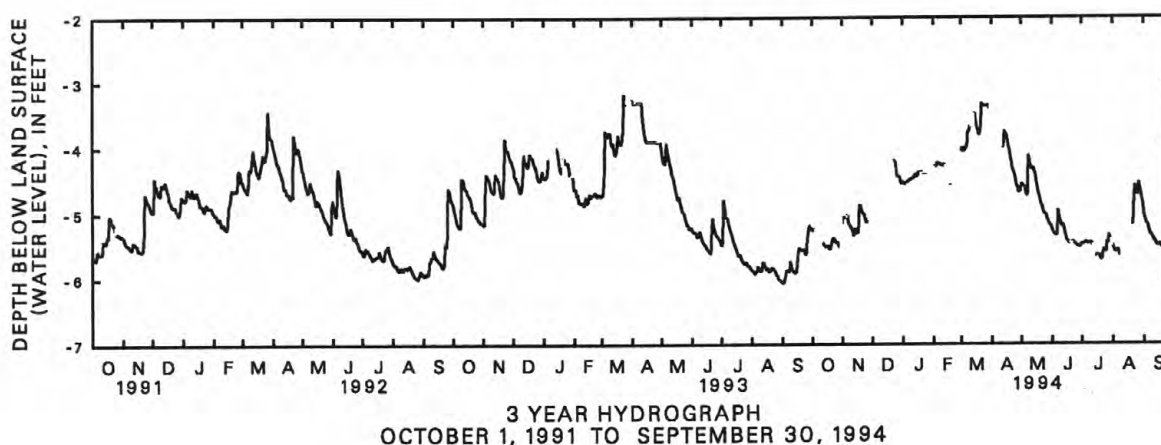
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.15 ft below land-surface datum, June 22, 1972; lowest, 6.95 ft below land-surface datum, Sept. 11, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.24	5.06	---	4.51	---	4.05	---	4.55	5.24	5.47	5.50	5.00
2	5.26	5.06	---	4.53	---	4.04	---	4.55	5.28	5.47	5.54	5.07
3	5.23	5.05	---	4.55	4.28	4.00	---	4.58	5.30	5.46	5.59	5.13
4	---	5.06	---	4.52	4.29	4.06	---	4.58	5.33	5.45	5.59	5.16
5	---	---	---	4.52	4.23	4.03	---	4.64	5.33	5.44	5.56	5.17
6	---	5.02	---	4.51	4.24	3.99	---	4.72	5.32	5.45	5.56	5.24
7	---	5.14	---	4.50	4.24	3.99	---	4.73	4.94	5.46	5.60	5.30
8	---	5.16	---	4.49	4.25	3.75	---	4.12	5.04	5.46	5.65	5.33
9	---	5.19	---	4.48	4.26	3.77	---	4.18	5.11	5.45	---	5.34
10	---	5.22	---	4.47	4.27	3.69	---	4.29	5.18	5.45	---	5.37
11	---	5.24	---	4.46	4.26	---	---	4.33	5.19	5.46	---	5.41
12	5.44	5.33	---	4.46	4.26	---	4.00	4.32	5.16	---	---	5.42
13	5.48	5.30	---	4.43	---	---	3.96	4.30	5.22	---	---	5.45
14	5.48	5.22	---	4.40	---	---	3.75	4.36	5.30	5.66	---	5.49
15	5.50	5.29	---	4.43	---	3.47	3.80	4.41	5.36	5.63	---	5.49
16	5.50	5.29	---	4.43	---	3.58	3.80	4.52	5.42	5.64	---	5.49
17	5.48	5.27	---	4.37	---	3.68	3.89	4.61	5.42	5.64	---	5.46
18	5.52	4.88	---	4.37	4.55	3.72	3.98	4.68	5.46	5.64	---	5.48
19	5.54	4.86	---	---	---	3.81	4.04	4.74	---	5.67	5.10	5.53
20	5.50	4.94	---	---	---	3.80	4.15	4.80	---	5.70	5.13	5.52
21	5.43	4.98	---	---	---	3.69	4.22	4.87	---	5.71	5.17	5.50
22	5.37	5.00	---	---	---	3.32	4.31	4.90	5.43	5.59	4.76	---
23	5.38	5.01	4.20	---	---	3.36	4.36	4.96	5.45	5.54	4.57	5.35
24	5.38	5.08	4.21	4.39	---	3.35	4.40	5.00	5.47	5.59	4.65	5.37
25	5.44	5.13	4.23	---	---	3.36	4.48	5.01	5.47	5.58	4.72	5.38
26	5.44	5.10	4.40	---	---	3.36	4.56	5.01	5.49	5.43	4.70	5.36
27	5.43	---	4.43	---	---	3.36	4.59	5.08	5.50	5.45	4.53	---
28	5.48	---	4.43	---	4.00	3.35	4.67	5.11	5.51	5.33	4.61	---
29	5.50	---	4.43	---	---	3.36	4.67	5.15	5.50	5.38	4.69	---
30	---	---	4.53	---	---	3.36	4.65	5.18	5.47	---	4.79	---
31	---	---	4.53	---	---	3.36	---	5.18	---	---	4.85	---
MEAN	5.43	5.12	4.38	4.46	4.26	3.65	4.23	4.69	5.33	5.53	5.09	5.35
MAX	5.54	5.33	4.53	4.55	4.55	4.06	4.67	5.18	5.51	5.71	5.65	5.53
MIN	5.23	4.86	4.20	4.37	4.00	3.32	3.75	4.12	4.94	5.33	4.53	5.00

WTR YR 1994: HIGHEST 3.32, MARCH 22; LOWEST 5.71, JULY 21.

Gap indicates missing record.



FRANKLIN COUNTY

394731077411701. Local number, FR 332.

LOCATION.--Lat 39°47'31", long 77°41'17", Hydrologic Unit 02070004, near Greencastle.

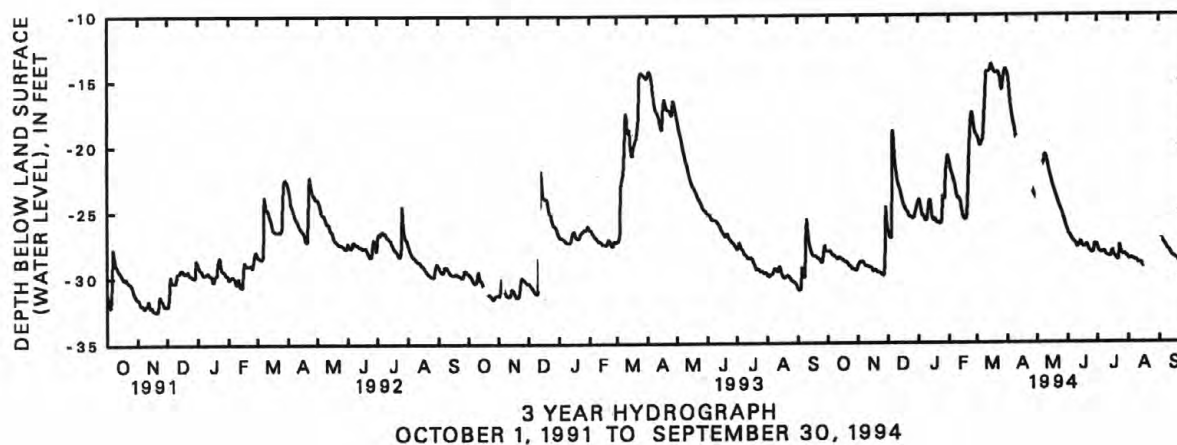
Owner: Borough of Greencastle.

AQUIFER.--Stonehenge Formation, Early Ordovician age.**WELL CHARACTERISTICS.**--Drilled unused well, diameter 8 in., depth 296 ft, cased to 92 ft, open hole.**INSTRUMENTATION.**--Data collection platform. Satellite telemetry at station.**DATUM.**--Elevation of land surface is 730 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.**PERIOD OF RECORD.**--March 1975 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 12.30 ft below land-surface datum, Sept. 27, 1975; lowest, 36.68 ft below land-surface datum, Sept. 6, 1976.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.04	29.08	26.28	24.26	21.02	19.18	14.35	---	26.46	27.69	28.61	---
2	28.04	28.99	26.63	24.05	21.25	19.31	14.70	---	26.72	27.97	28.67	---
3	28.03	28.88	26.98	24.41	21.79	19.49	15.30	---	26.79	28.10	28.64	27.12
4	28.06	28.84	27.01	24.79	22.05	19.84	16.36	---	26.90	28.15	28.64	27.24
5	28.19	28.82	26.97	25.21	22.27	20.01	17.03	---	27.07	28.16	28.65	27.37
6	28.28	28.84	18.87	25.30	22.60	19.76	17.56	---	27.22	28.13	28.67	27.46
7	28.32	28.96	18.94	25.37	22.72	19.69	18.09	21.34	27.30	28.08	28.72	27.59
8	28.40	29.11	20.37	25.63	23.25	19.18	18.40	21.34	27.39	28.09	28.80	27.70
9	28.44	29.16	21.47	25.69	23.68	17.59	18.81	20.72	27.44	28.23	28.76	27.89
10	28.50	29.16	22.04	25.57	23.99	16.12	19.32	20.70	27.66	28.39	28.86	27.94
11	28.60	29.19	22.61	24.92	23.99	14.36	---	20.90	27.76	28.40	28.98	28.03
12	28.60	29.28	22.93	24.25	23.97	14.33	---	21.26	27.66	28.41	28.98	28.14
13	28.42	29.28	23.20	24.08	24.26	14.33	---	21.65	27.48	28.48	28.94	28.29
14	28.53	29.28	23.38	24.58	24.75	14.28	---	22.03	27.30	28.50	29.02	28.41
15	28.60	29.34	23.80	25.33	25.22	14.15	---	22.33	27.47	28.16	29.17	28.46
16	28.66	29.54	24.15	25.63	25.48	13.72	---	22.61	27.67	28.00	29.28	28.51
17	28.69	29.54	24.43	25.66	25.58	13.92	---	22.95	27.73	28.27	---	28.63
18	28.78	29.47	24.56	25.49	25.63	14.14	---	23.21	27.74	28.41	---	28.63
19	28.82	29.48	24.75	25.71	25.41	14.34	---	23.46	27.68	28.52	---	28.71
20	28.83	29.56	24.92	25.85	24.49	14.43	---	23.70	27.52	28.64	---	28.82
21	28.91	29.67	24.99	25.85	22.22	14.41	---	23.91	27.61	28.72	---	28.90
22	29.02	29.67	25.18	25.82	19.97	14.40	---	24.15	27.85	28.74	---	28.91
23	29.15	29.64	25.35	25.88	18.50	14.34	---	24.41	28.04	27.58	---	28.81
24	29.16	29.74	25.38	25.94	17.49	14.58	---	24.59	28.06	27.88	---	28.85
25	29.26	29.82	25.38	25.61	17.51	14.78	---	24.78	28.17	28.21	---	28.94
26	29.37	29.88	25.52	23.79	18.13	15.53	---	24.98	28.19	28.32	---	29.03
27	29.37	29.88	25.52	24.04	18.70	15.75	23.48	25.23	28.01	28.31	---	29.08
28	29.41	29.12	25.41	24.04	19.06	15.08	23.63	25.47	27.46	28.24	---	29.17
29	29.48	24.62	25.09	21.93	---	14.41	23.81	25.71	27.62	28.33	---	29.27
30	29.49	25.68	24.77	21.41	---	14.13	23.97	25.98	27.47	28.43	---	29.40
31	29.39	---	24.50	20.75	---	14.19	---	26.24	---	28.49	---	---
MEAN	28.74	29.05	24.24	24.74	22.32	15.93	18.92	23.35	27.51	28.26	28.84	28.40
MAX	29.49	29.88	27.01	25.94	25.63	20.01	23.97	26.24	28.19	28.74	29.28	29.40
MIN	28.03	24.62	18.87	20.75	17.49	13.72	14.35	20.70	26.46	27.58	28.61	27.12

WTR YR 1994: HIGHEST 13.72, MARCH 16; LOWEST 29.88, NOVEMBER 26, 27.

Gap indicates missing record.



FULTON COUNTY

400302078090401. Local number, FU 93.

LOCATION.--Lat 40°03'02", long 78°09'04", Hydrologic Unit 02050304, at Buchanan State Forest, and near Wells Tannery.

Owner: Commonwealth of Pennsylvania.

AQUIFER.--Pocono Formation, Early Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 191 ft, cased to 45 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 1,180 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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

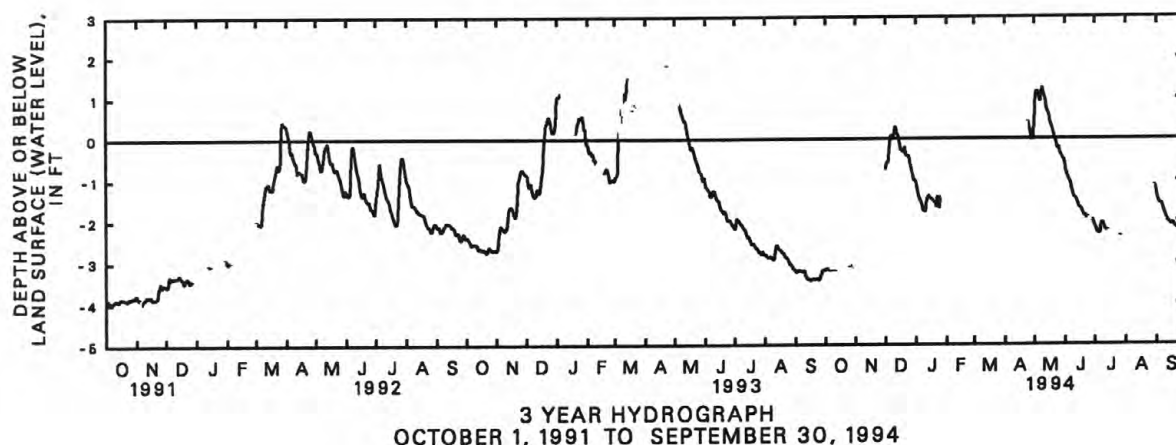
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.00 ft above land-surface datum, Feb. 22, 1971; lowest, 4.46 ft below land-surface datum, Sept. 12, 1966.

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-3.20	---	-0.74	-1.01			---	.40	-0.60	-2.13	---	-1.33
2	-3.16	---	-0.62	-1.14			---	1.03	-0.78	-2.18	---	-1.45
3	-3.16	---	-0.58	-1.27			---	1.15	-0.87	-2.25	---	-1.52
4	-3.16	---	-0.56	-1.38			---	1.16	-0.93	-2.29	---	-1.57
5	-3.19	---	-0.31	-1.46			---	1.15	-0.99	-2.30	---	-1.58
6	---	---	.04	-1.51			---	.99	-1.03	-2.32	---	-1.57
7	---	---	.09	-1.57			---	.91	-1.10	-2.11	---	-1.66
8	---	---	.04	-1.67			---	1.13	-1.24	-2.04	---	-1.74
9	---	---	-0.02	-1.76			---	1.25	-1.34	-2.07	---	-1.81
10	---	---	.12	-1.76			---	1.15	-1.41	-2.12	---	-1.87
11	---	---	.30	-1.76			---	1.05	-1.43	-2.20	---	-1.95
12	---	---	.26	-1.50			---	.98	-1.45	-2.22	---	-2.01
13	---	---	.12	-1.43			---	.81	-1.51	-2.24	---	-2.03
14	---	---	.11	-1.38			---	.67	-1.57	---	---	-2.04
15	---	---	-0.03	-1.41			---	.65	-1.65	---	---	-2.09
16	---	---	-0.16	-1.43			---	.57	-1.68	---	---	-2.08
17	---	---	-0.28	-1.46			---	.40	-1.70	---	---	-2.05
18	---	---	-0.28	-1.49			---	.34	-1.74	---	---	-2.08
19	---	---	-0.33	-1.51			---	.26	-1.80	---	---	-2.14
20	---	---	-0.33	-1.53			---	.18	-1.88	---	---	-2.16
21	---	---	-0.20	-1.55			---	.06	-1.85	---	---	-2.17
22	---	---	-0.40	-1.66			---	-0.02	-1.90	---	---	-2.18
23	---	---	-0.42	-1.39			---	-0.08	-1.94	---	---	-2.08
24	---	---	-0.42	-1.60			---	-0.23	-1.91	---	---	-2.02
25	---	---	-0.43	-1.69			.41	-0.23	---	---	---	-2.01
26	---	---	-0.56	-1.43			.27	-0.22	---	---	---	-1.97
27	---	---	-0.67	---			.17	-0.35	---	---	---	-1.97
28	-3.13	---	-0.77	---			-0.01	-0.40	-2.00	-2.36	---	-1.92
29	---	---	-0.88	---			-0.02	-0.44	-1.98	---	---	---
30	---	-0.70	-0.98	---			.01	-0.49	-2.06	---	-1.14	---
31	---	---	-1.01	---			---	-0.51	---	---	-1.19	---
MEAN	-3.17	-0.70	-0.32	-1.49			.14	.43	-1.49	-2.20	-1.17	-1.89
MAX	-3.13	-0.70	.30	-1.01			.41	1.25	-0.60	-2.04	-1.14	-1.33
MIN	-3.20	-0.70	-1.01	-1.76			-0.02	-0.51	-2.06	-2.36	-1.19	-2.18

WTR YR 1994: HIGHEST +1.25, MAY 9; LOWEST -3.20, OCTOBER 1.

Gap indicates missing record.



HUNTINGDON COUNTY

401843078075401. Local number, HU 301.

LOCATION.--Lat 40°18'43", long 78°07'54", Hydrologic Unit 02050303, at Trough Creek State Park, and near Newburg.
 Owner: U.S. Geological Survey.

AQUIFER.--Pocono Formation, Early Mississippian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 105 ft, cased to 18 ft, open hole.

INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Satellite telemetry at station.

DATUM.--Elevation of land surface is 970 ft above sea level, from topographic map. Measuring point: Top of casing, 3.6 ft above land-surface datum.

PERIOD OF RECORD.--August 1969 to current year.

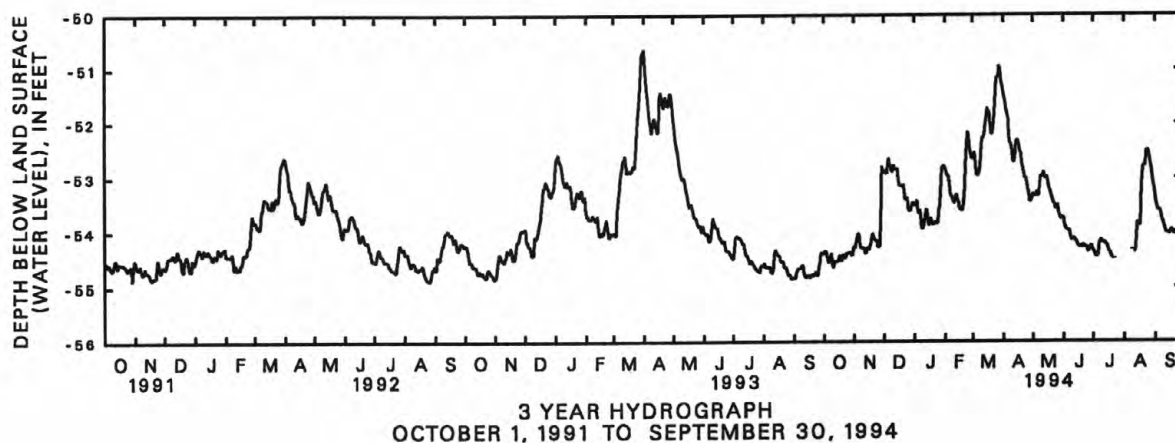
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.82 ft below land-surface datum, June 23, 1972; lowest, 55.96 ft below land-surface datum, Aug. 28, 30, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.41	54.26	52.91	53.51	52.82	52.66	51.42	53.30	53.73	54.35	---	53.34
2	54.35	54.29	52.89	53.47	52.86	52.62	51.52	53.32	53.85	54.37	---	53.48
3	54.35	54.19	52.87	53.53	52.94	52.54	51.60	53.34	53.93	54.43	---	53.56
4	54.37	54.11	52.93	53.42	52.96	52.70	51.75	53.32	53.95	54.45	---	53.60
5	54.48	54.03	52.75	53.65	53.00	52.92	51.82	53.26	53.97	54.45	---	53.60
6	54.57	54.05	52.65	53.65	53.16	52.96	51.91	53.30	53.97	54.41	---	53.60
7	54.51	54.23	52.75	53.59	53.34	52.95	52.25	53.34	53.97	54.21	---	53.70
8	54.45	54.29	52.81	53.77	53.34	52.88	52.38	53.14	54.07	54.17	---	53.78
9	54.39	54.29	52.89	53.94	53.39	52.76	52.40	52.98	54.13	54.15	---	53.82
10	54.59	54.29	52.88	53.94	53.46	52.43	52.50	52.98	54.15	54.17	54.34	53.89
11	54.65	54.29	52.77	53.84	53.46	52.27	52.70	52.96	54.13	54.21	54.36	53.96
12	54.55	54.37	52.84	53.76	53.36	52.28	52.72	52.90	54.13	54.19	54.36	54.02
13	54.54	54.39	52.85	53.60	53.31	52.18	52.62	52.98	54.15	54.21	54.11	54.02
14	54.55	54.31	52.85	53.59	53.42	52.02	52.36	53.02	54.17	54.23	53.84	54.02
15	54.53	54.28	52.83	53.77	53.44	51.90	52.32	52.98	54.23	54.25	53.82	54.04
16	54.53	54.33	53.06	53.88	53.58	51.72	52.32	53.04	54.25	54.31	53.88	54.02
17	54.43	54.27	53.15	53.80	53.58	51.82	52.42	53.16	54.27	54.37	53.88	53.96
18	54.43	54.19	53.15	53.75	53.60	51.78	52.52	53.22	54.29	54.37	53.29	53.98
19	54.53	54.09	53.14	53.84	53.59	52.04	52.56	53.28	54.25	54.44	52.91	54.01
20	54.49	54.03	53.17	53.86	53.49	52.20	52.74	53.34	54.29	54.47	52.78	54.04
21	54.41	54.11	53.13	53.86	53.24	52.20	52.82	53.42	54.23	54.48	52.78	54.04
22	54.47	54.15	53.27	53.82	52.78	52.06	52.92	53.48	54.27	---	52.78	54.04
23	54.47	54.15	53.41	53.82	52.46	51.85	53.02	53.48	54.29	---	52.54	53.96
24	54.41	54.15	53.41	53.84	52.16	51.53	53.00	53.58	54.27	---	52.50	53.96
25	54.39	54.27	53.37	53.84	52.22	51.17	53.10	53.54	54.31	---	52.52	53.94
26	54.39	54.27	53.56	53.60	52.42	51.16	53.22	53.50	54.37	---	52.59	53.88
27	54.39	54.25	53.61	53.52	52.54	51.14	53.28	53.64	54.29	---	52.71	53.78
28	54.37	53.80	53.61	53.18	52.64	50.94	53.44	53.70	54.29	---	52.80	53.80
29	54.40	52.79	53.56	52.82	---	51.02	53.44	53.74	54.25	---	52.96	53.84
30	54.43	52.87	53.46	52.80	---	51.24	53.38	53.76	54.31	---	53.12	53.92
31	54.33	---	53.51	52.78	---	51.30	---	53.74	---	---	53.18	---
MEAN	54.46	54.11	53.10	53.61	53.09	52.04	52.55	53.31	54.16	54.32	53.28	53.85
MAX	54.65	54.39	53.61	53.94	53.60	52.96	53.44	53.76	54.37	54.48	54.36	54.04
MIN	54.33	52.79	52.65	52.78	52.16	50.94	51.42	52.90	53.73	54.15	52.50	53.34

WTR YR 1994: HIGHEST 50.94, MARCH 28; LOWEST 54.65, OCTOBER 11.

Gap indicates missing record.



JUNIATA COUNTY

402411077374801. Local number, JU 351.

LOCATION.--Lat 40°24'11", long 77°37'48", Hydrologic Unit 02050304, at State Game Land No. 215, and near Reeds Gap.

Owner: U.S. Geological Survey.

AQUIFER.--Brallier and Harrell Formations, undivided, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 110 ft, cased to 18 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 635 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.6 ft above land-surface datum.

REMARKS.--This well shows significant response to Earth tide effects.

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

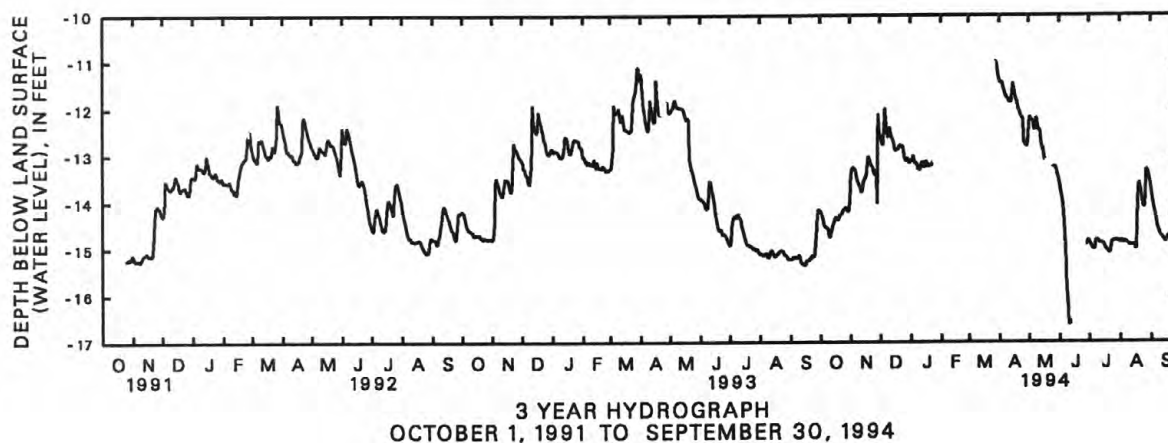
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.99 ft below land-surface datum, Mar. 29, 1994; lowest, 16.62 ft below land-surface datum, June 10, 1994.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.18	13.52	12.58	13.11		---	11.38	12.31	13.61	14.86	14.86	13.76
2	14.22	13.31	12.66	13.11		---	11.43	12.16	13.76	14.90	14.82	13.91
3	14.29	13.26	12.75	13.11		---	11.43	12.22	13.87	14.95	14.84	14.05
4	14.36	13.26	12.77	12.99		---	11.43	12.23	14.00	14.98	14.86	14.16
5	14.48	13.29	12.45	13.15		---	11.53	12.26	14.25	15.00	14.84	14.25
6	14.51	13.30	11.98	13.16		---	11.61	12.39	14.60	15.01	14.85	14.36
7	14.53	13.44	12.24	13.15		---	11.68	12.45	15.09	14.83	14.86	14.50
8	14.54	13.54	12.45	13.22		---	11.73	12.19	15.82	14.80	14.88	14.58
9	14.55	13.59	12.61	13.30		---	11.76	12.21	16.14	14.82	14.88	14.64
10	14.69	13.64	12.50	13.30		---	11.78	12.38	16.62	14.84	14.92	14.71
11	14.75	13.69	12.39	13.29		---	11.85	12.47	16.60	14.87	14.93	14.73
12	14.65	13.78	12.53	13.18		---	11.85	12.44	16.60	14.87	14.93	14.75
13	14.55	13.72	12.62	13.14		---	11.85	12.64	16.60	14.87	14.93	14.79
14	14.47	13.57	12.65	13.15		---	11.66	12.82	---	14.88	14.90	14.81
15	14.41	13.50	12.73	13.24		---	11.45	12.83	---	14.89	14.92	14.85
16	14.34	13.46	12.87	13.25		---	11.57	12.97	---	14.94	14.99	14.81
17	14.30	13.42	12.88	13.11		---	11.70	13.09	---	14.99	15.00	14.79
18	14.36	13.21	12.87	13.17		---	11.80	---	---	15.02	14.15	14.71
19	14.36	13.01	12.86	13.22		---	11.82	---	---	15.04	13.64	14.73
20	14.34	13.06	12.84	13.23		---	11.98	---	---	15.07	13.59	14.73
21	14.26	13.13	12.77	13.20		---	12.02	---	---	15.09	13.69	14.74
22	14.26	13.20	12.78	13.21		---	12.08	---	---	15.05	13.84	14.69
23	14.23	13.23	12.79	13.17		---	12.16	---	---	14.87	13.99	14.25
24	14.18	13.29	12.79	---		---	12.17	---	---	14.84	14.10	13.85
25	14.15	13.39	12.87	---		---	12.22	13.23	---	14.83	14.11	13.76
26	14.14	13.42	13.03	---		---	12.71	13.23	---	14.82	13.87	13.73
27	14.10	13.30	13.09	---		---	12.74	13.24	14.88	14.83	13.30	13.72
28	14.15	14.02	13.11	---		---	12.79	13.25	14.89	14.80	13.31	13.71
29	14.19	12.10	13.04	---		10.99	12.79	13.33	14.85	14.84	13.38	13.68
30	14.17	12.44	13.14	---		11.12	12.65	13.42	14.81	14.83	13.49	13.68
31	13.99	---	13.15	---		11.27	---	13.50	---	14.84	13.59	---
MEAN	14.35	13.34	12.74	13.18		11.13	11.92	12.72	15.12	14.91	14.36	14.35
MAX	14.75	14.02	13.15	13.30		11.27	12.79	13.50	16.62	15.09	15.00	14.85
MIN	13.99	12.10	11.98	12.99		10.99	11.38	12.16	13.61	14.80	13.30	13.68

WTR YR 1994: HIGHEST 10.99, MARCH 29; LOWEST 16.62, JUNE 10.

Gap indicates missing record.



LANCASTER COUNTY

400506076235201. Local number, LN 514.

LOCATION.--Lat 40°05'06", long 76°23'52", Hydrologic Unit 02050306, near Landisville.

Owner: Benjamin Landis.

AQUIFER.--Kinzers Formation, Early Cambrian age.

WELL CHARACTERISTICS.--Drilled unused well, diameter 6 in., depth 260 ft, casing information not available.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 415 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

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

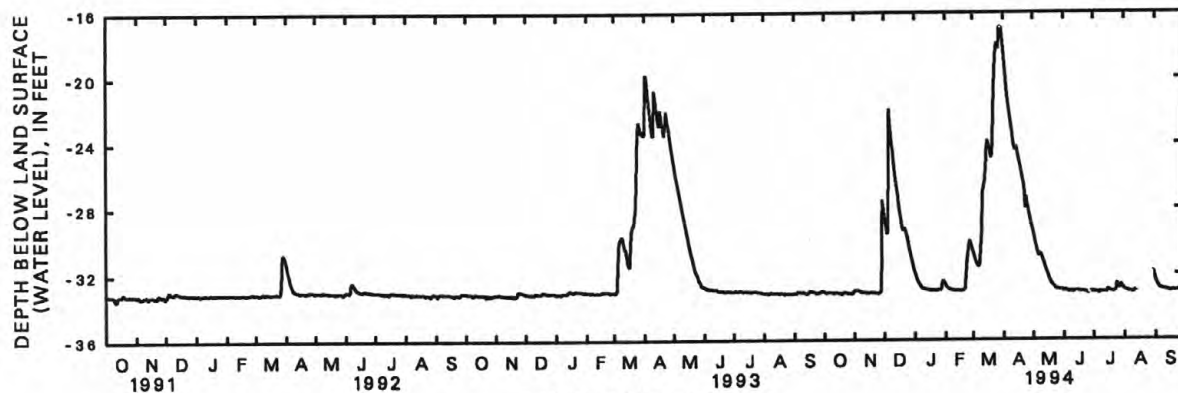
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.89 ft below land-surface datum, Mar. 28, 1994; lowest, 35.47 ft below land-surface datum, Nov. 15, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.05	32.97	28.40	31.79	32.60	30.60	18.23	29.43	33.04	33.08	32.98	32.41
2	33.06	32.97	28.81	32.00	32.76	30.76	18.92	29.74	32.99	33.09	32.99	32.55
3	33.15	32.99	29.22	32.21	32.80	31.01	19.61	30.04	33.00	33.09	33.02	32.68
4	33.11	33.00	29.55	32.38	32.86	31.24	20.30	30.28	33.01	33.10	33.03	32.78
5	33.09	33.01	29.40	32.51	32.90	31.37	21.03	30.51	33.01	33.11	33.05	32.85
6	33.10	33.03	21.90	32.62	32.92	31.48	21.59	30.76	33.12	33.22	33.06	32.89
7	33.10	33.05	22.77	32.71	32.98	31.55	22.03	30.88	33.02	33.07	33.07	32.92
8	33.10	33.12	23.37	32.81	32.94	31.39	22.52	30.81	33.03	33.10	33.09	32.93
9	33.11	33.08	24.07	32.86	32.97	30.37	22.95	30.79	33.03	33.11	33.10	32.94
10	33.13	33.10	24.53	32.87	32.97	29.50	23.42	30.97	33.14	33.10	33.10	32.97
11	33.13	33.10	25.20	32.89	32.97	26.93	23.94	31.17	33.04	33.11	33.00	32.96
12	33.12	33.12	25.83	32.90	33.00	26.65	24.30	31.32	33.04	33.11	33.02	32.98
13	33.10	33.16	26.33	32.92	32.98	26.40	24.43	31.53	33.01	33.11	---	32.98
14	33.12	33.11	26.77	32.93	33.00	25.61	24.23	31.72	33.03	33.11	---	32.99
15	33.13	33.13	27.19	32.94	33.00	24.33	24.46	31.89	33.03	32.92	---	33.11
16	33.13	33.13	27.72	32.94	33.04	23.84	24.77	32.02	33.04	32.98	---	33.01
17	33.13	33.12	28.19	33.00	33.00	24.13	25.10	32.25	33.05	33.02	---	33.01
18	33.22	33.10	28.56	32.95	32.99	24.33	25.40	32.40	33.06	33.04	---	33.00
19	33.19	33.13	28.96	32.97	33.00	24.73	25.71	32.50	33.07	33.06	---	33.01
20	33.15	33.10	29.31	32.97	32.99	24.90	26.05	32.63	33.08	33.07	---	33.02
21	33.10	33.11	29.34	32.96	32.88	24.15	26.37	32.69	33.08	33.09	---	33.02
22	33.11	33.15	29.21	33.01	32.04	21.54	26.69	32.77	33.10	33.04	---	33.02
23	33.12	33.12	29.37	32.99	31.20	19.62	28.00	32.82	33.10	33.00	---	32.99
24	33.12	33.18	29.61	32.99	30.74	18.51	27.30	32.93	33.10	32.55	---	33.01
25	33.19	33.13	29.85	32.94	30.19	17.90	27.70	32.91	33.21	32.72	---	33.01
26	33.14	33.13	30.22	32.93	29.98	18.17	28.02	32.92	---	32.82	---	33.01
27	33.15	33.12	30.52	32.94	30.16	18.23	28.31	32.93	---	32.87	---	32.97
28	33.16	32.95	30.80	32.92	30.39	16.89	28.65	32.94	33.06	32.67	---	32.99
29	33.21	27.49	31.03	32.49	---	---	28.92	32.95	33.09	32.72	---	33.01
30	33.16	27.94	31.34	32.39	---	16.97	29.19	32.96	33.08	32.82	31.84	33.03
31	33.08	---	31.63	32.49	---	17.54	---	32.96	---	32.89	32.12	---
MEAN	33.13	32.73	28.03	32.75	32.37	25.02	24.60	31.79	33.06	32.99	32.89	32.94
MAX	33.22	33.18	31.63	33.01	33.04	31.55	29.19	32.96	33.21	33.22	33.10	33.11
MIN	33.05	27.49	21.90	31.79	29.98	16.89	18.23	29.43	32.99	32.55	31.84	32.41

WTR YR 1994: HIGHEST 16.89, MARCH 28; LOWEST 33.22, OCTOBER 18.

Gap indicates missing record.



LANCASTER COUNTY

395947076145901. Local number, LN 2037.

LOCATION.--Lat 39°59'47", long 76°14'59", Hydrologic Unit 02050306, 40 ft above bridge at intersection of Gypsy Hill Road and Long Rifle Road, and 0.5 mi northwest of Lampeter.
 Owner: U.S. Geological Survey.

AQUIFER.--Quaternary age alluvium.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in. PVC, depth 6 ft, cased to 6 ft, closed end, screened from 3.5 to 4.5 ft.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 354.45 ft above sea level. Measuring point: Top of casing, 1.4 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 354.29 ft, Sept. 26, 1994; lowest water level, 351.73 ft, July 13, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	352.04	351.99	352.21
2									---	351.95	---	352.18
3									---	351.93	351.95	352.17
4									---	351.93	351.91	352.15
5									---	351.92	351.93	352.13
6									---	351.89	351.96	352.13
7									---	352.04	351.91	352.11
8									---	351.93	351.87	352.08
9									---	351.86	351.83	352.05
10									---	351.84	351.83	352.04
11									---	351.78	351.83	352.02
12									---	351.76	351.85	352.03
13									---	351.74	351.94	352.03
14									---	352.04	351.96	352.03
15									---	352.31	352.02	352.07
16									---	352.20	351.98	352.08
17									---	352.12	352.36	352.10
18									352.08	352.14	352.32	352.26
19									352.07	352.11	352.24	352.15
20									352.03	352.04	352.21	352.10
21									352.05	351.98	352.22	352.09
22									351.99	352.00	352.69	352.17
23									351.95	352.11	352.41	352.28
24									351.94	352.10	352.34	352.20
25									351.94	351.98	352.32	352.17
26									351.88	352.02	352.37	352.70
27									351.95	352.11	352.34	352.58
28									352.09	352.28	352.31	352.46
29									352.07	352.11	352.32	352.39
30									352.10	352.06	352.27	352.33
31									---	352.01	352.25	---
MEAN									352.01	352.01	352.12	352.18
MAX									352.10	352.31	352.69	352.70
MIN									351.88	351.74	351.83	352.02

WTR YR 1994: HIGHEST 354.29, SEPTEMBER 26; LOWEST 351.73, JULY 13.

LANCASTER COUNTY

395947076145901. Local number, LN 2037--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with peristaltic pump from recovery water after well pumped dry.
 PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)
NOV 22...	1205	1028	80020	2.63	525	8.8	--	--
MAR 14...	1400	1028	80020	1.96	945	7.4	4.5	K 67
MAY 12...	1100	1028	80020	2.22	968	7.3	13.0	--
JUN 07...	1345	1028	80020	2.29	--	--	--	--
JUL 13...	1310	1028	80020	2.70	--	--	--	--
AUG 09...	1053	1028	80020	2.60	--	--	--	--
SEP 12...	1435	1028	80020	2.42	871	7.2	19.0	--

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L CAC03) (90430)	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)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	11.0	--	--	--	--
MAR 14...	2900	--	0.120	21.0	0.080	1.4	0.060	0.020
MAY 12...	K 19	--	0.260	17.0	0.060	0.80	<0.010	<0.010
JUN 07...	--	266	0.270	13.0	0.070	0.40	<0.010	<0.010
JUL 13...	K 28	258	0.290	7.40	0.330	0.80	<0.010	<0.010
AUG 09...	300	254	0.130	6.20	0.250	0.70	<0.010	<0.010
SEP 12...	--	314	0.040	7.60	0.090	0.40	<0.010	<0.010

LANCASTER COUNTY

395947076145902. Local number, LN 2038.

LOCATION.--Lat 39°59'47", long 76°14'59", Hydrologic Unit 02050306, 40 ft above bridge at intersection of Gypsy Hill Road and Long Rifle Road, and 0.5 mi northwest of Lampeter.

Owner: U.S. Geological Survey.

AQUIFER.--Quaternary age alluvium.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in. PVC, depth 6.6 ft, cased to 6.6 ft, closed end, screened from 4 to 5 ft.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 354.32 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 353.33 ft, July 7, 1994; lowest water level, 351.90 ft, July 13, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	352.24	352.12	352.29
2									---	352.18	352.11	352.25
3									---	352.15	352.05	352.24
4									---	352.16	352.02	352.22
5									---	352.16	352.04	352.20
6									---	352.13	352.05	352.19
7									---	352.24	352.05	352.17
8									---	352.13	352.00	352.14
9									---	352.09	351.96	352.11
10									---	352.07	351.96	352.10
11									---	352.03	351.96	352.07
12									---	352.01	351.97	352.08
13									---	351.96	352.06	352.08
14									---	352.28	352.08	352.08
15									---	352.50	352.14	352.12
16									---	352.29	352.09	352.13
17									---	352.33	352.47	352.14
18									352.30	352.34	352.43	352.30
19									352.27	352.31	352.35	352.19
20									352.23	352.24	352.31	352.14
21									352.23	352.17	352.32	352.13
22									352.19	352.19	352.79	352.21
23									352.16	352.30	352.51	352.32
24									352.17	352.28	352.43	352.24
25									352.15	352.16	352.41	352.21
26									352.11	352.20	352.46	352.73
27									352.19	352.28	352.43	352.61
28									352.25	352.45	352.40	352.49
29									352.25	352.28	352.40	352.42
30									352.28	352.22	352.35	352.36
31									---	352.17	352.33	---
MEAN									352.21	352.21	352.23	352.23
MAX									352.30	352.50	352.79	352.73
MIN									352.11	351.96	351.96	352.07

WTR YR 1994: HIGHEST 353.33, JULY 7; LOWEST 351.90, JULY 13.

LANCASTER COUNTY

395947076145902. Local number, LN 2038--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with peristaltic pump from recovery water after well pumped dry.
 PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)
NOV 22...	1210	1028	80020	2.02	820	7.9	--	--
FEB 03...	1105	1028	80020	1.67	663	8.3	5.0	1200
MAR 14...	1415	1028	80020	0.88	485	9.3	4.5	3600
MAR 14...	1416	1028	80020	--	485	9.3	4.5	--
APR 19...	1450	1028	80020	1.52	741	7.8	11.0	--
MAY 12...	1049	1028	80020	1.63	719	7.6	12.5	--
JUN 07...	1330	1028	80020	1.87	779	7.0	14.5	--
JUL 13...	1350	1028	80020	2.30	714	7.1	19.5	--
AUG 09...	1045	1028	80020	2.22	770	7.0	20.0	--
SEP 12...	1445	1028	80020	2.09	786	7.2	19.0	--

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L CAC03) (90430)	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)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	17.0	--	--	--	--
FEB 03...	E2500	--	0.940	19.0	0.230	0.80	0.050	<0.010
MAR 14...	--	--	1.10	16.0	0.450	1.2	0.010	<0.010
MAR 14...	--	--	1.10	16.0	0.470	1.1	0.010	<0.010
APR 19...	850	--	0.470	16.0	0.120	0.60	<0.010	<0.010
MAY 12...	K 160	--	0.360	18.0	0.030	0.50	<0.010	<0.010
JUN 07...	--	258	0.310	19.0	0.030	0.30	<0.010	<0.010
JUL 13...	K 25	242	0.400	13.0	0.080	0.30	0.020	<0.010
AUG 09...	K 19	238	0.380	13.0	0.200	0.60	<0.010	<0.010
SEP 12...	--	226	0.330	12.0	0.340	0.70	<0.010	<0.010

LANCASTER COUNTY

395947076145903. Local number, LN 2039.

LOCATION.--Lat 39°59'47", long 76°14'59", Hydrologic Unit 02050306, 40 ft above bridge at intersection of Gypsy Hill Road and Long Rifle Road, and 0.5 mi northwest of Lampeter.
 Owner: U.S. Geological Survey.

AQUIFER.--Limestone of the Cambro-Ordovician age Conestoga Formation.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in. steel, depth 63 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 354.66 ft above sea level. Measuring point: Top of casing, 3.3 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 355.34 ft, Sept. 26, 1994; lowest water level, 352.09 ft, Aug. 10, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	352.62	352.37	352.99
2									---	352.56	---	352.93
3									---	352.52	352.33	352.90
4									---	352.50	352.31	352.86
5									---	352.49	352.32	352.83
6									---	352.46	352.32	352.80
7									---	352.51	352.28	352.76
8									---	352.44	352.27	352.71
9									---	352.40	352.22	352.67
10									---	352.38	352.11	352.63
11									---	352.34	352.11	352.60
12									---	352.32	352.15	352.55
13									---	352.31	352.14	352.39
14									---	352.36	352.14	352.36
15									---	352.50	352.16	352.34
16									---	352.38	352.15	352.33
17									---	352.33	352.41	352.32
18									352.80	352.34	352.87	352.39
19									352.76	352.32	352.75	352.33
20									352.73	352.26	352.62	352.29
21									352.71	352.22	352.58	352.28
22									352.68	352.22	353.98	352.29
23									352.65	352.29	354.13	352.41
24									352.63	352.29	353.79	352.35
25									352.61	352.23	353.59	352.34
26									352.57	352.26	353.48	353.83
27									352.58	352.33	353.38	354.74
28									352.63	352.56	353.30	354.18
29									352.63	352.52	353.21	353.93
30									352.64	352.44	353.12	353.77
31									---	352.40	353.06	---
MEAN									352.66	352.39	352.72	352.80
MAX									352.80	352.62	354.13	354.74
MIN									352.57	352.22	352.11	352.28

WTR YR 1994: HIGHEST 355.34, SEPTEMBER 26; LOWEST 352.09, AUGUST 10.

LANCASTER COUNTY

395947076145903. Local number, 2039--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with submersible pump from recovery water after well was pumped more than 3 times casing volume.

PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)
NOV 22...	1216	1028	80020	2.58	940	7.1	--	--
FEB 03...	1140	1028	80020	1.22	814	7.2	10.5	<2
MAR 14...	1430	1028	80020	0.20	855	7.2	12.0	--
APR 19...	1320	1028	80020	-0.07	841	7.2	12.5	--
19...	1321	1028	80020	--	--	--	--	--
MAY 12...	1045	1028	80020	0.88	816	7.1	12.5	--
JUN 07...	1420	1028	80020	1.60	831	7.0	12.5	--
JUL 13...	1330	1028	80020	2.34	833	7.1	12.5	--
AUG 09...	1100	1028	80020	2.39	854	7.1	13.0	--
SEP 12...	1505	1028	80020	2.07	873	7.1	13.0	--

DATE		STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L - CAC03) (90430)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	21.0	--	--	--	--	--
FEB 03...	K 2	--	0.090	23.0	0.020	0.20	<0.010	<0.010	<0.010
MAR 14...	400	--	0.220	24.0	0.060	<0.20	<0.010	<0.010	<0.010
APR 19...	K 10	--	0.230	22.0	0.130	<0.20	<0.010	<0.010	<0.010
19...	--	--	0.230	23.0	0.130	<0.20	<0.010	<0.010	<0.010
MAY 12...	K 1	--	0.010	2.40	0.020	0.20	0.010	<0.010	<0.010
JUN 07...	--	230	0.050	25.0	0.020	<0.20	<0.010	<0.010	<0.010
JUL 13...	K 34	232	<0.010	25.0	0.020	<0.20	<0.010	<0.010	<0.010
AUG 09...	K 8	232	<0.010	24.0	0.020	<0.20	<0.010	<0.010	<0.010
SEP 12...	--	254	<0.010	25.0	0.020	<0.20	<0.010	<0.010	<0.010

LANCASTER COUNTY

395947076145904. Local number, LN 2040.

LOCATION.--Lat 39°59'47", long 76°14'59", Hydrologic Unit 02050306, 40 ft above bridge at intersection of Gypsy Hill Road and Long Rifle Road, and 0.5 mi northwest of Lampeter.
 Owner: U.S. Geological Survey.

AQUIFER.--Quaternary age alluvium.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in. PVC, depth 7.6 ft, cased to 7.6 ft, closed end, screened from 5 to 6 ft.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 354.74 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 353.66 ft, Aug. 22, 1994; lowest water level, 352.25 ft, July 13, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	352.63	352.56	352.73
2									---	352.55	---	352.70
3									---	352.53	352.49	352.69
4									---	352.53	352.46	352.67
5									---	352.53	352.53	352.67
6									---	352.52	352.52	352.66
7									---	352.64	352.46	352.64
8									---	352.51	352.44	352.63
9									---	352.46	352.38	352.61
10									---	352.45	352.36	352.60
11									---	352.40	352.37	352.59
12									---	352.37	352.44	352.57
13									---	352.34	352.40	352.57
14									---	352.71	352.46	352.56
15									---	352.92	352.47	352.57
16									---	352.67	352.43	352.57
17									---	352.60	352.87	352.59
18									352.72	352.65	352.97	352.74
19									352.68	352.58	352.80	352.61
20									352.65	352.51	352.73	352.57
21									352.65	352.47	352.76	352.56
22									352.60	352.50	353.39	352.66
23									352.57	352.65	353.10	352.80
24									352.57	352.58	352.96	352.67
25									352.55	352.53	352.90	352.64
26									352.51	352.62	352.96	353.14
27									352.60	352.70	352.88	353.24
28									352.67	353.01	352.84	353.06
29									352.66	352.76	352.83	352.98
30									352.68	352.64	352.77	352.92
31									---	352.58	352.76	---
MEAN									352.62	352.59	352.68	352.71
MAX									352.72	353.01	353.39	353.24
MIN									352.51	352.34	352.36	352.56

WTR YR 1994: HIGHEST 353.66, AUGUST 22; LOWEST 352.25, JULY 13.

LANCASTER COUNTY

395947076145904. Local number, LN 2040--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with peristaltic pump from recovery water after well was pumped more than 3 times casing volume.

PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μM-MF (COLS./ 100 ML) (31625)	
NOV 22...	1212	1028	80020	2.37	1220	6.9	--	--	
FEB 03...	1050	1028	80020	1.74	807	7.0	4.5	1300	
MAR 14...	1450	1028	80020	0.91	906	7.1	4.0	K8400	
APR 19...	1355	1028	80020	1.58	884	7.1	9.0	--	
MAY 12...	1115	1028	80020	1.70	863	7.1	10.5	--	
JUN 07...	1400	1028	80020	1.96	849	6.8	13.0	--	
JUN 07...	1401	1028	80020	--	--	--	--	--	
JUL 13...	1440	1028	80020	2.35	841	6.9	18.5	--	
AUG 09...	1020	1028	80020	2.29	878	6.8	20.0	--	
SEP 12...	1450	1028	80020	2.14	869	6.9	19.0	--	
DATE		STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L CAC03) (90430)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	15.0	--	--	--	--	--
FEB 03...	E1400	--	0.050	19.0	0.080	0.60	0.020	<0.010	
MAR 14...	>6700	--	0.160	9.50	0.090	1.0	0.040	0.020	
APR 19...	310	--	0.020	16.0	0.140	0.60	0.010	0.010	
MAY 12...	K 140	--	0.030	17.0	0.030	0.40	<0.010	0.010	
JUN 07...	--	258	0.050	19.0	0.030	0.20	<0.010	0.010	
JUN 07...	--	--	0.050	18.0	0.030	0.20	<0.010	0.010	
JUL 13...	440	268	0.040	15.0	0.030	0.20	<0.010	<0.010	
AUG 09...	54	290	0.040	16.0	0.030	0.30	0.020	<0.010	
SEP 12...	--	316	0.020	15.0	0.030	0.30	0.010	0.010	

LANCASTER COUNTY

395957076155201. Local number, LN 2041.

LOCATION.--Lat 39°59'57", long 76°15'52", Hydrologic Unit 02050306, 50 ft above box culvert on Mentzer Road, 0.2 mi north of the intersection with SR 741, and 1.5 mi north of Willow Street.
 Owner: U.S. Geological Survey.

AQUIFER.--Quaternary age alluvium.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in. PVC, depth 6 ft, cased to 6 ft, closed end, screened from 3.5 to 4.5 ft.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 294.78 ft above sea level. Measuring point: Top of casing, 1.7 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 293.74 ft, Sept. 26, 1994; lowest water level, 292.03 ft, July 14, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	292.70	292.57	---	292.92	292.87	292.23	292.23	292.32	292.39	292.49
2		---	292.66	292.56	292.62	292.91	292.78	292.21	292.20	292.29	292.35	292.45
3		---	292.62	292.55	292.61	292.93	292.72	292.20	292.19	292.26	292.30	292.42
4		---	292.60	292.56	292.60	292.90	292.66	292.19	292.17	292.25	292.27	292.40
5		---	293.27	292.54	292.60	292.91	292.63	292.21	292.16	292.23	292.26	292.38
6		---	293.15	292.53	292.59	292.99	292.60	292.18	292.18	292.21	292.26	292.35
7		---	292.96	292.54	292.61	293.01	292.63	292.20	292.19	292.28	292.21	292.32
8		---	292.88	292.57	292.63	293.16	292.58	292.49	292.16	292.24	292.19	292.29
9		---	292.80	292.56	292.62	---	292.56	292.41	292.15	292.20	292.20	292.27
10		---	292.76	292.53	292.60	293.01	292.56	292.35	292.13	292.18	292.23	292.25
11		---	292.73	292.53	292.61	293.05	292.55	292.31	292.13	292.15	292.24	292.23
12		---	292.67	292.54	292.61	293.04	292.53	292.28	292.31	292.13	292.30	292.22
13		---	292.64	292.59	292.61	293.09	292.62	292.27	292.79	292.10	292.28	292.20
14		---	292.62	292.60	292.61	---	292.74	292.25	292.58	292.20	292.29	292.18
15		---	292.60	292.59	292.62	293.22	292.66	292.23	292.48	292.71	292.33	292.17
16		---	292.57	292.56	292.63	293.12	292.63	292.23	---	292.52	292.29	292.17
17		---	292.55	292.54	292.66	292.95	292.58	292.21	---	292.42	292.64	292.17
18		---	292.54	292.56	292.69	292.85	292.54	292.20	292.40	292.40	292.98	292.35
19		---	292.54	292.54	292.72	292.78	---	292.19	292.36	292.37	292.76	292.30
20		---	292.53	292.52	292.80	292.84	---	292.20	292.34	292.31	292.65	292.25
21		---	---	292.50	293.04	292.90	---	292.20	292.32	292.27	292.61	292.22
22		---	292.81	292.50	293.15	293.18	292.34	292.19	292.29	292.26	293.39	292.24
23		---	292.75	292.49	293.15	293.03	292.31	292.19	292.25	292.34	293.19	292.49
24		---	292.71	292.49	293.20	292.92	292.30	292.18	292.23	292.37	292.94	292.42
25		292.29	292.69	292.52	293.18	292.82	292.27	292.21	292.21	292.32	292.82	292.37
26	292.34		292.66	292.56	293.08	292.74	292.25	292.32	292.17	292.38	292.77	293.06
27	292.36		292.63	292.56	293.01	292.89	292.24	292.37	292.18	292.44	292.70	293.27
28	293.03		292.62	292.72	292.95	293.19	292.22	292.32	292.31	292.74	292.65	292.90
29	292.91		292.61	292.86	---	293.49	292.22	292.29	292.29	292.62	292.61	292.75
30	292.78		292.59	292.77	---	293.19	292.22	292.26	292.30	292.51	292.57	292.65
31	---		292.58	292.70	---	292.99	---	292.24	---	292.43	292.53	---
MEAN	292.62		292.70	292.57	292.77	293.00	292.51	292.25	292.28	292.34	292.52	292.41
MAX	293.03		293.27	292.86	293.20	293.49	292.87	292.49	292.79	292.74	293.39	293.27
MIN	292.33		292.53	292.49	292.59	292.74	292.22	292.18	292.13	292.10	292.19	292.17

WTR YR 1994: HIGHEST 293.74, SEPTEMBER 26; LOWEST 292.03, JULY 14.

LANCASTER COUNTY

395957076155201. Local number, 2041--Continued

WATER-QUALITY RECORDS

WATER-QUALITY RECORDS collected with peristaltic pump from recovery water after well pumped dry.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLI-FORM, FECAL, 0.7 μM-MF (COLS./ 100 ML) (31625)	
NOV 22...	1359	1028	80020	2.73	970	7.4	--	--	
FEB 01...	1135	1028	80020	2.13	830	7.7	2.5	K 290	
MAR 14...	1030	1028	80020	1.68	760	7.5	5.5	E 100	
APR 19...	1200	1028	80020	2.26	757	7.4	11.0	--	
MAY 12...	1345	1028	80020	--	721	7.4	12.5	--	
JUN 07...	0955	1028	80020	2.58	684	7.2	17.0	--	
JUL 13...	0930	1028	80020	2.66	760	7.0	21.5	--	
AUG 09...	1305	1028	80020	2.60	740	7.0	20.5	--	
SEP 12...	1040	1028	80020	2.59	725	7.3	18.0	--	
DATE		STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA-LINITY, CARBON-ATE IT-LAB (MG/L -CAC03) (90430)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	1.90	--	--	--	--	--
FEB 01...	K 240	--	0.130	6.60	0.660	1.4	0.630	0.620	
MAR 14...	480	--	0.020	1.10	0.670	1.3	0.160	0.140	
APR 19...	K 60	--	0.010	0.420	0.630	0.80	0.050	0.060	
MAY 12...	52	--	<0.010	1.20	0.250	0.60	0.100	0.100	
JUN 07...	--	184	0.100	9.20	0.060	0.30	0.030	0.030	
JUL 13...	81	336	<0.010	0.480	0.450	0.80	0.060	0.060	
AUG 09...	K 1200	320	0.020	0.160	0.600	1.1	0.160	0.110	
SEP 12...	--	330	<0.010	0.130	0.550	0.90	0.130	0.130	

LANCASTER COUNTY

395957076155202. Local number, LN 2042.

LOCATION.--Lat 39°59'57", long 76°15'52", Hydrologic Unit 02050306, 50 ft above box culvert on Mentzer Road, 0.2 mi north of the intersection with SR 741, and 1.5 mi north of Willow Street.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of the Cambro-Ordovician age Conestoga Formation.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in. PVC, depth 12 ft, cased to 12 ft, closed end, screened from 9 to 10 ft.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 294.75 ft above sea level. Measuring point: Top of casing, 1.8 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 293.61 ft, Apr. 20, 1994; lowest water level, 291.76 ft, July 12, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	292.46	292.26	---	292.68	292.84	292.24	292.02	291.97	292.17	292.21
2		---	292.43	292.25	292.31	292.67	292.75	292.21	292.00	291.93	292.13	292.17
3		---	292.39	292.25	292.31	292.70	292.69	292.18	291.98	291.90	292.09	292.15
4		---	292.38	292.25	292.31	292.67	292.64	292.18	291.96	291.90	292.06	292.13
5		---	292.86	292.24	292.30	292.69	292.60	292.20	291.94	291.88	292.07	292.11
6		---	292.74	292.23	292.31	292.76	292.56	292.18	291.94	291.84	292.07	292.09
7		---	292.63	292.24	292.33	292.78	292.58	292.19	291.94	291.94	292.02	292.07
8		---	292.57	292.28	292.34	292.90	292.53	292.45	291.92	291.88	292.01	292.04
9		---	292.52	292.26	292.34	---	292.50	292.36	291.87	291.84	291.99	292.03
10		---	292.50	292.23	292.33	293.09	292.48	292.29	291.86	291.82	291.95	292.01
11		---	292.48	292.23	292.35	293.11	292.47	292.26	291.87	291.80	291.95	291.99
12		---	292.44	292.25	292.34	293.11	292.44	292.22	292.12	291.79	292.01	291.98
13		---	292.41	292.29	292.35	293.17	292.51	292.20	292.54	291.80	291.99	291.95
14		---	292.40	292.30	292.36	---	292.57	292.17	292.35	292.11	292.00	291.95
15		---	292.38	292.29	292.37	293.27	292.50	292.16	292.22	292.53	292.05	291.95
16		---	292.36	292.26	292.37	293.19	292.47	292.15	---	292.33	292.00	291.96
17		---	292.35	292.25	292.40	293.06	292.42	292.12	---	292.23	292.41	291.96
18		---	292.34	292.27	292.43	292.98	292.37	292.11	292.05	292.20	292.65	292.17
19		---	292.34	292.24	292.46	292.91	292.32	292.09	292.02	292.15	292.46	292.08
20		---	292.33	292.23	292.54	292.93	292.48	292.09	292.00	292.10	292.36	292.03
21		---	---	292.21	292.73	292.98	292.43	292.08	291.96	292.05	292.33	292.01
22		---	292.46	292.21	292.80	293.16	292.39	292.07	291.93	292.05	292.95	292.06
23		---	292.42	292.20	292.81	293.06	292.37	292.06	291.90	292.15	292.77	292.32
24		---	292.39	292.20	292.85	292.98	292.35	292.04	291.87	292.15	292.58	292.22
25		292.19	292.37	292.23	292.84	292.90	292.32	292.06	291.84	292.10	292.49	292.16
26		292.18	292.35	292.28	292.77	292.82	292.30	292.18	291.80	292.18	292.46	292.79
27		292.21	292.33	292.27	292.73	292.92	292.28	292.21	291.82	292.24	292.40	292.88
28		292.73	292.31	292.41	292.70	293.10	292.25	292.14	291.96	292.53	292.35	292.63
29		292.60	292.30	292.50	---	293.30	292.24	292.09	291.93	292.40	292.32	292.51
30		292.52	292.29	292.44	---	293.10	292.24	292.06	291.95	292.30	292.27	292.43
31		---	292.27	292.39	---	292.94	---	292.04	---	292.22	292.24	---
MEAN		292.41	292.43	292.27	292.48	292.96	292.46	292.16	291.98	292.07	292.25	292.17
MAX		292.73	292.86	292.50	292.85	293.30	292.84	292.45	292.54	292.53	292.95	292.88
MIN		292.18	292.27	292.20	292.30	292.67	292.24	292.04	291.80	291.79	291.95	291.95

WTR YR 1994: HIGHEST 293.61, APRIL 20; LOWEST 291.76, JULY 12.

LANCASTER COUNTY

395957076155202. Local number, 2042--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with peristaltic pump from recovery water after well pumped dry.
 PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)
NOV 22...	1402	1028	80020	2.78	755	7.3	--	--
FEB 01...	1210	1028	80020	2.40	688	7.8	6.0	K 2
MAR 14...	1015	1028	80020	1.57	944	7.4	7.0	K 9
APR 19...	1155	1028	80020	2.43	721	7.4	9.5	--
MAY 12...	1405	1028	80020	--	676	7.3	10.5	--
JUN 07...	1005	1028	80020	2.82	690	7.2	12.0	--
JUL 13...	1000	1028	80020	2.91	617	7.3	15.0	--
AUG 09...	1335	1028	80020	2.76	664	7.1	17.5	--
SEP 12...	1105	1028	80020	2.78	642	7.2	16.5	--

DATE	STREP- TOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L CAC03) (90430)	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)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	0.190	--	--	--	--
FEB 01...	K 4	--	0.020	0.130	0.320	0.50	<0.010	0.010
MAR 14...	K 12	--	0.030	2.20	0.260	0.50	<0.010	<0.010
APR 19...	<1	--	0.020	3.80	0.330	0.50	<0.010	<0.010
MAY 12...	K210	--	<0.010	0.180	0.350	0.50	<0.010	<0.010
JUN 07...	--	240	<0.010	0.086	0.080	0.30	<0.010	<0.010
JUL 13...	K 10	286	<0.010	<0.050	0.580	0.80	0.030	<0.010
AUG 09...	K 7	270	<0.010	<0.050	0.370	0.50	<0.010	<0.010
SEP 12...	--	300	<0.010	<0.050	0.550	0.70	0.010	0.010

LANCASTER COUNTY

395957076155203. Local number, LN 2043.

LOCATION.--Lat 39°59'57", long 76°15'52", Hydrologic Unit 02050306, 50 ft above box culvert on Mentzer Road, 0.2 mi north of the intersection with SR 741, and 1.5 mi north of Willow Street.
 Owner: U.S. Geological Survey.

AQUIFER.--Limestone of the Cambro-Ordovician age Conestoga Formation.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in. steel, depth 100 ft, cased to 17 ft, open hole.
INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 295.59 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 294.90 ft, June 12, 1994; lowest water level, 291.11 ft, June 7, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	291.92	292.08	---	292.77	292.56	291.91	291.51	291.91	291.80	291.66
2		---	291.90	292.09	292.52	292.78	292.50	291.86	291.48	291.86	291.75	291.64
3		---	291.88	292.10	292.51	292.84	292.47	291.84	291.47	291.85	291.72	291.63
4		---	291.89	292.12	292.50	292.79	292.43	291.82	291.46	291.86	291.69	291.63
5		---	292.37	292.11	292.52	292.83	292.39	291.70	291.46	291.85	291.71	291.61
6		---	292.10	292.12	292.54	292.88	292.36	291.66	291.48	291.81	291.68	291.60
7		---	292.03	292.15	292.57	292.89	292.39	291.71	291.45	291.95	291.62	291.59
8		---	291.99	292.18	292.58	293.01	292.32	291.97	291.15	291.89	291.59	291.58
9		---	291.97	292.18	292.57	---	292.28	291.77	291.15	291.86	291.55	291.57
10		---	291.97	292.16	292.56	293.17	292.28	291.70	291.15	291.85	291.48	291.56
11		---	291.96	292.16	292.57	293.11	292.25	291.67	291.16	291.84	291.48	291.57
12		---	291.91	292.20	292.54	293.09	292.21	291.66	291.62	291.84	291.56	291.56
13		---	291.90	292.26	292.56	293.13	292.29	291.65	291.74	291.87	291.51	291.57
14		---	291.90	292.27	292.56	---	292.26	291.63	291.71	292.30	291.56	291.57
15		---	291.89	292.27	292.58	293.15	292.19	291.62	291.72	292.47	291.57	291.58
16		---	291.88	292.23	292.59	293.06	292.17	291.62	---	292.25	291.52	291.59
17		---	291.87	292.24	292.61	292.97	292.11	291.58	---	292.13	292.02	291.61
18		---	291.87	292.31	292.63	292.90	292.06	291.57	291.82	292.12	292.03	291.80
19		---	291.88	292.30	292.66	292.87	---	291.56	291.81	292.05	291.82	291.65
20		---	291.87	292.29	292.75	292.91	291.98	291.58	291.81	291.98	291.73	291.61
21		---	---	292.28	292.94	292.92	291.99	291.57	291.79	291.93	291.76	291.61
22		---	292.08	292.29	292.92	293.00	291.97	291.55	291.76	291.92	292.40	291.72
23		---	292.04	292.31	292.88	292.86	291.96	291.54	291.74	292.06	292.03	291.88
24		---	292.04	292.34	292.94	292.78	291.94	291.54	291.73	291.98	291.87	291.72
25		291.70	292.04	292.40	292.89	292.72	291.93	291.59	291.72	291.91	291.81	291.68
26	291.70	292.04	292.47	292.82	292.66	291.91	291.73	291.70	291.98	291.82	292.46	
27	291.74	292.04	292.44	292.80	292.76	291.91	291.70	291.77	292.03	291.76	292.22	
28	292.28	292.04	292.66	292.77	292.83	291.90	291.60	291.91	292.31	291.74	291.98	
29	292.04	292.05	292.66	---	292.87	291.88	291.56	291.86	292.04	291.73	291.88	
30	291.96	292.06	292.58	---	292.70	291.89	291.53	291.87	291.91	291.70	291.83	
31	---	292.06	292.55	---	292.62	---	291.52	---	291.84	291.68	---	
MEAN	291.90	291.98	292.28	292.66	292.89	292.16	291.66	291.61	291.98	291.73	291.71	
MAX	292.28	292.37	292.66	292.94	293.17	292.56	291.97	291.91	292.47	292.40	292.46	
MIN	291.70	291.87	292.08	292.50	292.62	291.88	291.52	291.15	291.81	291.48	291.56	

WTR YR 1994: HIGHEST 294.90, JUNE 12; LOWEST 291.11, JUNE 7.

LANCASTER COUNTY

395957076155203. Local number, 2043--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with submersable pump from recovery water after well pumped dry.
 PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)
NOV 22...	1408	1028	80020	3.93	910	7.9	--	--
FEB 01...	1540	1028	80020	3.59	927	7.4	11.5	K 2
MAR 14...	1100	1028	80020	2.47	997	8.0	12.5	K 5
APR 19...	1045	1028	80020	3.56	1050	7.4	12.0	--
MAY 12...	1410	1028	80020	--	1140	7.2	12.5	--
JUN 07...	1135	1028	80020	4.10	1090	7.3	13.0	--
JUL 13...	1115	1028	80020	4.24	935	7.8	13.5	--
AUG 09...	1405	1028	80020	4.00	925	7.8	13.5	--
SEP 12...	1145	1028	80020	4.00	917	7.8	13.5	--

DATE	STREP- TOCOC CI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L CAC03) (90430)	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)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 22...	--	--	--	0.950	--	--	--	--
FEB 01...	K 27	--	0.020	4.10	0.270	0.50	<0.010	0.010
MAR 14...	K 10	--	0.100	6.20	0.230	0.60	<0.010	<0.010
APR 19...	K 8	--	0.350	7.10	0.320	0.60	<0.010	<0.010
MAY 12...	<1	--	0.050	12.0	0.030	0.30	<0.010	<0.010
JUN 07...	--	348	0.110	3.70	0.190	0.40	<0.010	<0.010
JUL 13...	K120	298	<0.010	1.10	0.250	0.50	<0.010	<0.010
AUG 09...	37	378	0.020	1.70	0.220	0.50	<0.010	<0.010
SEP 12...	--	342	<0.010	1.10	0.170	0.40	<0.010	<0.010

LANCASTER COUNTY

395957076155204. Local number, LN 2044.

LOCATION.--Lat 39°59'57", long 76°15'52", Hydrologic Unit 02050306, 50 ft above box culvert on Mentzer Road, 0.2 mi north of the intersection with SR 741, and 1.5 mi north of Willow Street.
 Owner: U.S. Geological Survey.

AQUIFER.--Quaternary age alluvium.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in. PVC, depth 8 ft, cased to 8 ft, closed end, screened from 5 to 6 ft.

INSTRUMENTATION.--Pressure transducer and data logger with 60-minute recording interval.

DATUM.--Land-surface datum is 296.84 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Although daily mean water levels are published, maximum and minimum water levels for each day are also available.

PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 293.88 ft, Sept. 26, 1994; lowest water level, 291.70 ft, July 13, 1994. Values are actual recorded extremes.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	292.52	292.53	292.56	292.96	293.06	292.19	292.07	292.06	292.22	292.29
2		---	292.49	292.52	292.56	292.96	292.98	292.15	292.05	292.02	292.18	292.27
3		---	292.47	292.51	292.56	293.01	292.92	292.13	292.03	292.00	292.16	292.24
4		---	292.47	292.52	292.56	292.97	292.87	292.15	292.01	292.00	292.13	292.23
5		---	293.08	292.51	292.56	293.00	292.82	292.17	292.00	291.98	292.16	292.21
6		---	292.85	292.50	292.58	293.07	292.79	292.14	292.03	291.94	292.15	292.19
7		---	292.73	292.52	292.60	293.10	292.82	292.17	291.97	292.04	292.11	292.16
8		---	292.68	292.56	292.62	293.24	292.76	292.43	291.99	291.98	292.11	292.14
9		---	292.63	292.53	292.61	293.24	292.72	292.30	291.98	291.94	292.03	292.13
10		---	292.62	292.50	292.60	293.47	292.72	292.24	291.97	291.93	292.06	292.12
11		---	292.61	292.49	292.63	293.46	292.70	292.21	291.98	291.91	292.08	292.11
12		---	292.57	292.52	292.62	293.45	292.67	292.19	292.19	291.90	292.16	292.09
13		---	292.56	292.56	292.63	293.50	292.76	292.18	292.27	291.82	292.12	292.10
14		---	292.55	292.57	292.64	293.59	292.81	292.16	292.05	292.18	292.16	292.10
15		---	292.55	292.55	292.65	293.60	292.72	292.15	291.95	292.51	292.18	292.11
16		---	292.54	292.51	292.66	293.49	292.69	292.15	---	292.30	292.13	292.12
17		---	292.53	292.51	292.69	293.36	292.63	292.12	---	292.22	292.59	292.13
18		---	292.54	292.53	292.72	293.25	292.59	292.12	292.12	292.22	292.74	292.34
19		---	292.55	292.51	292.76	293.20	292.54	292.11	292.09	292.17	292.52	292.21
20		---	292.54	292.49	292.86	293.24	292.41	292.12	292.07	292.13	292.43	292.17
21		---	---	292.47	293.08	293.29	292.31	292.11	292.04	292.09	292.41	292.15
22		---	292.71	292.47	293.13	293.47	292.28	292.09	292.01	292.10	293.17	292.23
23		---	292.66	292.47	293.12	293.32	292.26	292.08	291.98	292.22	292.85	292.44
24		---	292.63	292.47	293.18	293.22	292.24	292.08	291.96	292.19	292.64	292.32
25		292.23	292.61	292.50	293.14	293.13	292.22	292.12	291.94	292.16	292.54	292.26
26	292.24	292.59	292.55	293.06	293.06	292.21	292.23	292.23	291.91	292.25	292.52	293.05
27	292.27	292.57	292.53	293.01	293.20	292.20	292.23	292.23	291.96	292.30	292.45	292.99
28	292.88	292.56	292.74	292.98	293.39	292.18	292.16	292.16	292.07	292.60	292.41	292.68
29	292.67	292.55	292.79	---	293.57	292.17	292.13	292.13	292.04	292.41	292.39	292.56
30	292.57	292.54	292.69	---	293.32	292.17	292.10	292.10	292.05	292.31	292.35	292.48
31	---	292.53	292.63	---	293.16	---	292.09	---	---	292.25	292.32	---
MEAN	292.48	292.60	292.54	292.76	293.27	292.57	292.16	292.03	292.13	292.34	292.29	
MAX	292.88	293.08	292.79	293.18	293.60	293.06	292.43	292.27	292.60	292.17	293.05	
MIN	292.23	292.47	292.47	292.56	292.96	292.17	292.08	291.91	291.82	292.03	292.08	

WTR YR 1994: HIGHEST 293.88, SEPTEMBER 26; LOWEST 291.70, JULY 13.

LANCASTER COUNTY

395957076155204. Local number, LN 2044--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples collected with peristaltic pump from recovery water after well pumped dry.
 PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 μ M-MF (COLS./ 100 ML) (31625)
NOV								
22...	1404	1028	80020	4.78	990	7.5	--	--
22...	1405	1028	80020	--	--	--	--	--
FEB								
01...	1030	1028	80020	4.35	1150	7.0	6.5	--
MAR								
14...	1040	1028	80020	3.45	745	7.4	6.0	K 3
APR								
19...	1140	1028	80020	4.28	1260	7.1	10.0	--
MAY								
12...	1440	1028	80020	--	1030	7.1	10.5	--
JUN								
07...	1033	1028	80020	4.80	989	7.1	12.5	--
JUL								
13...	1030	1028	80020	4.93	735	7.5	17.0	--
AUG								
09...	1245	1028	80020	4.73	747	7.2	18.0	--
SEP								
12...	1110	1028	80020	4.74	761	7.2	18.0	--

DATE	STREP- TOCOC CI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINITY, CARBON- ATE IT-LAB (MG/L CAC03) (90430)	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)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV								
22...	--	--	--	3.40	--	--	--	--
22...	--	--	--	3.40	--	--	--	--
FEB								
01...	--	--	0.070	9.10	0.390	0.90	0.020	0.020
MAR								
14...	--	--	0.070	6.70	0.360	0.80	<0.010	<0.010
APR								
19...	K 7	--	0.090	12.0	0.310	0.70	<0.010	<0.010
MAY								
12...	<1	--	0.040	7.80	0.130	0.60	<0.010	<0.010
JUN								
07...	--	334	0.050	6.50	0.170	0.50	<0.010	<0.010
JUL								
13...	K 4	348	0.030	0.420	0.290	0.50	<0.010	<0.010
AUG								
09...	E 9	314	0.020	0.160	0.360	0.50	<0.010	0.010
SEP								
12...	--	322	<0.010	0.120	0.430	0.60	<0.010	<0.010

LUZERNE COUNTY

411800076162501. Local number, LU 243.

LOCATION.--Lat 41°18'00", long 76°16'25", Hydrologic Unit 02050107, at Ricketts Glen Park, and near Red Rock.

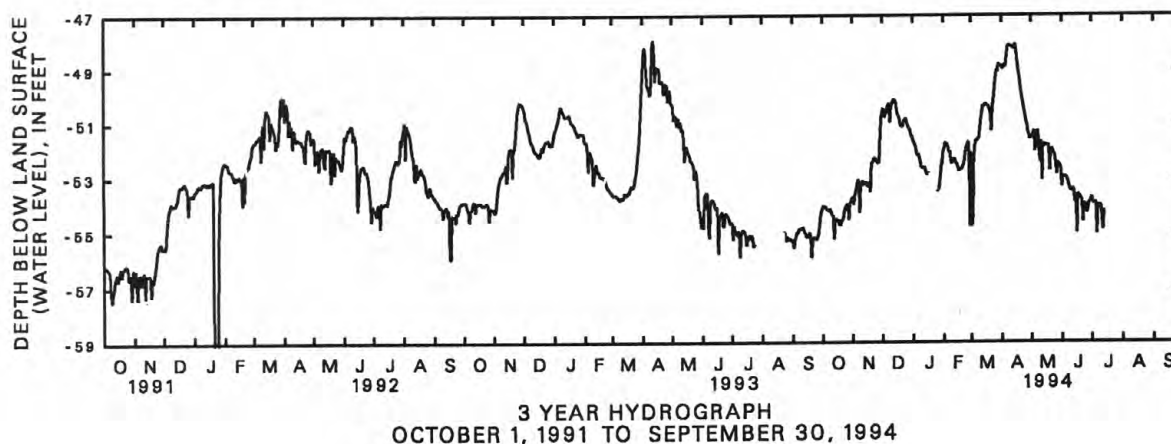
Owner: Commonwealth of Pennsylvania.

AQUIFER.--Catskill Formation, Late Devonian age.**WELL CHARACTERISTICS.**--Drilled unused observation well, diameter 6 in., depth 160 ft, cased to 40 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land surface is 1,266 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.**REMARKS.**--Well levels effected by nearby intermittent pumpage.**PERIOD OF RECORD.**--November 1948 to July 1950, July 1955 to July 1994 (discontinued).**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 36.08 ft below land-surface datum, Mar. 31, 1950; lowest, 64.76 ft below land-surface datum, Jan. 24, 1992 (due to pumping near well).DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.12	53.77	50.54	51.52	52.03	52.07	48.88	51.47	53.33	53.70		
2	54.01	53.96	50.44	51.67	51.93	54.75	48.99	51.50	53.00	53.92		
3	54.08	53.63	50.78	51.76	51.71	54.32	48.87	51.40	52.95	53.93		
4	54.03	53.46	50.66	51.82	51.74	52.45	48.83	51.26	52.95	53.89		
5	54.09	53.32	50.60	52.08	51.76	51.86	48.91	52.03	52.98	53.91		
6	54.17	53.07	50.43	52.18	51.88	51.62	48.57	51.31	53.00	55.02		
7	54.17	53.09	50.30	52.13	52.08	51.65	48.21	51.32	53.12	53.97		
8	54.21	54.24	50.26	52.25	52.03	51.56	48.11	51.28	53.28	54.12		
9	54.11	53.32	50.95	52.43	52.39	51.57	48.13	51.94	53.40	54.03		
10	54.23	53.25	50.39	52.62	52.49	51.28	48.15	52.41	53.48	53.99		
11	54.36	53.09	50.27	52.61	52.38	50.90	48.13	51.64	53.46	54.41		
12	54.37	53.24	50.14	52.67	52.31	50.64	48.19	53.07	53.39	54.89		
13	55.22	53.24	50.12	52.62	52.33	50.36	48.14	51.74	53.44	54.22		
14	54.54	53.16	50.12	52.69	52.46	50.37	48.27	51.86	53.88	54.21		
15	54.47	53.20	50.23	52.83	52.48	50.34	48.07	51.81	53.61	---		
16	54.56	53.32	50.52	52.89	52.65	50.27	48.31	51.76	55.01	---		
17	54.51	53.27	50.69	52.82	52.74	50.34	48.66	51.80	53.58	---		
18	54.65	53.17	50.73	---	52.70	50.34	48.99	51.81	53.66	---		
19	54.71	53.50	50.87	---	52.70	50.38	49.23	51.80	53.68	---		
20	54.63	52.50	51.11	---	52.68	50.47	49.55	52.74	53.77	---		
21	54.54	52.44	51.11	---	52.57	50.65	49.84	52.00	53.79	---		
22	54.50	52.38	51.12	---	52.49	51.27	50.07	51.93	54.61	---		
23	54.28	52.27	50.93	---	52.17	50.39	50.30	52.02	53.96	---		
24	54.12	52.27	50.89	---	51.95	50.11	50.52	52.11	53.95	---		
25	54.03	52.38	50.81	---	51.84	49.66	50.69	52.17	54.01	---		
26	53.99	52.44	50.93	53.47	51.70	49.30	50.94	52.46	54.28	---		
27	53.95	52.46	51.06	53.43	51.69	49.03	51.05	52.87	54.13	---		
28	54.50	52.41	51.16	53.32	54.75	49.08	51.33	52.45	53.92	---		
29	53.94	51.45	51.18	52.92	---	48.78	51.45	52.53	53.89	---		
30	53.88	50.75	51.35	52.57	---	48.89	51.57	52.54	53.81	---		
31	53.71	---	51.47	52.47	---	48.85	---	52.66	---	---		
MEAN	54.28	52.94	50.71	52.51	52.31	50.76	49.30	51.99	53.64	54.16		
MAX	55.22	54.24	51.47	53.47	54.75	54.75	51.57	53.07	55.01	55.02		
MIN	53.71	50.75	50.12	51.52	51.69	48.78	48.07	51.26	52.95	53.70		

WTR YR 1994: HIGHEST 48.07, APRIL 15; LOWEST 55.22, OCTOBER 13.

Gap indicates missing record.



LYCOMING COUNTY

412427076594401. Local number, LY 112.

LOCATION.--Lat 41°24'27", long 76°59'44", Hydrologic Unit 02050206, at State Game Land No. 133, and near Trout Run.

Owner: U.S. Geological Survey.

AQUIFER.--Catskill Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 200 ft, cased to 23 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 1,400 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.1 ft above land-surface datum.

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

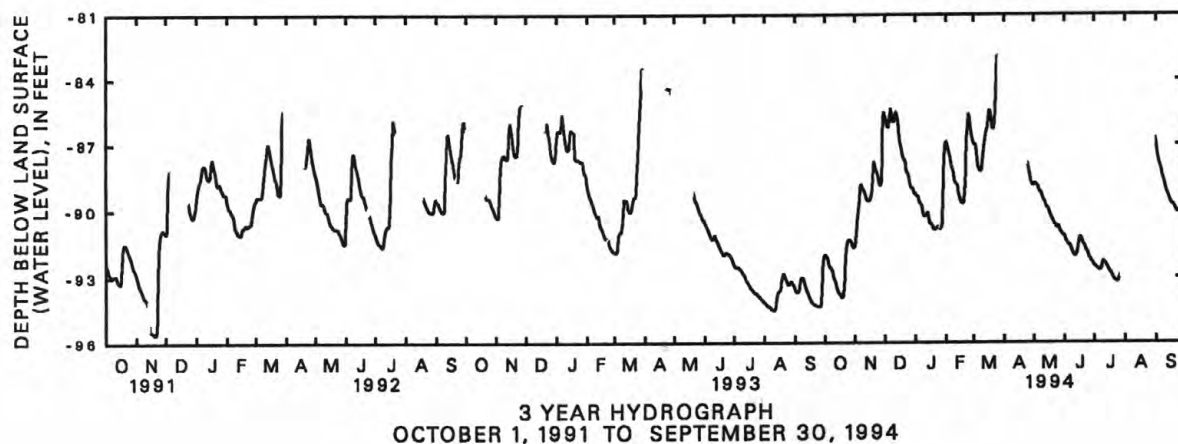
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.10 ft below land-surface datum, June 23, 1972; lowest, 95.63 ft below land-surface datum, November 20, 1991 (may have been affected by pumping during well test).

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92.00	91.47	85.67	89.20	86.87	86.95	---	88.82	91.12	92.49	---	86.96
2	92.01	91.02	85.82	89.31	86.95	87.02	---	88.76	91.28	92.50	---	87.31
3	92.07	90.40	86.13	89.35	87.17	86.97	---	88.80	91.38	92.56	---	87.60
4	92.13	89.98	86.21	89.32	87.34	87.29	---	88.85	91.46	92.61	---	87.81
5	92.41	89.59	86.20	89.57	87.48	87.75	---	88.87	91.52	92.65	---	87.97
6	92.51	89.00	85.67	89.66	87.75	88.07	---	89.05	91.55	92.68	---	88.11
7	92.58	88.79	85.35	89.69	88.09	88.19	---	89.14	91.59	92.68	---	88.37
8	92.62	88.94	85.59	89.83	88.12	88.21	---	89.15	91.74	92.56	---	88.54
9	92.74	89.04	85.91	90.11	88.36	88.20	---	89.26	91.87	92.37	---	88.68
10	93.00	89.12	85.97	90.25	88.66	87.83	---	89.44	91.98	92.27	---	88.90
11	93.11	89.20	85.91	90.22	88.74	87.40	---	89.53	92.03	92.35	---	89.06
12	93.20	89.43	85.48	90.21	88.81	86.95	---	89.54	92.01	92.37	---	89.20
13	93.44	89.51	85.58	90.11	88.86	86.66	---	89.73	91.94	92.46	---	89.29
14	93.58	89.55	85.77	90.07	89.23	86.36	---	89.84	91.74	92.53	---	89.42
15	93.70	89.54	86.10	90.36	89.36	86.25	---	89.87	91.48	92.63	---	89.55
16	93.76	89.49	86.73	90.58	89.57	85.78	---	89.94	91.23	92.71	---	89.66
17	93.81	89.38	87.01	90.57	89.62	85.44	---	90.08	91.19	92.80	---	89.69
18	93.91	89.11	87.18	90.60	89.66	85.42	---	90.20	91.26	92.84	---	89.73
19	93.92	88.42	87.45	90.75	89.65	85.84	---	90.32	91.41	92.95	---	89.79
20	93.85	87.75	87.64	90.82	89.26	86.24	---	90.40	91.51	93.03	---	89.89
21	93.22	87.98	87.70	90.83	88.45	86.29	---	90.51	91.56	93.11	---	90.01
22	92.09	88.16	87.75	90.78	86.73	86.17	---	90.59	91.69	93.16	---	90.06
23	91.64	88.25	88.25	90.77	86.32	85.52	---	90.62	91.79	93.21	---	90.05
24	91.41	88.45	88.31	90.72	85.59	84.29	---	90.74	91.85	93.19	---	90.02
25	91.31	88.72	88.31	---	85.74	82.90	87.92	90.76	92.01	93.13	---	89.96
26	91.33	88.85	88.60	90.80	86.15	---	88.16	90.67	92.13	93.04	---	89.94
27	91.33	88.85	88.87	90.80	86.55	---	88.40	90.84	92.17	---	---	87.91
28	91.43	88.64	88.97	90.66	86.77	---	88.67	90.92	92.29	---	---	86.43
29	91.58	85.88	88.97	89.58	---	---	88.79	90.99	92.31	---	---	85.67
30	91.65	85.48	89.05	87.96	---	---	88.86	91.06	92.42	---	---	85.38
31	91.65	---	89.21	87.13	---	---	---	91.10	---	---	86.69	---
MEAN	92.55	88.93	87.01	90.02	87.92	86.56	88.47	89.95	91.72	92.73	86.69	88.70
MAX	93.92	91.47	89.21	90.83	89.66	88.21	88.86	91.10	92.42	93.21	86.69	90.06
MIN	91.31	85.48	85.35	87.13	85.59	82.90	87.92	88.76	91.12	92.27	86.69	85.38

WTR YR 1994: HIGHEST 82.90, MARCH 25; LOWEST 93.92, OCTOBER 19.

Gap indicates missing record.



MIFFLIN COUNTY

404140077354001. Local number, MF 344.

LOCATION.--Lat 40°41'40", long 77°35'48", Hydrologic Unit 02050304, at Roseann.

Owner: Ira Huron.

AQUIFER.--Bellefonte Formation, Early-Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 200 ft, cased to 42 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 800 ft above sea level. Measuring point: Top of shelter platform, 1.0 ft above land-surface datum.

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

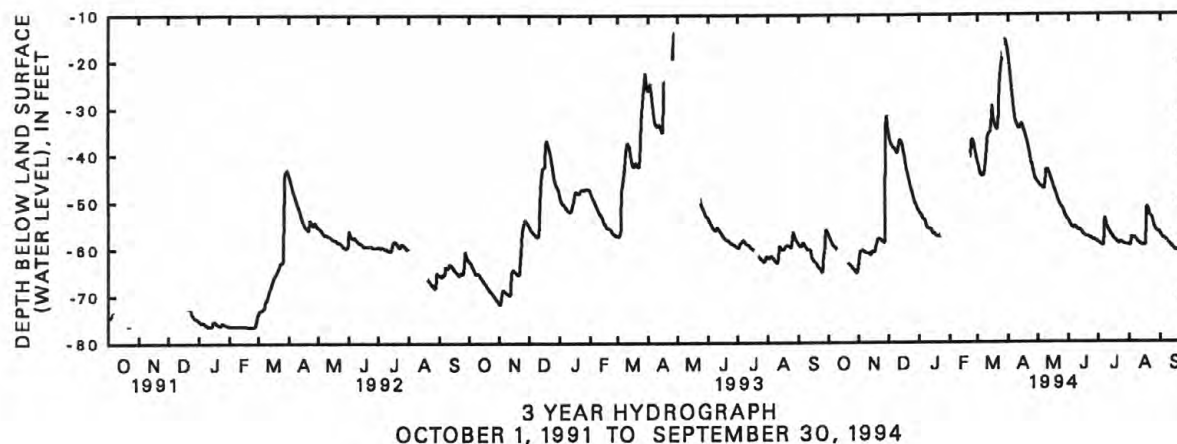
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.54 ft below land-surface datum, Apr. 28, 1993; lowest, 77.13 ft below land-surface datum, Oct. 11, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56.94	62.09	35.11	52.00	---	41.39	18.68	45.79	54.02	58.69	59.21	56.87
2	57.46	60.49	36.54	52.53	---	42.07	20.43	46.17	54.53	58.77	59.25	57.22
3	57.96	60.32	37.16	52.62	---	43.10	22.50	46.52	54.86	58.92	57.39	57.52
4	58.39	60.25	37.74	53.02	---	43.95	24.56	46.56	55.21	59.14	57.69	57.72
5	58.94	60.24	38.25	53.55	---	44.31	26.81	46.77	55.41	59.23	57.79	57.86
6	59.20	60.36	38.27	53.60	---	44.35	28.67	47.05	55.54	59.27	57.55	58.00
7	59.39	60.62	38.40	53.94	---	44.43	30.70	47.23	55.29	59.39	57.88	58.19
8	59.55	60.70	38.84	54.69	---	43.45	32.24	46.03	55.34	59.00	58.10	58.54
9	59.95	60.70	39.44	55.34	---	41.42	32.93	43.11	55.61	54.88	58.40	58.75
10	---	60.74	39.48	55.54	---	39.25	33.32	43.05	55.87	55.59	58.66	58.94
11	---	60.77	38.24	55.56	---	36.24	34.11	43.15	55.93	56.01	58.81	59.20
12	---	61.09	36.77	55.65	---	35.56	34.15	43.66	55.93	56.37	58.99	59.41
13	---	61.15	36.87	55.73	---	35.19	34.02	44.24	56.08	56.73	59.21	59.60
14	---	60.45	37.17	56.17	---	34.96	33.15	44.93	56.34	57.02	59.32	59.94
15	---	60.41	37.76	56.64	---	32.41	33.30	45.54	56.64	57.33	58.95	60.14
16	---	60.54	39.03	56.71	---	29.28	34.08	46.26	56.93	57.69	59.09	60.29
17	---	60.51	40.07	56.67	---	31.79	34.70	47.07	57.11	57.93	59.25	60.43
18	---	59.11	41.45	57.08	---	32.91	35.31	47.50	57.34	58.09	50.99	60.12
19	---	58.53	42.90	57.19	---	33.71	36.16	48.18	57.24	58.42	51.25	60.36
20	---	57.71	43.69	57.20	---	34.44	36.86	48.77	57.33	58.70	51.74	60.51
21	62.93	57.74	44.57	57.20	---	34.45	37.82	49.38	57.38	58.79	52.80	60.57
22	63.22	57.77	45.51	57.27	39.89	32.82	38.87	49.97	57.54	58.85	53.03	60.66
23	63.42	57.91	46.52	---	36.85	25.23	39.94	50.52	57.67	58.47	53.11	59.82
24	63.60	58.12	47.26	---	36.63	22.47	41.60	50.85	57.76	58.65	53.92	60.05
25	63.89	58.40	47.84	---	37.13	20.22	41.52	51.10	57.95	58.75	54.73	60.20
26	64.15	58.48	48.84	---	38.25	19.22	42.87	51.34	58.04	58.90	55.33	---
27	64.31	58.50	49.68	---	39.21	---	43.77	51.98	58.07	58.92	55.84	54.57
28	64.65	33.47	50.24	---	40.29	15.39	44.77	52.64	58.17	59.06	56.23	---
29	64.97	31.42	50.53	---	---	15.35	45.23	53.01	58.28	59.20	56.31	---
30	65.06	33.90	51.24	---	---	15.93	45.61	53.43	58.47	58.99	56.28	55.95
31	64.12	---	51.70	---	---	17.19	---	53.72	---	59.14	56.43	---
MEAN	61.61	57.08	42.16	55.27	38.32	32.75	34.62	47.92	56.60	57.87	56.57	58.94
MAX	65.06	62.09	51.70	57.27	40.29	44.43	45.61	53.72	58.47	59.27	59.32	60.66
MIN	56.94	31.42	35.11	52.00	36.63	15.35	18.68	43.05	54.02	53.39	50.99	54.57

WTR YR 1994: HIGHEST 15.35, MARCH 29; LOWEST 65.06, OCTOBER 30.

Gap indicates missing record.



PERRY COUNTY

402339077074502. Local number, PE 518.

LOCATION.--Lat 40°23'39", long 77°07'45", Hydrologic Unit 02050305, at State Game Land No. 256, and near Mecks Corner.

Owner: U.S. Geological Survey.

AQUIFER.--Shermans Ridge member of Mahantango Formation, Middle Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 138 ft, cased to 17 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 590 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.0 ft above land-surface datum.

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

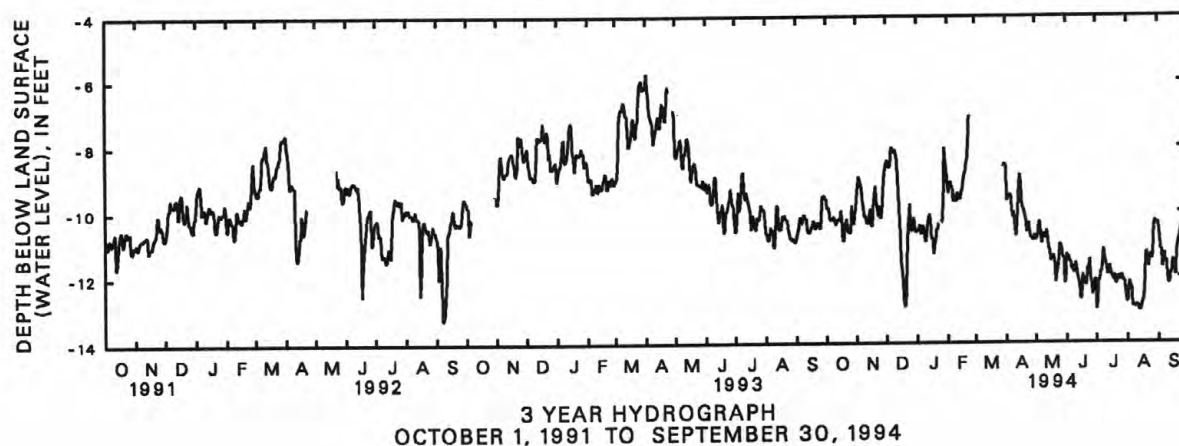
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.74 ft below land-surface datum, Apr. 2, 1993; lowest, 19.51 ft below land-surface datum, Aug. 19, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.62	9.50	8.49	10.56	9.17	---	8.61	10.88	11.32	13.00	12.78	10.43
2	9.88	9.17	8.43	10.55	9.42	---	9.66	10.82	11.40	12.74	12.36	10.75
3	9.85	8.92	8.63	10.60	9.15	---	9.57	10.68	11.41	12.14	12.16	11.19
4	9.91	9.05	8.63	10.39	9.08	---	9.54	10.39	11.56	12.10	12.31	11.19
5	10.22	9.14	8.62	10.69	9.24	---	9.47	10.30	11.55	11.86	12.35	11.72
6	10.22	9.32	8.12	10.57	9.27	---	9.53	10.68	11.79	11.82	12.92	11.57
7	10.24	9.69	8.03	10.43	9.68	---	9.95	10.98	11.68	11.50	12.86	11.28
8	10.17	9.91	8.18	10.49	9.49	---	10.16	10.78	11.88	11.16	12.93	11.60
9	10.15	10.16	8.17	10.80	9.52	---	10.01	10.67	11.85	11.47	12.90	11.54
10	10.26	10.11	8.11	10.93	9.68	---	10.44	10.80	11.58	11.60	12.88	12.02
11	10.38	10.31	8.25	10.64	9.41	---	10.75	10.78	11.79	11.70	12.86	12.22
12	10.25	10.35	8.41	10.36	9.47	---	10.41	10.58	11.99	11.94	12.96	12.18
13	10.23	10.31	9.13	10.16	9.58	---	9.84	10.82	12.13	11.90	13.05	11.90
14	10.24	10.03	9.81	10.08	9.61	---	9.17	11.17	12.27	11.68	12.98	11.88
15	10.21	9.91	10.48	10.35	9.38	---	8.87	11.19	12.70	11.86	12.86	11.52
16	9.95	10.43	11.55	10.85	9.32	---	9.12	11.51	12.57	11.97	12.74	11.50
17	10.22	10.39	11.78	10.82	9.03	---	9.75	11.49	11.93	12.02	12.69	11.73
18	10.89	9.69	12.20	11.29	8.85	---	9.91	11.37	12.21	12.11	12.18	11.97
19	10.85	9.44	12.79	11.01	8.80	---	9.95	11.36	12.03	11.95	11.40	11.26
20	10.34	9.22	12.90	10.88	8.50	---	10.12	11.59	12.27	12.23	11.25	11.03
21	10.34	9.69	12.57	10.53	8.38	---	10.29	12.17	12.17	12.19	11.58	10.86
22	10.20	9.90	11.38	10.55	7.95	---	10.62	11.90	11.73	12.00	11.71	10.78
23	10.61	10.11	10.53	10.37	7.08	---	10.54	11.76	11.77	12.07	11.40	10.56
24	10.51	9.80	10.17	---	7.13	---	10.33	11.48	11.48	11.97	11.33	10.41
25	10.65	10.18	9.77	---	---	---	10.62	11.00	12.04	12.13	11.48	10.44
26	10.56	10.13	10.58	10.32	---	---	10.81	11.07	12.22	11.95	11.36	11.46
27	9.81	9.82	10.58	10.24	---	---	10.79	11.15	12.55	12.07	10.64	11.40
28	10.31	9.29	10.38	9.48	---	---	10.88	11.44	12.30	12.12	10.29	11.01
29	10.37	8.83	10.18	8.06	---	8.60	10.86	11.41	12.14	12.16	10.30	10.88
30	10.05	8.66	10.52	8.44	---	8.56	10.71	12.21	12.09	12.46	10.38	11.18
31	9.91	---	10.63	8.71	---	8.54	---	12.02	---	12.75	10.33	---
MEAN	10.24	9.72	9.94	10.32	9.01	8.57	10.04	11.18	11.95	12.02	12.01	11.32
MAX	10.89	10.43	12.90	11.29	9.68	8.60	10.88	12.21	12.70	13.00	13.05	12.22
MIN	9.62	8.66	8.03	8.06	7.08	8.54	8.61	10.30	11.32	11.16	10.29	10.41

WTR YR 1994: HIGHEST 7.08, FEBRUARY 23; LOWEST 13.05, AUGUST 13.

Gap indicates missing record.



POTTER COUNTY

414640077493801. Local number, PO 72.

LOCATION.--Lat 41°46'40", long 77°49'38", Hydrologic Unit 02050205, at Denton Hill State Park, and near Walton.

Owner: U.S. Geological Survey.

AQUIFER.--Catskill Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 110 ft, cased to 21 ft, open hole.

INSTRUMENTATION.--Electronic data logger with 15-minute recording interval.

DATUM.--Elevation of land surface is 1,810 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 1.8 ft above land-surface datum.

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

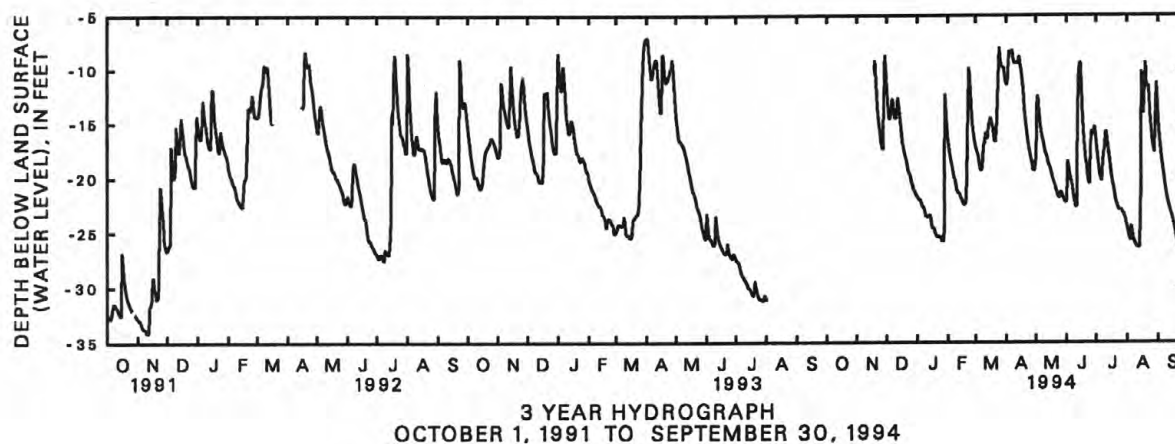
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.20 ft below land-surface datum, Mar. 23, 1968; lowest, 39.12 ft below land-surface datum, Dec. 11, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	11.69	21.66	16.54	17.21	11.45	18.16	22.02	17.07	24.56	14.94
2		---	13.25	21.86	17.22	17.50	11.23	12.52	18.48	17.95	25.03	16.25
3		---	14.38	21.99	17.89	17.78	9.37	12.52	18.90	18.80	25.45	17.23
4		---	14.59	21.99	18.39	18.24	8.29	13.86	19.57	19.62	25.74	18.08
5		---	14.12	22.27	18.80	18.85	8.54	14.88	20.14	20.02	24.39	18.77
6		---	12.79	22.57	19.33	19.24	8.49	15.70	20.33	20.27	24.97	19.44
7		---	12.76	22.65	19.91	19.34	8.25	16.25	20.99	18.82	25.63	20.22
8		---	13.69	22.82	20.08	18.48	9.05	16.57	21.68	17.75	25.82	20.86
9		---	14.42	23.19	20.51	16.95	9.46	17.07	22.17	17.23	26.06	21.42
10		---	14.54	23.53	21.08	16.82	9.40	17.57	22.56	15.78	26.26	21.95
11		---	13.84	23.54	21.29	15.83	9.32	17.81	22.66	15.84	26.34	22.31
12		---	12.63	23.54	21.40	16.31	9.49	18.04	13.65	16.78	26.35	22.66
13		---	13.38	23.46	21.49	16.42	9.21	18.56	10.47	17.54	26.38	23.06
14		---	14.20	23.40	21.79	15.18	8.80	18.90	9.39	18.17	22.89	23.32
15		---	15.04	23.87	21.94	14.91	9.55	18.99	9.46	19.01	10.18	23.64
16		---	16.09	24.55	22.23	14.46	10.08	19.33	11.77	19.78	12.73	24.06
17		---	16.85	24.56	22.39	14.84	10.89	19.81	14.44	20.41	14.07	24.33
18		10.09	17.24	24.60	22.44	15.19	11.92	20.10	15.92	20.76	11.86	24.86
19		9.20	17.75	24.96	22.16	15.95	13.27	20.36	17.22	21.35	9.34	25.51
20		10.94	18.14	25.25	20.23	16.59	14.43	20.64	18.22	21.99	11.28	25.82
21		12.85	18.37	25.34	15.08	16.71	15.28	20.94	18.82	22.32	11.64	26.10
22		14.19	18.93	25.38	9.91	15.39	16.04	21.25	19.78	22.54	11.54	26.27
23		15.00	19.43	25.38	10.59	13.15	16.72	21.58	20.45	22.84	12.91	26.27
24		15.81	19.60	25.34	12.36	10.33	17.29	21.79	20.52	22.93	14.76	26.32
25		16.68	19.83	25.47	14.02	8.02	17.82	21.79	16.94	22.91	15.68	26.43
26		17.17	20.33	25.74	15.21	9.04	18.26	21.25	15.69	22.92	16.84	26.51
27		17.36	20.55	25.78	16.05	9.70	18.66	21.38	16.06	23.18	17.30	26.63
28		12.55	21.08	25.78	16.67	9.79	19.26	21.66	15.67	23.18	17.67	26.72
29		8.68	21.09	12.30	---	9.78	19.37	21.88	15.30	23.49	13.88	26.58
30		9.98	21.37	13.84	---	10.34	18.90	22.13	15.96	23.76	11.26	26.91
31		---	21.60	15.37	---	11.03	---	22.29	---	24.19	13.05	---
MEAN		13.12	16.57	22.97	18.46	14.82	12.60	18.89	17.51	20.30	18.77	23.12
MAX		17.36	21.60	25.78	22.44	19.34	19.37	22.29	22.66	24.19	26.38	26.91
MIN		8.68	11.69	12.30	9.91	8.02	8.25	12.52	9.39	15.78	9.34	14.94

WTR YR 1994: HIGHEST 8.02, MARCH 25; LOWEST 26.91, SEPTEMBER 30.

Gap indicates missing record.



SNYDER COUNTY

403939076591001. Local number, SN 130.

LOCATION.--Lat 40°39'39", long 76°59'10", Hydrologic Unit 02050301, at State Game Land No. 194, and at Meiserville.

Owner: U.S. Geological Survey.

AQUIFER.--Irish Valley member of Catskill Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 100 ft, cased to 40 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 740 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.6 ft above land-surface datum.

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

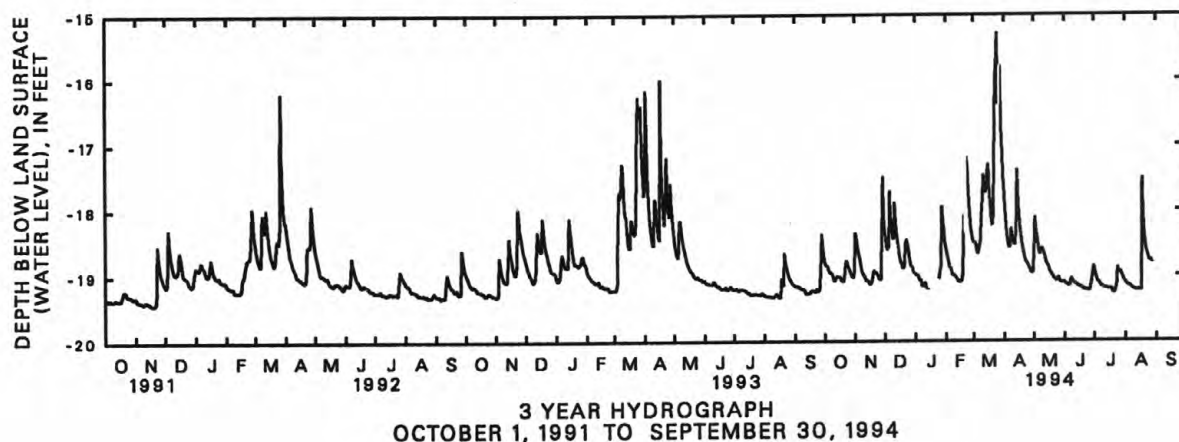
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.45 ft below land-surface datum, Sept. 26, 1975; lowest, 19.57 ft below land-surface datum, Nov. 23, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.79	18.35	18.34	18.97	18.59	18.50	17.75	18.65	19.11	18.92	19.11	---
2	18.84	18.41	18.47	19.00	18.67	18.50	18.03	18.11	19.13	18.99	19.13	---
3	18.85	18.53	18.59	19.00	18.73	18.50	18.24	18.28	19.14	19.04	19.14	---
4	18.86	18.63	18.60	19.00	18.81	18.58	18.40	18.40	19.15	19.09	19.16	---
5	18.92	18.70	18.55	19.06	18.89	18.67	18.52	18.51	19.16	19.11	19.16	---
6	18.95	18.78	17.71	19.08	18.88	18.63	18.57	18.63	19.16	19.12	19.17	---
7	18.96	18.88	18.07	19.07	18.95	18.55	18.56	18.68	19.08	19.15	19.19	---
8	18.97	18.95	18.28	19.17	19.00	18.48	18.28	18.64	19.05	19.17	19.20	---
9	18.99	18.98	18.43	19.16	19.00	18.08	18.37	18.58	19.09	19.17	19.21	---
10	19.06	19.01	18.44	19.15	19.01	17.85	18.47	18.61	19.12	19.19	19.22	---
11	19.08	19.03	17.88	19.11	19.02	17.46	18.53	18.65	19.13	19.20	19.22	---
12	19.06	19.08	18.16	19.19	19.05	17.66	18.53	18.70	19.13	19.20	19.23	---
13	19.02	19.08	18.35	19.19	19.07	17.74	18.28	18.78	19.15	19.20	19.23	---
14	19.01	19.08	18.47	19.20	19.10	17.67	17.38	18.82	19.16	19.20	19.22	---
15	19.03	19.12	18.58	---	19.10	17.39	17.80	18.85	19.17	19.21	19.21	---
16	19.02	19.13	18.71	---	19.10	17.29	18.08	18.88	19.18	19.21	19.23	---
17	19.03	19.12	18.79	---	19.07	17.70	18.26	18.94	19.18	19.21	19.23	---
18	19.08	19.09	18.80	---	18.99	17.92	18.39	18.96	19.19	19.21	17.51	---
19	19.08	18.99	18.88	---	18.35	18.13	18.52	18.99	19.20	19.26	18.08	---
20	19.09	18.92	18.89	---	---	18.24	18.60	19.01	19.22	19.27	18.35	---
21	19.00	18.96	18.83	---	---	18.09	18.68	19.04	19.21	19.27	18.53	---
22	18.82	18.95	18.51	---	17.19	17.09	18.75	19.06	19.23	19.22	18.63	---
23	18.77	18.98	18.45	---	17.43	16.01	18.79	19.07	19.23	19.15	18.67	---
24	18.81	19.00	18.53	---	17.76	15.73	18.81	19.09	19.22	18.88	18.73	---
25	18.87	19.05	18.59	19.05	18.00	15.28	18.84	19.05	19.23	18.93	18.77	---
26	18.92	19.07	18.73	18.92	18.22	16.38	18.88	19.04	19.24	18.97	18.77	---
27	18.94	19.05	18.82	18.86	18.36	---	18.91	19.09	19.17	18.94	18.77	---
28	18.99	18.33	18.87	17.94	18.44	15.79	18.96	19.10	19.09	18.98	18.80	18.22
29	19.03	17.49	18.87	18.17	---	16.74	18.96	19.11	18.97	19.02	---	18.40
30	19.02	18.13	18.94	18.30	---	17.08	18.95	19.11	18.86	19.06	---	18.52
31	18.95	---	18.97	18.49	---	17.50	---	19.11	---	19.09	---	---
MEAN	18.96	18.83	18.55	18.91	18.65	17.57	18.47	18.82	19.15	19.12	18.92	18.38
MAX	19.09	19.13	18.97	19.20	19.10	18.67	18.96	19.11	19.24	19.27	19.23	18.52
MIN	18.77	17.49	17.71	17.94	17.19	15.28	17.38	18.11	18.86	18.88	17.51	18.22

WTR YR 1994: HIGHEST 15.28, MARCH 25; LOWEST 19.27, JULY 20, 21.

Gap indicates missing record.



SULLIVAN COUNTY

413026076352901. Local number, SU 34.

LOCATION.--Lat 41°30'26", long 76°35'29", Hydrologic Unit 02050206, near Forksville.

Owner: U.S. Geological Survey.

AQUIFER.--Catskill Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 50 ft, cased to 34 ft, open hole.

INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Satellite telemetry at station.

DATUM.--Elevation of land surface is 1,060 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

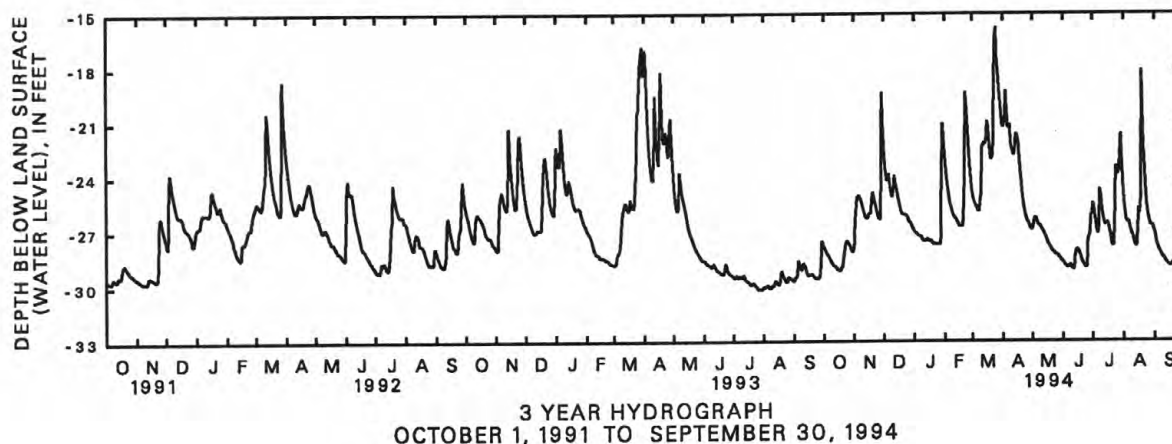
PERIOD OF RECORD.--April 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.42 ft below land-surface datum, June 23, 1972; lowest, 31.12 ft below land-surface datum, Sept. 4, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.79	27.76	22.19	26.92	22.61	24.80	21.23	26.90	28.65	25.45	25.00	27.07
2	27.93	26.37	23.13	27.02	23.33	25.14	21.07	26.59	28.75	25.61	25.70	27.29
3	28.03	25.72	23.77	27.08	23.99	25.32	20.63	26.29	28.84	26.13	26.18	27.63
4	28.17	25.13	24.17	27.10	24.45	25.48	19.23	26.25	28.91	26.50	26.48	27.83
5	28.25	25.06	24.21	27.20	24.85	25.60	20.28	26.33	28.97	26.92	26.52	27.97
6	28.33	25.02	23.81	27.22	25.25	25.73	21.22	26.51	28.99	27.13	26.44	28.07
7	28.45	25.14	24.29	27.25	25.55	25.89	21.28	26.65	28.99	26.83	26.66	28.21
8	28.55	25.29	24.67	27.27	25.69	25.89	21.08	26.67	28.83	24.67	26.92	28.31
9	28.65	25.47	24.99	27.35	25.96	25.35	22.14	26.69	28.89	24.99	27.16	28.40
10	28.73	25.69	25.09	27.47	26.12	24.97	22.44	26.83	29.01	25.59	27.26	28.47
11	28.83	25.93	24.65	27.47	26.20	22.37	22.60	26.91	29.07	26.11	27.45	28.53
12	28.89	26.13	23.93	27.47	26.28	22.25	22.82	27.01	29.07	26.35	27.68	28.63
13	28.91	26.25	24.33	27.47	26.34	22.08	22.52	27.11	28.34	26.63	27.82	28.71
14	28.99	26.27	24.57	27.43	26.48	22.20	21.68	27.25	28.09	26.64	27.81	28.79
15	29.05	26.24	24.83	27.40	26.58	21.92	21.62	27.37	27.99	26.56	26.96	28.85
16	29.09	26.02	25.13	27.47	26.70	20.92	21.92	27.51	28.01	26.54	25.73	28.89
17	29.11	26.01	25.41	27.49	26.72	21.16	22.22	27.67	28.11	26.70	26.03	28.92
18	29.11	26.01	25.63	27.50	26.72	21.90	23.12	27.75	28.27	27.00	25.36	28.92
19	28.97	25.18	25.89	27.52	26.69	22.55	23.81	27.85	28.43	27.26	18.11	28.69
20	28.91	24.80	26.03	27.64	26.38	23.03	24.43	27.93	28.61	27.68	21.01	28.75
21	28.47	25.12	26.05	27.65	24.57	22.93	24.97	28.05	28.73	27.78	22.43	28.87
22	28.12	25.38	26.07	27.64	19.31	22.76	25.45	28.11	28.85	27.78	23.47	28.95
23	27.73	25.59	26.07	27.66	20.13	18.79	25.81	28.15	28.95	26.25	24.55	28.95
24	27.53	25.85	26.11	27.68	20.93	16.33	26.11	28.23	28.99	23.42	25.35	28.73
25	27.51	26.09	26.13	27.68	21.85	15.77	26.29	28.27	28.92	23.46	25.89	28.59
26	27.57	26.25	26.27	27.68	22.87	17.52	26.45	28.29	27.42	23.91	26.25	28.57
27	27.66	26.31	26.44	27.67	23.67	18.18	26.53	28.33	27.29	23.68	26.47	28.07
28	27.80	26.31	26.50	27.64	24.34	18.92	26.67	28.41	27.11	22.82	26.67	24.21
29	27.98	19.31	26.56	23.46	---	19.63	26.83	28.47	26.13	21.62	26.69	24.35
30	28.10	21.06	26.68	21.01	---	20.37	26.89	28.55	26.03	22.82	26.67	24.89
31	28.10	---	26.84	21.83	---	21.05	---	28.61	---	24.06	26.87	---
MEAN	28.36	25.43	25.18	26.91	24.66	22.15	23.31	27.47	28.37	25.64	25.79	28.04
MAX	29.11	27.76	26.84	27.68	26.72	25.89	26.89	28.61	29.07	27.78	27.82	28.95
MIN	27.51	19.31	22.19	21.01	19.31	15.77	19.23	26.25	26.03	21.62	18.11	24.21

WTR YR 1994: HIGHEST 15.77, MARCH 25; LOWEST 29.11, OCTOBER 17, 18.



SUSQUEHANNA COUNTY

415323077451301. Local number, SQ 61.

LOCATION.--Lat 41°53'23", long 75°45'13", Hydrologic Unit 02050101, at State Game Land No. 175, and at New Milford.

Owner: U.S. Geological Survey.

AQUIFER.--Catskill Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 175 ft, cased to 80 ft, open hole.

INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Satellite telemetry at station.

DATUM.--Elevation of land surface is 1,270 ft above sea level, from topographic map. Measuring point: Top of casing, 3.0 ft above land-surface datum.

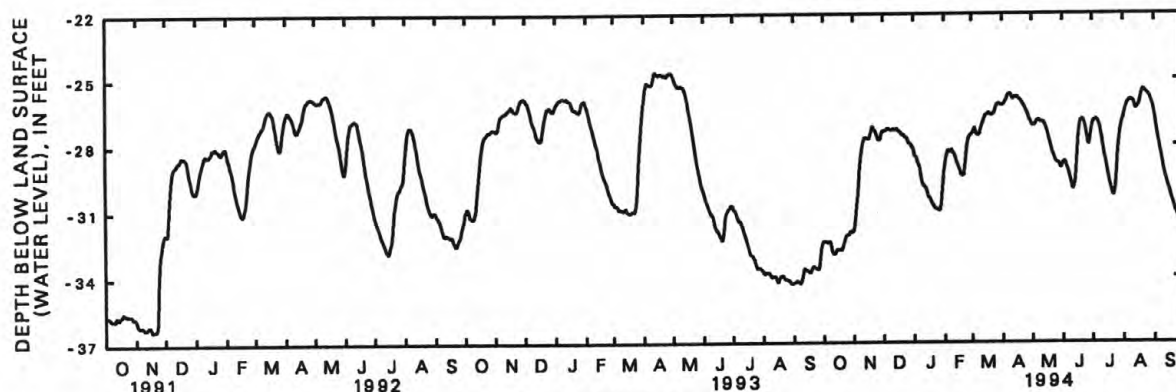
PERIOD OF RECORD.--July 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.49 ft below land-surface datum, Apr. 3, 1978; lowest, 37.24 ft below land-surface datum, Aug. 30, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.40	31.90	27.41	28.20	29.15	27.53	26.19	27.08	28.88	27.07	26.76	26.51
2	32.36	31.65	27.38	28.45	28.84	27.47	26.18	27.13	28.78	26.93	26.55	26.78
3	32.38	31.21	27.33	28.54	28.57	27.36	26.13	27.12	28.78	26.90	26.37	27.10
4	32.39	30.72	27.36	28.54	28.41	27.21	26.05	27.09	28.78	26.87	26.24	27.42
5	32.39	30.32	27.25	28.73	28.28	27.37	25.96	27.01	28.93	26.86	26.11	27.67
6	32.45	29.70	27.26	28.84	28.28	27.52	25.84	26.91	29.07	26.88	26.06	27.93
7	32.38	29.06	27.28	28.95	28.32	27.55	25.72	26.92	29.18	26.97	26.00	28.18
8	32.37	28.64	27.31	29.17	28.32	27.55	25.71	26.86	29.37	27.09	25.97	28.42
9	32.48	28.30	27.33	29.52	28.22	27.54	25.70	26.93	29.56	27.25	25.96	28.64
10	32.79	28.01	27.33	29.72	28.33	27.34	25.72	26.97	29.78	27.54	26.00	28.95
11	32.92	27.83	27.26	29.82	28.40	27.14	25.89	26.98	30.00	27.81	26.04	29.19
12	32.94	27.69	27.30	29.85	28.49	27.05	25.92	26.96	29.96	28.12	26.13	29.39
13	32.92	27.68	27.32	29.91	28.61	26.92	25.82	27.01	29.79	28.41	26.29	29.54
14	32.85	27.69	27.30	29.96	28.80	26.76	25.83	27.07	29.53	28.63	26.36	29.73
15	32.73	27.70	27.25	30.14	28.87	26.68	25.84	27.18	28.93	28.83	26.29	29.90
16	32.75	27.74	27.32	30.35	29.02	26.62	25.81	27.30	28.15	29.11	26.22	30.02
17	32.78	27.70	27.38	30.37	29.13	26.62	25.86	27.47	27.57	29.38	26.14	30.17
18	32.73	27.52	27.40	30.40	29.29	26.56	25.92	27.64	27.17	29.63	25.95	30.38
19	32.78	27.39	27.45	30.55	29.38	26.56	25.93	27.82	26.94	29.84	25.74	30.52
20	32.75	27.14	27.53	30.65	29.38	26.65	26.02	27.97	26.90	30.03	25.55	30.63
21	32.61	27.23	27.52	30.68	29.36	26.65	26.09	28.19	26.83	30.17	25.48	30.80
22	32.47	27.30	27.55	30.80	29.01	26.62	26.16	28.36	26.88	30.32	25.51	30.95
23	32.29	27.34	27.63	30.85	28.62	26.61	26.25	28.46	26.99	30.17	25.58	31.05
24	32.17	27.48	27.64	30.89	28.17	26.53	26.29	28.60	27.16	29.89	25.64	31.20
25	32.09	27.64	27.64	30.89	27.87	26.40	26.43	28.72	27.39	29.34	25.66	31.35
26	32.09	27.75	27.77	30.94	27.68	26.26	26.53	28.78	27.76	28.66	25.71	31.45
27	32.09	27.77	27.88	30.96	27.60	26.17	26.60	28.81	27.98	28.05	25.78	31.42
28	31.97	27.77	27.94	30.95	27.56	26.13	26.79	28.81	27.91	27.65	25.85	30.90
29	31.90	27.53	27.96	30.68	---	26.14	26.87	28.87	27.61	27.32	25.98	30.30
30	31.95	27.39	28.03	30.15	---	26.18	26.99	29.04	27.29	27.08	26.11	29.97
31	31.96	---	28.13	29.62	---	26.19	---	29.01	---	26.89	26.26	---
MEAN	32.46	28.36	27.50	29.94	28.57	26.83	26.10	27.71	28.33	28.25	26.01	29.55
MAX	32.94	31.90	28.13	30.96	29.38	27.55	26.99	29.04	30.00	30.32	26.76	31.45
MIN	31.90	27.14	27.25	28.20	27.56	26.13	25.70	26.86	26.83	26.86	25.48	26.51

WTR YR 1994: HIGHEST 25.48, AUGUST 21; LOWEST 32.94, OCTOBER 12.



TIOGA COUNTY

414513077333701. Local number, TI 100.

LOCATION.--Lat 41°45'13", long 77°33'37", Hydrologic Unit 02050205, at State Game Land No. 208, and at Gaines.
 Owner: U.S. Geological Survey.

AQUIFER.--Catskill Formation, Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 77 ft, cased to 67 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land surface is 1,310 ft above sea level, from topographic map. Measuring point: Top of casing, 4.0 ft above land-surface datum.

REMARKS.--Water-quality records for 1973-75 are available in files of District Office.

PERIOD OF RECORD.--July 1972 to current year.

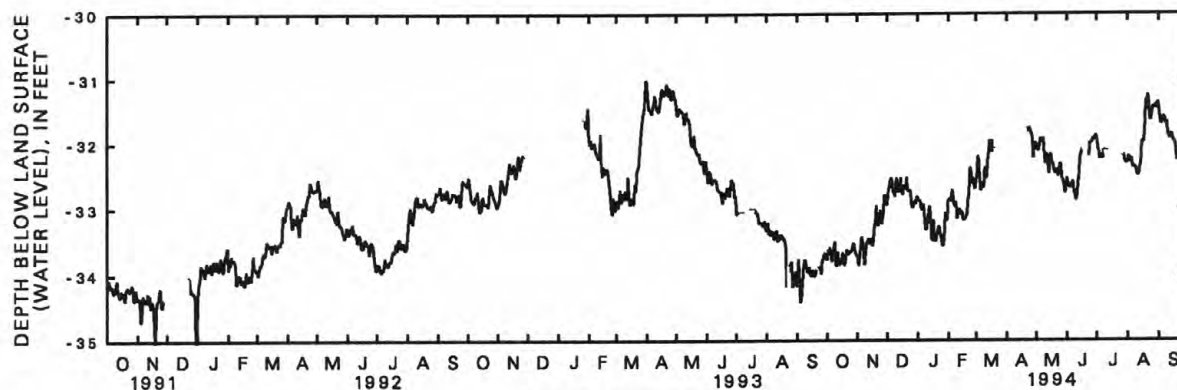
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.02 ft below land-surface datum, Mar. 27, 1978, Mar. 31, 1993; lowest, 35.88 ft below land-surface datum, Oct. 11, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.77	33.72	32.94	32.83	32.86	32.59	---	32.02	32.53	31.94	32.27	31.45
2	33.61	33.86	32.75	32.88	32.87	32.49	---	32.08	32.61	32.06	32.19	31.59
3	33.66	33.74	32.67	32.88	32.84	32.20	---	32.12	32.66	32.12	32.29	31.69
4	33.58	33.57	32.58	32.89	32.89	32.26	---	32.04	32.68	32.24	32.24	31.68
5	33.72	33.43	32.53	33.02	32.72	32.56	---	31.93	32.66	32.17	32.23	31.59
6	33.80	33.47	32.57	32.98	32.80	32.72	---	31.94	32.61	32.23	32.37	31.59
7	33.65	33.64	32.75	32.93	32.94	32.60	---	31.99	32.58	32.23	32.36	31.62
8	33.57	33.85	32.74	33.11	32.97	32.66	---	31.92	32.74	32.11	32.36	31.70
9	33.49	33.66	32.81	33.31	32.89	32.67	---	32.13	32.78	---	32.37	31.66
10	33.86	33.52	32.56	33.30	33.15	32.37	---	32.31	32.87	---	32.46	31.85
11	33.83	33.49	32.54	33.18	33.06	32.53	---	32.21	32.80	---	32.49	31.88
12	33.65	33.45	32.68	33.07	33.01	32.51	---	32.16	32.62	---	32.47	31.92
13	33.84	33.53	32.75	32.96	33.04	32.25	---	32.37	32.49	---	32.37	31.86
14	33.84	33.45	32.66	33.06	33.09	32.12	---	32.47	32.23	---	32.29	31.85
15	33.80	33.49	32.53	33.45	33.04	31.96	---	32.18	32.16	---	31.97	31.93
16	33.73	33.56	32.71	33.48	33.17	32.08	---	32.17	32.11	---	31.97	31.96
17	33.66	33.45	32.78	33.17	33.16	32.13	---	32.30	---	---	31.98	31.97
18	33.85	33.26	32.66	33.45	33.15	31.96	---	32.32	---	---	31.72	32.06
19	33.82	33.20	32.64	33.49	33.12	32.06	---	32.40	---	---	31.33	32.26
20	33.74	32.95	32.70	33.44	33.07	---	---	32.47	---	---	31.35	32.14
21	33.61	33.19	32.52	33.35	32.86	---	---	32.44	---	---	31.25	32.24
22	33.68	33.25	32.72	33.27	32.78	---	31.77	32.40	31.99	---	31.38	32.27
23	33.69	33.14	32.73	33.28	32.38	---	31.82	32.51	32.19	---	31.63	32.25
24	33.64	33.02	32.72	33.38	32.40	---	31.75	32.42	32.02	---	31.64	32.25
25	33.66	33.22	32.74	33.45	32.62	---	31.81	32.31	31.98	---	31.53	32.30
26	33.62	33.17	32.94	33.56	32.53	---	31.85	32.34	31.98	---	31.43	32.25
27	33.55	33.06	32.99	33.56	32.64	---	31.91	32.55	31.92	---	31.44	32.19
28	33.52	32.81	32.94	33.39	32.70	---	32.22	32.55	31.95	32.18	31.45	32.24
29	33.60	32.79	32.89	33.06	---	---	32.04	32.65	31.90	32.27	31.39	32.25
30	33.67	32.93	32.93	33.17	---	---	31.99	32.76	31.87	32.29	31.46	32.39
31	33.71	---	32.82	33.17	---	---	---	32.68	---	32.30	31.36	---
MEAN	33.69	33.36	32.73	33.21	32.88	32.35	31.91	32.29	32.36	32.18	31.90	31.96
MAX	33.86	33.86	32.99	33.56	33.17	32.72	32.22	32.76	32.87	32.30	32.49	32.39
MIN	33.49	32.79	32.52	32.83	32.38	31.96	31.75	31.92	31.87	31.94	31.25	31.45

WTR YR 1994: HIGHEST 31.25, AUGUST 21; LOWEST 33.86, OCTOBER 10, NOVEMBER 2.

Gap indicates missing record.



3 YEAR HYDROGRAPH
 OCTOBER 1, 1991 TO SEPTEMBER 30, 1994

UNION COUNTY

405928077115501. Local number, UN 51.

LOCATION.--Lat 40°59'28", long 77°11'55", Hydrologic Unit 02050206, at Raymond B. Winter Park, and 5.5 mi east of Livonia.

Owner: U.S. Geological Survey.

AQUIFER.--Reedsville Formation, Late Ordovician age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 115 ft, cased to 91 ft, open hole.

INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Satellite telemetry at station.

DATUM.--Elevation of land surface is 1,550 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.6 ft above land-surface datum.

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

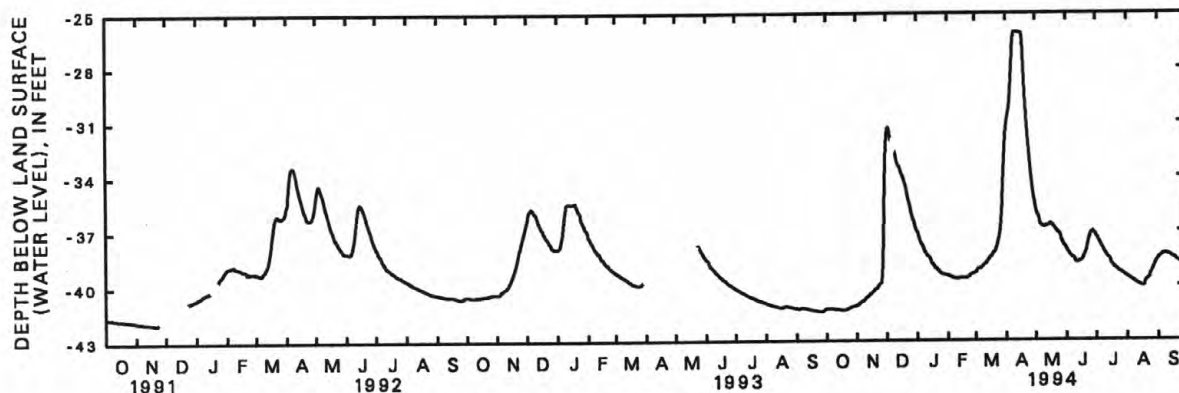
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.26 ft below land-surface datum, Apr. 10, 1978; lowest, 42.24 ft below land-surface datum, Jan. 29 to Feb. 1, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.26	41.06	31.83	37.00	39.43	39.28	31.44	35.75	37.99	37.29	39.53	38.51
2	41.24	41.04	31.38	37.12	39.45	39.26	31.02	35.99	38.11	37.38	39.57	38.45
3	41.24	40.98	31.27	37.30	39.49	39.13	30.65	36.13	38.17	37.50	39.60	38.41
4	41.25	40.93	31.50	37.49	39.50	39.09	30.41	36.17	38.26	37.60	39.63	38.37
5	41.26	40.88	31.91	37.65	39.53	39.06	29.94	36.53	38.34	37.70	39.68	38.33
6	41.26	40.84	---	37.72	39.55	39.06	28.96	36.68	38.37	37.81	39.71	38.27
7	41.26	40.82	---	37.82	39.58	39.02	27.94	36.69	38.44	37.91	39.74	38.25
8	41.26	40.79	---	37.98	39.58	38.96	26.68	36.73	38.48	38.01	39.78	38.25
9	41.26	40.74	---	38.13	39.60	38.93	26.09	36.75	38.50	38.14	39.82	38.25
10	41.27	40.69	32.73	38.19	39.62	38.83	26.07	36.77	38.67	38.22	39.85	38.28
11	41.27	40.64	32.98	38.30	39.61	38.80	26.07	36.77	38.73	38.32	39.89	38.31
12	41.27	40.58	33.26	38.34	39.60	38.77	26.08	36.70	38.74	38.39	39.92	38.32
13	41.29	40.55	33.39	38.40	39.58	38.70	26.08	36.70	38.73	38.47	39.94	38.34
14	41.29	40.48	33.45	38.46	39.58	38.61	26.08	36.69	38.68	38.50	39.99	38.39
15	41.30	40.42	33.59	38.58	39.58	38.54	26.09	36.65	38.65	38.58	40.01	38.43
16	41.30	40.40	33.81	38.75	39.59	38.47	26.09	36.60	38.64	38.78	40.04	38.45
17	41.30	40.34	33.92	38.75	39.59	38.41	26.09	36.65	38.57	38.83	40.05	38.47
18	41.30	40.28	34.02	38.88	39.58	38.33	26.52	36.68	38.46	38.91	39.99	38.52
19	41.30	40.21	34.27	38.95	39.58	38.21	27.72	36.74	38.33	38.98	39.82	38.57
20	41.30	40.16	34.42	39.03	39.58	38.18	28.87	36.81	38.19	39.04	39.70	38.62
21	41.30	40.15	34.62	39.05	39.56	38.14	29.89	36.91	38.08	39.08	39.66	38.65
22	41.26	40.10	34.94	39.14	39.53	37.92	30.83	36.98	37.76	39.14	39.63	38.69
23	41.24	39.95	35.22	39.16	39.49	37.79	31.62	37.07	37.53	39.19	39.61	38.73
24	41.22	39.92	35.41	39.25	39.40	37.56	32.34	37.11	37.33	39.23	39.38	38.76
25	41.18	39.86	35.61	39.28	39.38	37.31	33.00	37.14	37.15	39.25	39.29	38.78
26	41.16	39.79	35.93	39.37	39.35	36.99	33.62	37.24	37.11	39.28	39.18	38.82
27	41.15	39.04	36.16	39.38	39.34	36.41	34.21	37.51	37.03	39.32	39.06	38.85
28	41.12	37.15	36.34	39.38	39.32	35.66	34.69	37.62	37.06	39.37	38.93	38.88
29	41.12	34.68	36.47	39.39	---	34.32	35.11	37.72	37.12	39.40	38.79	38.92
30	41.10	32.88	36.71	39.40	---	33.26	35.39	37.82	37.20	39.45	38.69	38.95
31	41.09	---	36.90	39.39	---	32.27	---	37.87	---	39.49	38.61	---
MEAN	41.24	39.88	34.15	38.55	39.52	37.85	29.52	36.84	38.08	38.60	39.58	38.53
MAX	41.30	41.06	36.90	39.40	39.62	39.28	35.39	37.87	38.74	39.49	40.05	38.95
MIN	41.09	32.88	31.27	37.00	39.32	32.27	26.07	35.75	37.03	37.29	38.61	38.25

WTR YR 1994: HIGHEST 26.07, APRIL 10, 11; LOWEST 41.30, OCTOBER 15-21.

Gap indicates missing record.



3 YEAR HYDROGRAPH
OCTOBER 1, 1991 TO SEPTEMBER 30, 1994

YORK COUNTY

400320076451501. Local number, YO 180.

LOCATION.--Lat 40°03'20", long 76°45'15", Hydrologic Unit 02050306, near Zions View.

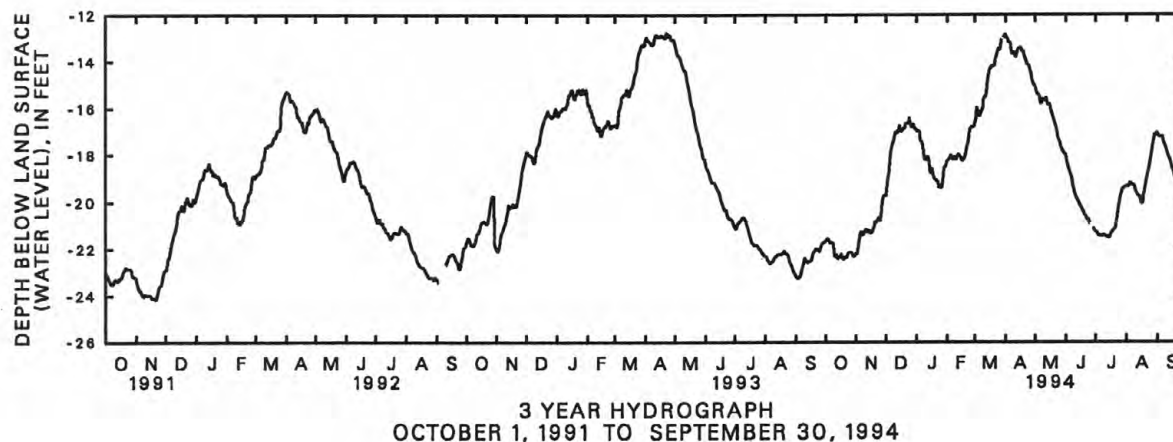
Owner: New York Wire Cloth Company.

AQUIFER.--New Oxford Formation, Late Triassic age.**WELL CHARACTERISTICS.**--Drilled unused well, diameter 8 in., depth 490 ft, casing information not available.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land surface is 360 ft above sea level, from topographic map. Measuring point: Top of casing at land-surface datum.**REMARKS.**--This well shows significant response to Earth tide effects.**PERIOD OF RECORD.**--March 1962 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 12.77 ft below land-surface datum, Apr. 23, 1993; lowest, 37.55 ft below land-surface datum, Nov. 3, 4, 1963.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.67	22.16	19.70	16.89	18.25	16.63	12.83	15.06	18.01	21.25	19.32	17.07
2	21.58	22.19	19.36	16.98	18.22	16.50	12.97	15.23	18.27	21.26	19.32	17.21
3	21.54	21.94	18.96	16.98	18.17	15.94	13.00	15.37	18.42	21.31	19.33	17.23
4	21.54	21.63	18.77	16.95	18.12	16.04	13.16	15.41	18.56	21.39	19.22	17.23
5	21.68	21.36	18.27	17.35	17.98	16.29	13.18	15.44	18.70	21.42	19.16	17.20
6	21.75	21.22	17.83	17.41	18.08	16.34	13.22	15.67	18.82	21.42	19.27	17.22
7	21.70	21.33	17.63	17.44	18.20	16.19	13.55	15.81	18.90	21.45	19.26	17.45
8	21.70	21.39	17.48	17.76	18.07	16.08	13.69	15.58	19.21	21.42	19.27	17.55
9	21.79	21.25	17.35	18.10	18.09	16.03	13.64	15.61	19.40	21.38	19.32	17.66
10	22.19	21.18	17.13	18.22	18.22	15.54	13.59	15.63	19.58	21.40	19.50	17.82
11	22.33	21.11	16.98	18.18	18.07	15.52	13.81	15.68	19.72	21.46	19.59	17.96
12	22.21	21.26	17.07	18.05	18.03	15.49	13.75	15.53	19.80	21.44	19.67	18.07
13	22.41	21.21	17.02	18.08	17.95	15.20	13.55	15.73	19.89	21.47	19.73	18.17
14	22.36	21.15	16.90	18.27	18.08	14.79	13.45	15.86	19.96	21.51	19.73	18.28
15	22.32	21.28	16.72	18.66	18.08	14.53	13.45	15.80	20.10	21.49	19.89	18.46
16	22.28	21.29	16.99	18.76	18.23	14.30	13.39	15.88	20.17	21.39	20.03	18.61
17	22.18	21.26	16.97	18.54	18.22	14.29	13.47	16.11	20.24	21.29	20.06	18.65
18	22.34	21.13	16.91	18.80	18.18	14.19	13.58	16.24	20.32	21.19	19.68	18.84
19	22.42	21.04	16.85	18.92	18.09	14.17	13.54	16.38	20.40	21.18	19.50	18.98
20	22.41	20.79	16.85	19.02	17.91	14.21	13.76	16.52	20.53	21.12	19.24	19.03
21	22.31	20.85	16.67	19.01	17.64	14.13	13.86	16.67	20.55	21.07	18.98	19.09
22	22.33	20.78	16.64	19.12	17.52	13.88	13.99	16.83	20.66	20.80	18.76	19.08
23	22.27	20.70	16.67	19.08	17.24	13.74	14.14	16.96	20.74	20.49	18.59	18.96
24	22.15	20.60	16.59	19.38	16.88	13.55	14.13	17.26	20.73	20.19	18.40	18.94
25	22.12	20.77	16.37	19.29	16.86	13.45	14.20	17.35	20.86	19.94	18.15	18.83
26	22.14	20.58	16.67	19.37	16.79	13.51	14.38	17.45	---	19.71	17.84	18.70
27	22.10	20.07	16.81	19.34	16.82	13.35	14.49	17.66	---	19.56	17.58	18.62
28	22.18	19.79	16.77	18.99	16.79	13.04	14.82	17.75	21.14	19.42	17.35	18.61
29	22.29	19.69	16.65	18.52	---	---	14.96	17.84	21.10	19.42	17.10	18.71
30	22.29	19.69	16.82	18.52	---	12.97	14.98	17.91	21.16	19.33	17.17	18.87
31	22.22	---	16.91	18.40	---	12.88	---	17.95	---	19.34	17.06	---
MEAN	22.09	21.02	17.27	18.33	17.81	14.76	13.75	16.33	19.86	20.86	18.94	18.24
MAX	22.42	22.19	19.70	19.38	18.25	16.63	14.98	17.95	21.16	21.51	20.06	19.09
MIN	21.54	19.69	16.37	16.89	16.79	12.88	12.83	15.06	18.01	19.33	17.06	17.07

WTR YR 1994: HIGHEST 12.83, APRIL 1; LOWEST 22.42, OCTOBER 19.

Gap indicates missing record.



GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE APPALACHIAN MOUNTAIN SECTION

The following tables contain water-level and water-quality records from a network of 30 privately-owned wells used to supply water to rural homes and businesses. The network was established as part of The National Water-Quality Assessment (NAWQA) Project in the Lower Susquehanna River Basin.

Waters from the wells were sampled to assess the status of ground-water quality in a subarea of the Ridge and Valley Physiographic Province, Appalachian Mountain Section, underlain by carbonate bedrock of Cambrian and Ordovician age where the primary land use is agriculture. The sampling is termed a Land-Use Survey for the NAWQA program.

Samples were tested for physical characteristics, nutrients, major and minor elements, and 47 pesticides. A subset of 9 wells was also sampled for a schedule of 60 volatile organic chemicals (VOC's). Many of the constituents were not detected at any of the 30 wells. Tables listing all of the VOC and pesticide analytes and their detection levels precede the water-quality table. The VOC table also lists those sites where VOC samples were taken. The concentrations of VOCs and pesticides that were detected in one or more wells are also included in the water-quality table. Only those compounds that had detectable concentrations are listed in the table of water-quality data. Water-level records are presented first followed by the water-quality data.

The shaded portion of the following figure shows the sampling subarea in the carbonate bedrock area of the Ridge and Valley Province, Appalachian Mountain Section.

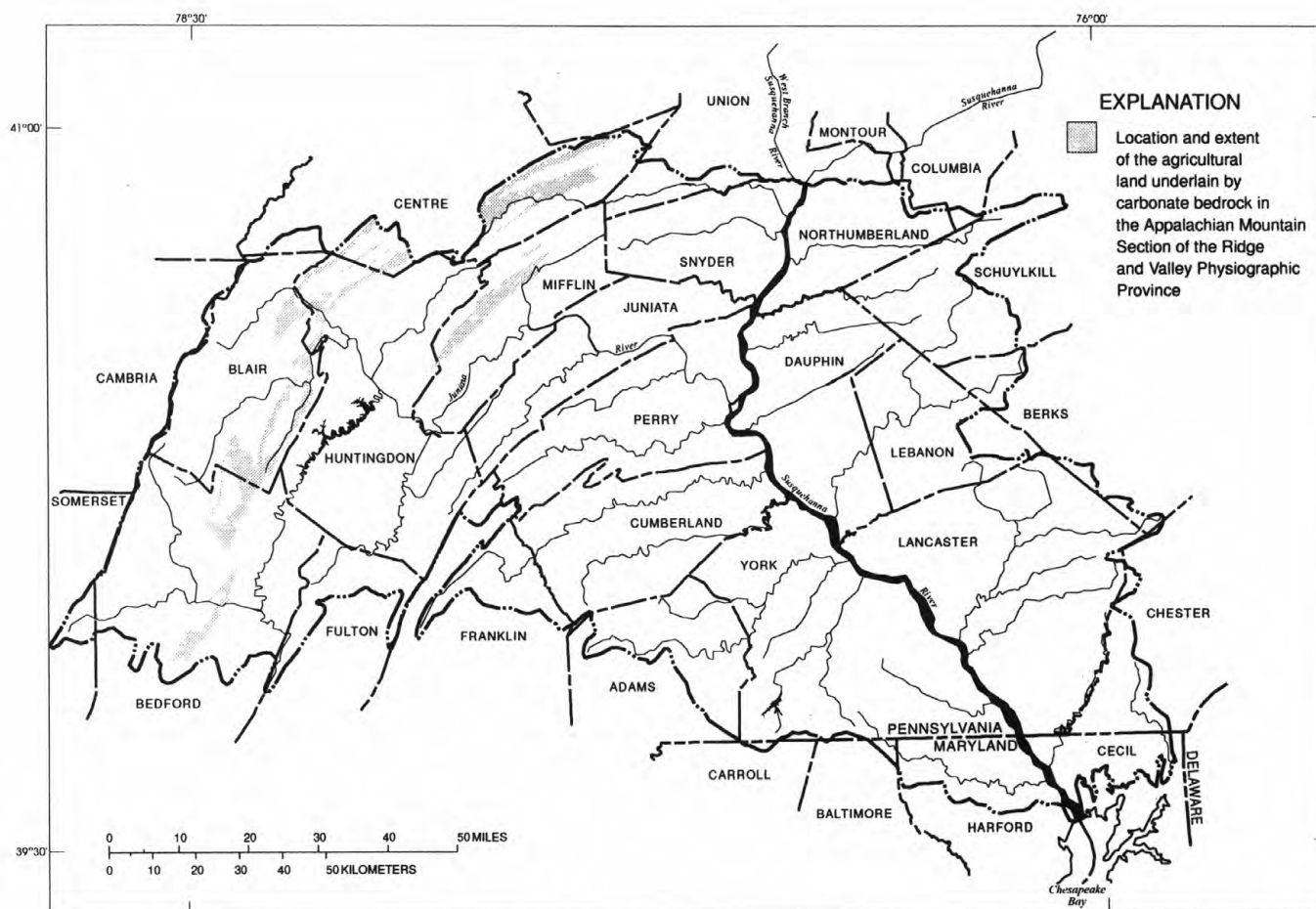


Figure 21. Location and areal extent of the agricultural land underlain by carbonate bedrock of Cambrian and Ordovician age in the Ridge and Valley Province, Appalachian Mountain Section, Lower Susquehanna River Basin.

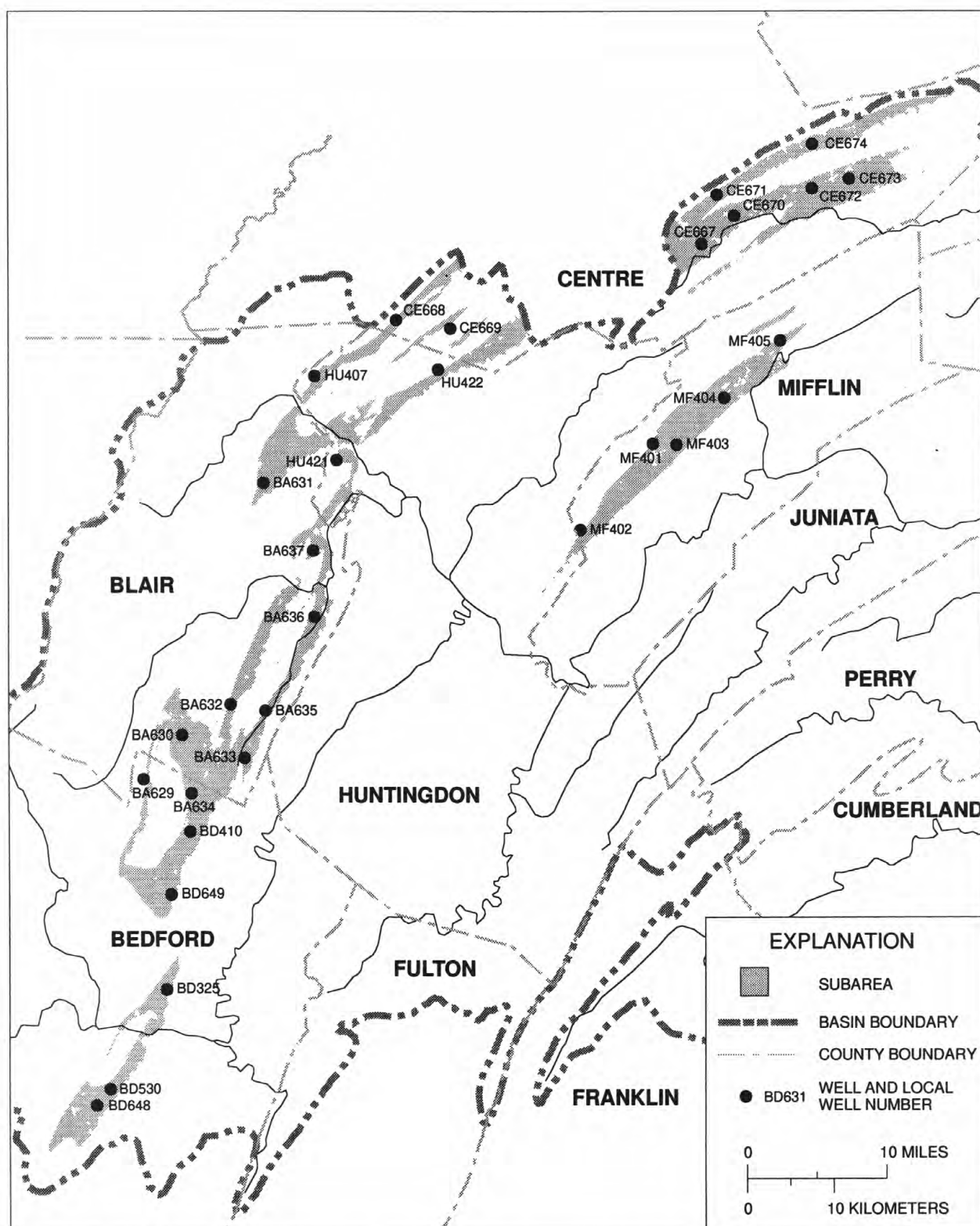


Figure 22. Location and local well number of wells sampled in agricultural land underlain by carbonate bedrock of Cambrian and Ordovician age in the Ridge and Valley Province, Appalachian Mountain Section, Lower Susquehanna River Basin.

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION

GROUND-WATER LEVELS IN WELLS

The following table contains ground water level records from a network of 30 privately-owned wells used to supply water to rural homes and businesses. The network was established as part of The National Water-Quality Assessment (NAWQA) Project in the Lower Susquehanna River Basin.

The wells were sampled to assess the status of ground water quality in areas of agricultural land use underlain by carbonate bedrock of Cambrian and Ordovician age in the Ridge and Valley Physiographic Province, Appalachian Mountain Section. The sampling is thus termed a Land-Use Survey for the NAWQA program. Water-quality data follows the water-level table.

Explanation of Column Headings--SITE IDENTIFIER: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix. AQUIFER CODE: 364BSHL, Benner and Loysburg Formations; 364CBSN, Coburn and Nealmont Formations; 364CSNL, Coburn and Loysburg Formations; 367AXMN, Axemann Formation; 367BFAX, Bellefonte and Axemann Formations; 367BLFN, Bellefonte Formation; 367NNLK, Nittany and Stonehenge (Larke) Formations; 371GBRG, Gatesburg Formation; 371MINS, Mines Member of Gatesburg Formation. ELEVATION OF LAND SURFACE: land-surface at well site, in feet above sea level. SOURCE OF DEPTH DATA: D, Driller; A, Other (Government). WATER LEVEL METHOD: T, electric tape; S, steel tape.

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	AQUIFER CODE	ELEVATION OF LAND SURFACE (FEET) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SOURCE OF DEPTH DATA	DATE	WATER-LEVEL BELOW LAND SURFACE (FEET) (72019)	WATER-LEVEL METHOD
BEDFORD COUNTY									
400317078233501	BD325	Everett	367BLFN	1150	243	D	07-25-94	22.55	S
401303078214401	BD410	Woodbury	367BFAX	1345	150	A	06-14-94 08-10-94	107.6 115.6	T T
395705078280901	BD530	Bedford	367BLFN	1220	100	D	05-11-94 06-07-94 08-02-94	15.10 23.4 26.37	S T S
395605078291501	BD648	Bedford	367NNLK	1330	105	D	05-11-94 06-07-94 08-01-94	24.83 30.8 36.6	S T T
400910078231501	BD649	Loysburg	364CBSN	1270	179	D	06-22-94 08-02-94	60.49 60.53	S S
BLAIR COUNTY									
401617078253401	BA629	Roaring Spring	371GBRG	1440	145	D	05-25-94 06-21-94 08-09-94	13.41 15.9 17.92	S T S
401901078222501	BA630	Roaring Spring	367BFAX	1410	195	D	06-01-94 06-15-94 08-09-94	64.77 70.6 75.14	S T S
403438078154901	BA631	Altoona	364CSNL	1090	210	D	04-22-94 06-22-94 08-10-94	128.5 144.60 142.33	T S S
402056078182701	BA632	Martinsburg	367BFAX	1350	100	D	05-11-94 06-15-94 08-01-94	15.4 22.97 25.6	T S T
401738078171801	BA633	Martinsburg	367BFAX	1370	80	D	05-23-94 06-09-94 08-04-94	39.18 43.0 42.2	S T T
401525078213801	BA634	Martinsburg	367NNLK	1370	170	D	05-26-94 06-15-94 08-01-94	52.32 57.2 64.1	S T T
402033078153501	BA635	Martinsburg	367BFAX	1250	70	D	05-23-94 06-14-94 08-04-94	33.23 34.30 35.0	S S T
402623078113401	BA636	Williamsburg	367BFAX	1050	205	D	05-04-94 06-22-94 08-01-94	40.6 58.7 63.21	T T S
403029078114101	BA637	Williamsburg	367NNLK	1050	226	D	05-18-94 06-21-94 08-10-94	126.2 142.5 158.96	T T S

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION

GROUND-WATER LEVELS IN WELLS--Continued

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	AQUIFER CODE	ELEVATION OF LAND SURFACE (FEET) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SOURCE OF DEPTH DATA	DATE	WATER LEVEL BELOW LAND SURFACE (FEET) (72019)	WATER-LEVEL METHOD
CENTRE COUNTY									
404446078045101	CE546	Warriors Mark	367BFAX	1315	100	D	05-10-94	20.9	T
							06-16-94	29.5	T
							08-04-94	32.00	S
404927077392501	CE667	Centre Hall	367BLFN	1290	200	D	04-14-94	39.7	T
							06-20-94	56.9	T
							08-03-94	78.5	T
404450078004101	CE669	Warriors Mark	367NNLK	1250	180	D	04-21-94	93.66	S
							06-17-94	107.06	S
							08-09-94	116.97	S
405111077364201	CE670	Spring Mills	364CSNL	1210	210	D	06-23-94	129.2	T
							08-03-94	126.60	S
405229077380801	CE671	Centre Hall	364CSNL	1220	200	D	04-15-94	55.0	T
							06-22-94	78.3	T
							08-02-94	64.8	T
405253077301501	CE672	Spring Mills	364CSNL	1190	200	D	04-19-94	84.2	T
							06-24-94	129.10	S
							08-11-94	131.50	S
405327077271201	CE673	Aaronsburg	364CSNL	1170	190	D	05-09-94	127.7	T
							06-20-94	131.4	T
							08-03-94	130.8	T
405537077301301	CE674	Rebersburg	364CSNL	1310	151	D	05-10-94	85.9	T
							06-22-94	103.1	T
							08-02-94	105.3	T
HUNTINGDON COUNTY									
404116078113801	HU407	Tyrone	364CSNL	1130	181	D	05-16-94	158.8	T
							06-17-94	162.1	T
							08-08-94	158.76	S
403604078094601	HU421	Tyrone	371MINS	990	65	D	06-16-94	8.87	S
							08-08-94	9.7	T
404142078012101	HU422	Spruce Creek	371MINS	1130	125	D	06-09-94	21.98	S
							06-16-94	23.35	S
							08-04-94	22.21	S
MIFFLIN COUNTY									
403706077432801	MF401	Belleville	367BLFN	850	120	D	06-21-94	3.47	S
							07-27-94	16.9	T
403148077492901	MF402	Allensville	364CBSN	990	102	D	04-12-94	40.7	T
							06-14-94	48.0	T
							07-27-94	42.97	S
403702077413101	MF403	Belleville	367AXMN	830	175	D	03-30-94	25.6	T
							06-14-94	77.5	T
							07-28-94	76.74	S
403955077373301	MF404	Reedsville	367BLFN	830	200	D	05-03-94	88.7	T
							06-14-94	97.5	T
							08-16-94	95.06	S
404328077325501	MF405	Milroy	364CSNL	850	147	D	05-06-94	42.8	T
							06-22-94	47.00	S
							07-27-94	46.26	S

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION

GROUND-WATER QUALITY IN WELLS

TABLE 5.--PESTICIDE SCHEDULE FOR GROUND WATER WELLS

REMARKS.--Water from each of the 30 wells in this study was tested for pesticides. The table below lists the 47 pesticides on this schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. Users of these data should use the parameter code as a cross-reference to the water-quality tables. This schedule includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid-phase extraction and are sufficiently volatile and thermally stable for analysis by gas chromatography. Samples are filtered through a glass-fibre filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. This pesticide reporting level table is applicable only to ground-water samples collected during the 1994 water year. Each sample was analyzed for all of the compounds in this schedule. **Only pesticide compounds measured at or above the reporting level in one or more wells are listed in the water-quality table.**

NOTE: Reporting levels have changed from those published in the 1993 report.

ALACHLOR ($\mu\text{G/L}$) (46342)	ALPHA BHC ($\mu\text{G/L}$) (34253)	ATRAZINE ($\mu\text{G/L}$) (39632)	BENFLURALIN ($\mu\text{G/L}$) (82673)	BUTYLATE ($\mu\text{G/L}$) (04028)	CARBARYL ($\mu\text{G/L}$) (82680)
0.009	0.007	0.017	0.013	0.008	0.046
CARBOFURAN ($\mu\text{G/L}$) (82674)	CHLOR- PYRIFOS ($\mu\text{G/L}$) (38933)	CYANAZINE ($\mu\text{G/L}$) (04041)	DCPA ($\mu\text{G/L}$) (82682)	DEETHYL ATRAZINE ($\mu\text{G/L}$) (04040)	DIAZINON ($\mu\text{G/L}$) (39572)
0.013	0.005	0.013	0.004	0.005	0.008
DIELDRIN ($\mu\text{G/L}$) (39381)	DIETHYL- ANALINE-2,6 ($\mu\text{G/L}$) (82660)	DIMETHOATE ($\mu\text{G/L}$) (82682)	DISULFOTON ($\mu\text{G/L}$) (82677)	EPTC ($\mu\text{G/L}$) (82668)	ETHAL- FLURALIN ($\mu\text{G/L}$) (82663)
0.008	0.006	0.024	0.06	0.005	0.013
ETHOPROP ($\mu\text{G/L}$) (82672)	FONOFOS ($\mu\text{G/L}$) (04095)	LINDANE ($\mu\text{G/L}$) (39341)	LINURON ($\mu\text{G/L}$) (82666)	MALATHION ($\mu\text{G/L}$) (39532)	METHYL AZINPHOS ($\mu\text{G/L}$) (82686)
0.012	0.008	0.011	0.039	0.014	0.014
METHYL PARATHION ($\mu\text{G/L}$) (82667)	METOLACHLOR ($\mu\text{G/L}$) (39415)	METRIBUZIN ($\mu\text{G/L}$) (82630)	MOLINATE ($\mu\text{G/L}$) (82671)	NAPROP- AMIDE ($\mu\text{G/L}$) (82684)	P,P-DDE ($\mu\text{G/L}$) (34653)
0.035	0.009	0.012	0.007	0.01	0.02
PARATHION ($\mu\text{G/L}$) (39542)	PEBULATE ($\mu\text{G/L}$) (82669)	PENDI- METHALIN ($\mu\text{G/L}$) (82683)	PERMETHRIN- CIS ($\mu\text{G/L}$) (82687)	PHORATE ($\mu\text{G/L}$) (82664)	PROMETON ($\mu\text{G/L}$) (04037)
0.022	0.009	0.018	0.016	0.011	0.008
PRONAMIDE ($\mu\text{G/L}$) (82676)	PROPACHLOR ($\mu\text{G/L}$) (04024)	PROPANIL ($\mu\text{G/L}$) (82679)	PROPARGITE ($\mu\text{G/L}$) (82685)	SIMAZINE ($\mu\text{G/L}$) (04035)	TEBUTHIURON ($\mu\text{G/L}$) (82670)
0.009	0.015	0.016	0.008	0.008	0.015
TERBACIL ($\mu\text{G/L}$) (82665)	TERBUFOS ($\mu\text{G/L}$) (82675)	THIOBENCARB ($\mu\text{G/L}$) (82681)	TRIALATE ($\mu\text{G/L}$) (82678)	TRIFLURALIN ($\mu\text{G/L}$) (82661)	
0.03	0.012	0.008	0.008	0.012	

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION

GROUND-WATER QUALITY IN WELLS

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE.

REMARKS.--Water from 9 of the 30 wells in this study was tested for a schedule of 60 Volatile Organic Compounds (VOC's). The table below lists the compounds on the schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. The county and local number of the wells sampled for VOC's were: **Blair County**; BA630, BA637, **Bedford County**; BD530, **Centre County** CE669, CE671, CE672, **Huntingdon County**; HU421, and **Mifflin County**; MF402, and MF404. No VOC's were detected in any of the wells sampled.

BENZENE ($\mu\text{G/L}$) (34030)	BENZENE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77613))	BENZENE, 1,2,4- TRICHLORO- ($\mu\text{G/L}$) (34551)	BENZENE, 1,2,4- TRIMETHYL- (PSEUDOCUMENE) ($\mu\text{G/L}$) (77222)	BENZENE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34536)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1,3,5- TRIMETHYL (MESITYLENE) ($\mu\text{G/L}$) (77226)	BENZENE, 1,3- DICHLORO- ($\mu\text{G/L}$) (34586)	BENZENE, 1,4- DICHLORO- ($\mu\text{G/L}$) (34571)	BENZENE, 1-CHLORO- 2-METHYL- (O-CHLORO -TOLUENE) ($\mu\text{G/L}$) (77275)	BENZENE, 1-CHLORO- 4-METHYL- (TOLUENE, P-CHLOR) ($\mu\text{G/L}$) (77277)
0.2	0.2	0.2	0.2	0.2
BENZENE, ISOPROPYL ($\mu\text{G/L}$) (77223)	BENZENE, BROMO- ($\mu\text{G/L}$) (81555)	BENZENE, CHLORO- ($\mu\text{G/L}$) (34301)	BENZENE, DIMETHYL- (XYLENE) ($\mu\text{G/L}$) (81551)	BENZENE, ETHYL- ($\mu\text{G/L}$) (34371)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1-METHYL- 4-ISOPROPYL (ISOPROPYL TOLUENE) ($\mu\text{G/L}$) (77356)	BENZENE, METHYL- (TOLUENE) ($\mu\text{G/L}$) (34010)	BENZENE, n-BUTYL- ($\mu\text{G/L}$) (77342)	BENZENE, n-PROPYL- ($\mu\text{G/L}$) (77224)	BENZENE, sec-BUTYL- ($\mu\text{G/L}$) (77350)
0.2	0.2	0.2	0.2	0.2
BENZENE, tert-BUTYL- ($\mu\text{G/L}$) (77353)	ETHANE, 1,1,1,2- TETRACHLORO- ($\mu\text{G/L}$) (77562)	ETHANE, 1,1,1- TRICHLORO- ($\mu\text{G/L}$) (34506)	ETHANE, 1,1,2,2- TETRACHLORO- ($\mu\text{G/L}$) (34516)	ETHANE, 1,1,2- TRICHLORO- ($\mu\text{G/L}$) (34511)
0.2	0.2	0.2	0.2	0.2
ETHANE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34496)	ETHANE, 1,2- DIBROMO- (EDB) ($\mu\text{G/L}$) (77651)	ETHANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (32103)	ETHANE, CHLORO- ($\mu\text{G/L}$) (34311)	ETHANE, TRICHLOROTRIFLUORO- (FREON-113) ($\mu\text{G/L}$) (77652)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34501)	ETHYLENE, CHLORO- (VINYL CHLORIDE) ($\mu\text{G/L}$) (39175)	ETHYLENE, cis-1,2- DICHLORO- ($\mu\text{G/L}$) (77093)	ETHYLENE, TETRACHLORO- ($\mu\text{G/L}$) (34475)	ETHYLENE, trans1,2 DICHLORO- ($\mu\text{G/L}$) (34546)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, TRICHLORO- ($\mu\text{G/L}$) (39180)	HEXACHLORO- BUTADIENE ($\mu\text{G/L}$) (39702)	METHANE, BROMO- ($\mu\text{G/L}$) (34413)	METHANE, BROMOCHLORO- ($\mu\text{G/L}$) (77297)	METHANE, CHLORO- (METHYL CHLORIDE) ($\mu\text{G/L}$) (34418)
0.2	0.2	0.2	0.2	0.2

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION

GROUND-WATER QUALITY IN WELLS

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE--Continued

METHANE, DIBROMO- ($\mu\text{G/L}$) (30217)	METHANE, DIBROMOCHLORO- ($\mu\text{G/L}$) (32105)	METHANE, DICHLORO- (METHYLENE CHLORIDE) ($\mu\text{G/L}$) (34423)	METHANE, DICHLOROBROMO- ($\mu\text{G/L}$) (32101)	METHANE, DICHLORODIFLUORO- ($\mu\text{G/L}$) (34668)
0.2	0.2	0.2	0.2	0.2
METHANE, TETRACHLORO- (CARBON TETRACHLORIDE) ($\mu\text{G/L}$) (32102)	METHANE, TRIBROMO- (BROMOFORM) ($\mu\text{G/L}$) (32104)	METHANE, TRICHLORO- (CHLOROFORM) ($\mu\text{G/L}$) (32106)	METHANE, TRICHLOROFLUORO- ($\mu\text{G/L}$) (34888)	PROPENE 2-METHOXY-2-METHYL (METHYL ETHER TERT-BUTYL) ($\mu\text{G/L}$) (78032)
0.2	0.2	0.2	0.2	0.2
NAPTHELENE ($\mu\text{G/L}$) (34696)	PROPANE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77443)	PROPANE, 1,2- DIBROMO-3- CHLORO-(DBCP) ($\mu\text{G/L}$) (82625)	PROPANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34541)	PROPANE, 1,3- DICHLORO- ($\mu\text{G/L}$) (77173)
0.2	0.2	1.0	0.2	0.2
PROPANE, 2,2- DICHLORO- ($\mu\text{G/L}$) (77170)	PROPENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (77168)	PROPENE, cis-1,3- DICHLORO- ($\mu\text{G/L}$) (34704)	PROPENE, trans-1,3- DICHLORO- ($\mu\text{G/L}$) (34699)	STYRENE ($\mu\text{G/L}$) (77128)
0.2	0.2	0.2	0.2	0.2

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION

GROUND-WATER QUALITY IN WELLS

REMARKS.--Explanation of column headings--SITE IDENTIFIER: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; ELEVATION OF LAND SURFACE: land-surface at well site in feet above sea level; G/M: gallons per minute; μS/CM: microsiemens per centimeter at 25 degrees Celsius; DEG.C: degrees Celsius; MG/L: milligrams per liter; μG/L: micrograms per liter; COLS. PER 100 ML: colonies per 100 milliliters; WH IT: alkalinity, bicarbonate and carbonate as determined by incremental titration of unfiltered water at field site; PCI/L: picocuries per liter; 2 SIGMA: counting statistic that represents error in the reported radon, uranium, or tritium value caused by variation in sample counting, background radiation, volume of sample, and decay since sample was collected. The remark code "E" for deethyl atrazine indicates an estimated value based on low recovery for this analyte.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	DATE	TIME	WATER-LEVEL BELOW LAND SURFACE (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEVATION OF LAND SURFACE (FEET) (72000)	FLOW RATE, INSTANTANEOUS (G/M) (00059)	SPECIFIC CONDUCTANCE (μS/CM) (00095)
BEDFORD COUNTY									
400317078233501	BD325	Everett	07-25-94	1410	22.55	243	1150	5.0	480
401303078214401	BD410	Woodbury	08-10-94	0920	115.6	150	1345	5.0	637
395705078280901	BD530	Bedford	08-02-94	1330	26.37	100	1220	3.3	560
395605078291501	BD648	Bedford	08-01-94	0910	36.6	105	1330	5.0	527
400910078231501	BD649	Loysburg	08-02-94	1000	60.53	179	1270	4.0	639
BLAIR COUNTY									
401617078253401	BA629	Roaring Spring	08-09-94	1250	17.92	145	1440	5.0	327
401901078222501	BA630	Roaring Spring	08-09-94	0940	75.14	195	1410	4.3	659
403438078154901	BA631	Altoona	08-10-94	0950	142.33	210	1090	4.3	772
402056078182701	BA632	Martinsburg	08-01-94	0940	25.6	100	1350	2.7	657
401738078171801	BA633	Martinsburg	08-04-94	1300	42.2	80	1370	4.3	778
401525078213801	BA634	Martinsburg	08-01-94	1310	64.1	170	1370	4.0	674
402033078153501	BA635	Martinsburg	08-04-94	0950	35.0	70	1250	3.3	616
402623078113401	BA636	Williamsburg	08-01-94	1330	63.21	205	1050	4.3	871
403029078114101	BA637	Williamsburg	08-10-94	1300	158.96	226	1050	8.5	387
CENTRE COUNTY									
404446078045101	CE546	Warriors Mark	08-04-94	0930	32.00	100	1315	4.0	635
404927077392501	CE667	Centre Hall	08-03-94	1250	78.5	200	1290	5.4	450
404450078004101	CE669	Warriors Mark	08-09-94	1020	116.97	180	1250	2.8	520
405111077364201	CE670	Spring Mills	08-03-94	0930	126.60	210	1210	4.3	656
405229077380801	CE671	Centre Hall	08-02-94	1220	64.8	200	1220	6.0	867
405253077301501	CE672	Spring Mills	08-11-94	0950	131.50	200	1190	5.0	671
405327077271201	CE673	Aaronsburg	08-03-94	0930	130.8	190	1170	4.0	666
405537077301301	CE674	Rebersburg	08-02-94	0900	105.3	151	1310	2.5	682
HUNTINGDON COUNTY									
404116078113801	HU407	Tyrone	08-08-94	1000	158.76	181	1130	3.8	489
403604078094601	HU421	Tyrone	08-08-94	1000	9.7	65	990	3.3	526
404142078012101	HU422	Spruce Creek	08-04-94	1230	22.21	125	1130	9.6	438
MIFFLIN COUNTY									
403706077432801	MF401	Belleville	07-27-94	0930	16.9	120	850	5.0	764
403148077492901	MF402	Allensville	07-27-94	1310	42.97	102	990	3.5	940
403702077413101	MF403	Belleville	07-28-94	0930	76.74	175	830	4.0	689
403955077373301	MF404	Reedsville	08-16-94	0920	95.06	200	830	3.6	650
404328077325501	MF405	Milroy	07-27-94	0940	46.26	147	850	2.9	625

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, TOTAL (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL (COLS. PER 100 ML) (31625)	E.COLI (COLS. PER 100 ML) (31633)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
BEDFORD COUNTY										
BD325	7.2	12.0	1.9	26	K 2	K 2	>100	249	52	29
BD410	7.3	12.0	7.1	>80	<1	<1	<1	316	72	33
BD530	7.4	13.5	7.5	K 4	<1	<1	<1	272	56	32
BD648	7.2	11.0	7.7	>80	<1	<1	>100	274	57	32
BD649	7.3	12.5	8.0	34	K 4	K 2	K10	324	80	30
BLAIR COUNTY										
BA629	7.8	11.5	3.7	<1	<1	--	<1	163	40	15
BA630	7.4	12.0	9.1	K 1	<1	<1	22	307	65	35
BA631	7.2	12.0	6.6	36	K 1	K 1	>100	398	89	42
BA632	7.4	12.0	9.0	K18	<1	<1	K 6	314	73	32
BA633	7.2	13.5	8.6	K11	<1	K 3	>100	375	76	45
BA634	7.3	11.5	7.9	K 3	<1	<1	K 1	328	72	36
BA635	7.4	13.5	6.7	31	<1	<1	K 4	208	47	22
BA636	7.4	12.0	8.9	K 2	<1	<1	>100	369	77	43
BA637	7.7	11.5	14	<1	<1	--	<1	195	40	23
CENTRE COUNTY										
CE546	7.3	11.0	9.2	>80	<1	<1	92	336	75	36
CE667	7.7	10.5	10	K 4	<1	--	K 5	223	48	25
CE669	7.6	12.5	7.5	K 4	<1	<1	K 6	258	62	25
CE670	7.0	11.0	9.4	<1	<1	--	<1	329	100	19
CE671	7.4	14.0	7.6	>80	K 4	K 1	22	340	88	29
CE672	7.2	11.5	7.7	>80	<1	>80	<1	320	120	4.9
CE673	7.1	12.5	7.6	46	K 2	K 1	>100	328	120	6.8
CE674	7.2	11.0	.5	30	<1	<1	>100	379	87	35
HUNTINGDON COUNTY										
HU407	7.4	10.5	7.2	>80	68	48	>100	224	80	5.9
HU421	7.3	12.5	.1	K 6	<1	<1	K 2	285	99	8.9
HU422	7.7	11.0	7.1	<1	<1	--	K 6	221	49	24
MIFFLIN COUNTY										
MF401	7.1	11.5	7.6	>80	<1	K 2	32	426	90	48
MF402	7.1	12.5	6.0	>80	>60	<1	>100	380	140	7.2
MF403	7.3	11.0	9.0	K 2	<1	<1	K 1	351	99	25
MF404	7.3	12.0	9.6	64	<1	<1	96	333	74	36
MF405	7.4	12.5	7.9	46	<1	K 1	>100	320	88	24

GROUND-WATER DATA COLLECTED AT SPECIAL STUDY-SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WH IT (MG/L AS HCO3) (00450)	CAR- BONATE WH IT (MG/L AS CO3) (00447)	ALKA- LINITY WH IT (MG/L AS CACO3) (00419)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
BEDFORD COUNTY										
BD325	5.9	.9	242	0	200	27	13	<.1	.030	6.7
BD410	5.2	1.8	297	0	240	20	18	.1	.020	8.0
BD530	4.0	1.2	278	0	230	13	10	<.1	.030	6.9
BD648	2.1	1.8	280	0	230	13	7.8	<.1	.030	7.6
BD649	2.5	1.6	315	0	260	20	9.1	<.1	.030	6.9
BLAIR COUNTY										
BA629	1.8	1.1	172	0	140	14	3.3	.3	<.010	7.4
BA630	11	1.4	281	0	230	21	26	.1	.020	8.0
BA631	8.2	1.2	366	0	300	33	21	.2	.040	6.6
BA632	6.8	3.7	288	0	240	13	17	<.1	.040	8.6
BA633	7.9	1.6	371	0	300	21	20	<.1	.030	7.6
BA634	4.4	1.7	322	0	260	21	16	<.1	.040	7.6
BA635	52	1.3	308	0	250	19	13	<.1	.040	7.7
BA636	27	1.0	353	0	290	30	64	<.1	.030	5.2
BA637	1.7	1.2	190	0	160	9	6.4	<.1	.030	7.3
CENTRE COUNTY										
CE546	3.0	0.8	329	0	270	26	4.9	<.1	.020	5.1
CE567	1.6	0.8	214	0	180	8.2	11	<.1	.030	6.9
CE669	3.5	1.4	280	0	230	18	11	.2	.010	6.9
CE670	3.4	.7	359	0	290	18	9.9	<.1	.030	5.8
CE671	43	.8	336	0	280	30	91	.1	.010	6.2
CE672	6.7	.8	322	0	260	18	19	<.1	.030	6.0
CE673	12	.5	342	0	280	21	18	<.1	.040	5.3
CE674	1.8	.9	366	0	300	64	12	.1	.040	6.8
HUNTINGDON COUNTY										
HU407	4.5	1.4	237	0	190	25	10	.1	<.010	7.4
HU421	6.0	1.1	320	0	260	31	2.7	.1	.030	16
HU422	1.6	1.1	212	0	170	9.7	6.5	<.1	.020	6.8
MIFFLIN COUNTY										
MF401	5.8	.8	400	0	330	30	19	.2	.020	6.6
MF402	48	.6	328	0	270	29	95	<.1	.040	7.1
MF403	4.9	1.5	317	0	260	21	17	.1	.030	9.5
MF404	3.4	1.0	322	0	260	17	18	.2	.040	7.9
MF405	10	.5	300	0	250	25	22	.2	.020	5.7

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	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)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	IRON, DIS- SOLVED (µG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L) AS MN) (01056)
BEDFORD COUNTY										
BD325	278	264	.040	2.40	.020	<.20	<.010	<.010	4	1
BD410	357	353	<.010	12.0	.020	<.20	<.010	<.010	<3	<1
BD530	287	236	<.010	7.90	.020	<.20	<.010	<.010	<3	<1
BD648	274	291	<.010	8.00	.030	<.20	<.010	<.010	<3	<1
BD649	289	354	<.010	11.0	.020	<.20	<.010	<.010	<3	<1
BLAIR COUNTY										
BA629	180	177	<.010	2.00	<.010	<.20	<.010	<.010	<3	<1
BA630	367	363	<.010	13.0	.020	<.20	<.010	<.010	<3	<1
BA631	436	441	<.010	13.0	.030	<.20	<.010	<.010	4	<1
BA632	337	376	<.010	18.0	.030	<.20	<.010	<.010	<3	<1
BA633	457	440	.010	18.0	.020	<.20	<.010	<.010	<3	<1
BA634	387	384	<.010	15.0	.030	<.20	.010	<.010	<3	<1
BA635	360	361	<.010	11.0	.020	<.20	<.010	<.010	<3	<1
BA636	396	464	<.010	9.70	.030	<.20	<.010	<.010	3	<1
BA637	206	217	<.010	7.80	.010	<.20	.020	<.010	5	<1
CENTRE COUNTY										
CE546	335	356	.010	9.80	.030	<.20	<.010	<.010	<3	<1
CE667	241	248	<.010	9.40	.020	<.20	.010	.010	<3	<1
CE669	246	290	<.010	5.50	.020	<.20	.010	<.010	<3	<1
CE670	281	353	<.010	4.30	.020	<.20	<.010	<.010	<3	<1
CE671	467	466	<.010	2.80	.020	<.20	<.010	<.010	<3	5
CE672	417	378	<.010	10.0	.020	<.20	.020	<.010	<3	<1
CE673	382	386	<.010	8.20	.020	<.20	<.010	<.010	<3	<1
CE674	397	405	.020	.200	.030	<.20	<.010	<.010	12	3
HUNTINGDON COUNTY										
HU407	269	281	<.010	7.00	.030	<.20	.020	.020	<3	<1
HU421	316	322	<.010	.100	.090	<.20	.010	<.010	79	360
HU422	218	227	<.010	5.30	.020	<.20	<.010	<.010	12	1
MIFFLIN COUNTY										
MF401	447	441	<.010	10.0	<.010	<.20	<.010	<.010	<3	<1
MF402	593	527	<.010	8.70	<.010	<.20	<.010	<.010	<3	2
MF403	387	396	<.010	14.0	.010	<.20	<.010	<.010	<3	<1
MF404	352	365	<.010	11.0	.030	<.20	<.010	<.010	<3	<1
MF405	352	343	<.010	4.20	<.010	<.20	<.010	<.010	4	<1

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	STRON- TIUM, DIS- SOLVED (µG/L AS SR) (01080)	RADON 222 TOTAL (PCI/L) (82303)	RADON- 222 2 SIGMA TOTAL (PCI/L) (76002)	URANIUM NATURAL DIS- SOLVED (µG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA SOLVED (µG/L) (75990)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA (PCI/L) (75985)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
BEDFORD COUNTY										
BD325	60	390	23	1.0	.153	-56.4	-8.95	47	3.0	.3
BD410	50	410	23	<.4	.033	--	--	--	--	.5
BD530	30	910	29	<.4	.003	-58.1	-8.95	--	--	.2
BD648	50	630	25	<.4	.004	--	--	--	--	.3
BD649	250	260	19	<.4	.006	--	--	--	--	.3
BLAIR COUNTY										
BA629	840	700	28	<.4	.038	-61.8	-9.45	41	3.0	.4
BA630	50	550	26	<.4	.040	--	--	--	--	.4
BA631	2500	500	25	.8	.118	--	--	--	--	.4
BA632	80	710	27	<.4	.004	-63.9	-9.75	--	--	.3
BA633	40	320	21	<.4	.017	-62.1	-9.45	--	--	.3
BA634	70	470	22	<.4	.039	-60.3	-9.35	--	--	.3
BA635	30	520	25	<.4	.042	--	--	--	--	.3
BA636	30	280	20	<.4	.040	--	--	--	--	.9
BA637	30	280	21	<.4	.015	--	--	--	--	.1
CENTRE COUNTY										
CE546	140	300	22	.5	.012	--	--	--	--	.8
CE667	60	320	20	<.4	.004	--	--	--	--	.3
CE669	40	430	24	<.4	.039	-59.0	-9.25	60	4.0	.3
CE670	640	320	21	<.4	.007	-59.8	-9.30	38	3.0	.6
CE671	400	540	24	<.4	.038	-59.5	-9.15	39	3.0	.4
CE672	240	530	25	<.4	.025	-61.7	-9.35	--	--	.7
CE673	470	720	26	<.4	.016	--	--	--	--	.6
CE674	15000	150	17	12	1.75	-59.0	-9.20	33	2.0	.3
HUNTINGDON COUNTY										
HU407	350	550	25	<.4	.039	--	--	--	--	.6
HU421	780	620	27	1.4	.206	-56.4	-8.95	45	3.0	.4
HU422	90	270	21	<.4	.005	-60.5	-9.35	54	3.0	.2
MIFFLIN COUNTY										
MF401	2700	350	26	.4	.061	-68.9	-10.3	--	--	.9
MF402	780	590	29	.4	.060	-62.8	-9.55	--	--	1.0
MF403	430	550	26	<.4	.045	-56.0	-8.75	50	3.0	.4
MF404	890	440	24	.5	.081	-54.6	-8.50	--	--	.5
MF405	1100	410	27	<.4	.051	-62.6	-9.40	37	3.0	.6

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CARBONATE BEDROCK IN THE RIDGE AND VALLEY PHYSIOGRAPHIC PROVINCE, APPALACHIAN MOUNTAIN SECTION--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	ALA- CHLOR (µG/L) (46342)	ATRA- ZINE (µG/L) (39632)	CYANA- ZINE (µG/L) (04041)	DEETHYL ATRA- ZINE (µG/L) (04040)	METO- LACHLOR (µG/L) (39415)	PRO- METON (µG/L) (04037)	SI- MAZINE (µG/L) (04035)	TEBU- THIURON (µG/L) (82670)
BEDFORD COUNTY									
BD325	<.02	<.009	.017	<.013	E .002	<.009	<.008	<.008	<.015
BD410	<.02	<.009	.220	<.013	E .220	<.009	<.008	.010	<.015
BD530	.03	<.009	.210	<.013	E .250	<.009	<.008	.043	<.015
BD648	<.02	<.009	.150	<.013	E .170	<.009	<.008	.010	.035
BD649	.03	<.009	.220	<.013	E .270	<.009	<.008	.012	<.015
BLAIR COUNTY									
BA629	<.02	<.009	.017	<.013	E .004	<.009	<.008	<.008	<.015
BA630	<.02	<.009	.180	<.013	E .210	<.009	.021	.015	<.015
BA631	<.02	<.009	.130	<.013	E .170	<.009	<.008	.009	<.015
BA632	.02	<.009	.190	<.013	E .170	<.009	<.008	<.008	<.015
BA633	<.02	<.009	.300	<.013	E .440	<.009	<.008	.130	<.015
BA634	<.02	<.009	.330	<.013	E .240	.022	<.008	.032	<.015
BA635	<.02	<.009	.260	<.013	E .240	.010	.015	.076	<.015
BA636	.03	<.009	.180	<.013	E .410	<.009	.120	<.008	<.015
BA637	<.02	<.009	.041	<.013	E .028	<.009	<.008	<.008	<.015
CENTRE COUNTY									
CE546	.04	<.009	.130	.140	E .150	.076	<.008	.024	<.015
CE667	<.02	<.009	.140	<.013	E .180	<.009	<.008	<.008	<.015
CE669	<.02	.023	.120	<.013	E .056	<.009	<.008	<.008	<.015
CE670	.02	<.009	.061	<.013	E .065	<.009	<.008	<.008	<.015
CE671	<.02	<.009	.260	.070	E .200	.340	<.008	<.008	<.015
CE672	<.02	<.009	.220	<.013	E .110	<.009	<.008	<.008	<.015
CE673	<.02	<.009	.050	<.013	E .080	<.009	<.008	<.008	<.015
CE674	<.02	<.009	.046	<.013	E .054	<.009	<.008	<.008	<.015
HUNTINGDON COUNTY									
HU407	<.02	<.009	.057	<.013	E .035	<.009	<.008	<.008	<.015
HU421	<.02	<.009	.017	<.013	E .007	<.009	<.008	<.008	<.015
HU422	<.02	<.009	.170	<.013	E .110	<.009	<.008	.011	<.015
MIFFLIN COUNTY									
MF401	<.02	<.009	2.10	.160	E .680	.380	<.008	1.30	<.015
MF402	.30	<.009	.056	<.013	E .067	<.009	<.008	<.008	<.015
MF403	<.02	<.009	.630	.042	E .360	.370	.035	.057	<.015
MF404	<.02	<.009	.058	<.013	E .085	<.009	<.008	<.008	<.015
MF405	.02	<.009	.030	<.013	E .033	<.009	<.008	<.008	<.015

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

The following tables contain water-level and water-quality records from a network of 30 privately-owned wells used to supply water to rural homes and businesses. The network was established as part of the National Water-Quality Assessment (NAWQA) project in the Lower Susquehanna River Basin. This study included six wells in the State of Maryland.

The network represents a subarea of the Lower Susquehanna River Basin in the Piedmont Physiographic Province. The subarea is limited to areas underlain by crystalline rocks and includes formations of Paleozoic, Lower Cambrian, and Precambrian age. The subarea is bounded on the north by carbonate formations of Cambrian and Ordovician age, and siliciclastic rocks of Triassic age. The network is located in areas adjacent to the Susquehanna River Valley in Chester, Lancaster, and York counties in Pennsylvania, and Cecil and Harford counties in Maryland. The well network represents both forested and agricultural settings. Waters from the wells were sampled to assess the status of ground-water quality. The sampling is termed a Study-Unit Survey for the NAWQA program.

Samples were tested for physical characteristics, nutrients, major and minor elements, and 47 pesticides. A subset of 10 wells was also sampled for a schedule of 60 volatile organic compounds (VOC's). Many of the constituents were not detected. Tables listing all of the VOC and pesticide analytes and their detection levels precede the water-quality table. The VOC table also lists those sites where the VOC samples were taken. The concentrations of VOCs and pesticides in water that were detected from one or more wells were also included in the water-quality table. Only those compounds that had detectable concentrations are listed in the table of water-quality data.

The shaded portion of the following figure shows the sampling subarea in the crystalline bedrock areas of the Piedmont Physiographic Province.

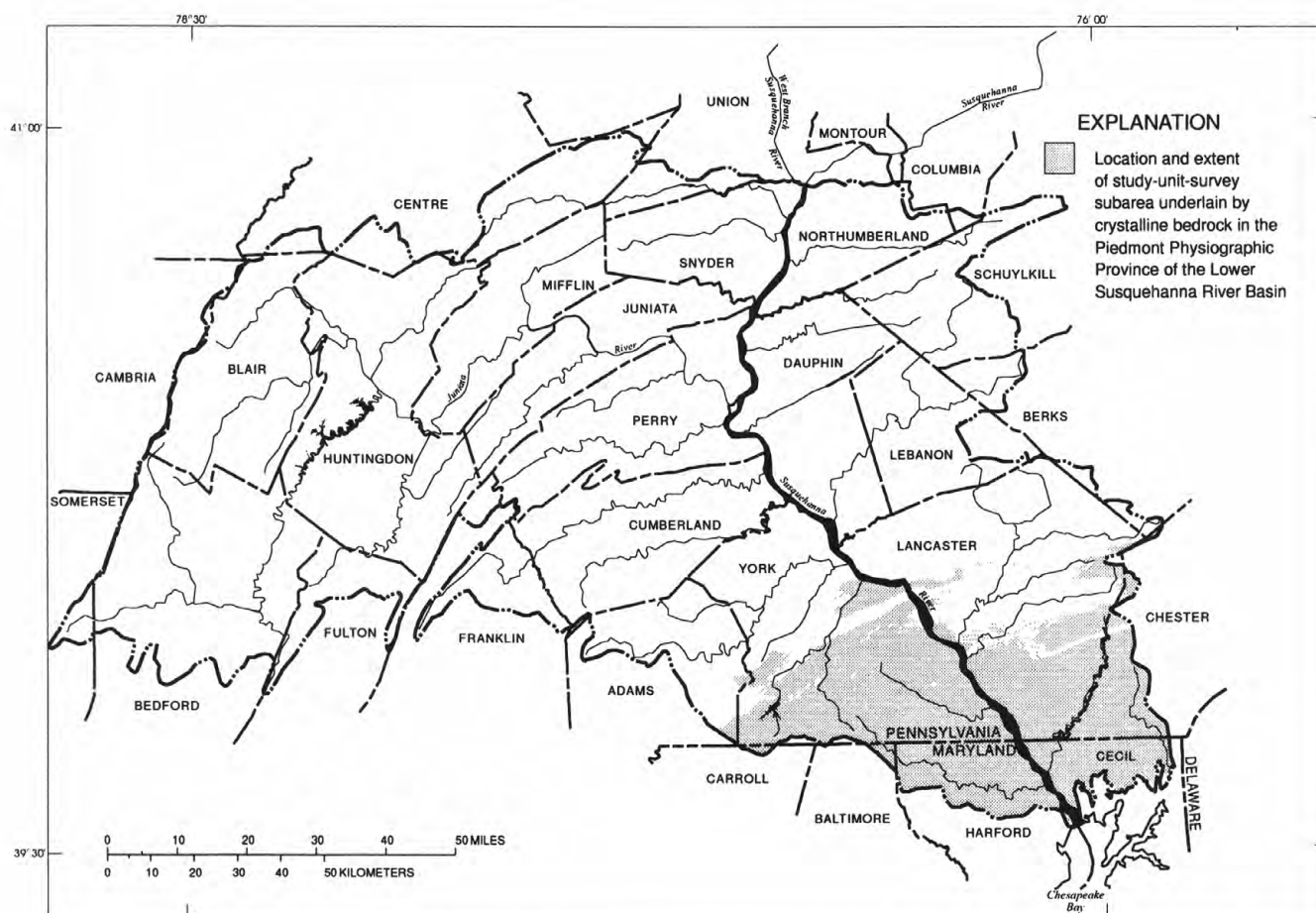


Figure 23. Location and areal extent of the study-unit-survey subarea underlain by crystalline bedrock in the Piedmont Physiographic Province, Lower Susquehanna River Basin.

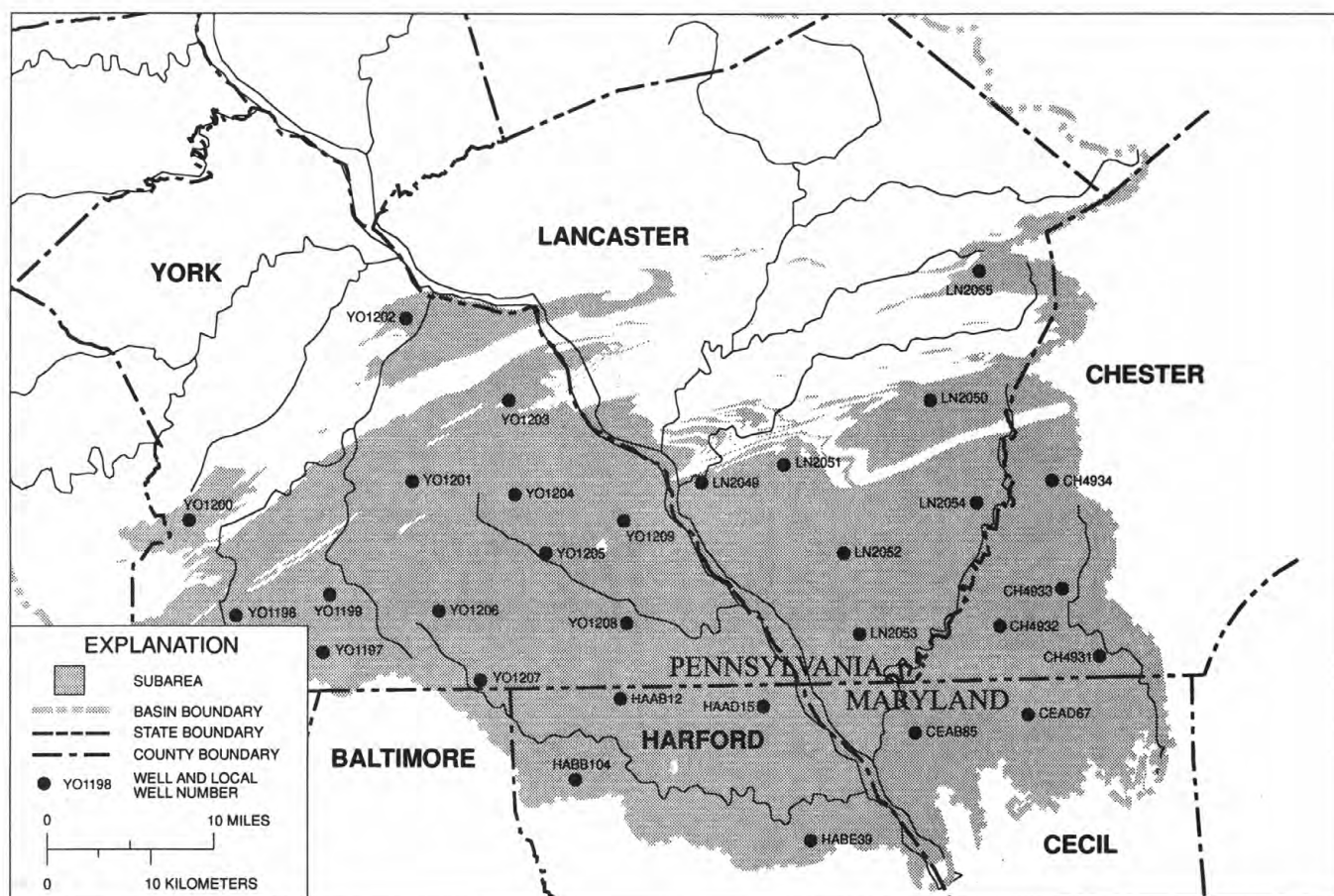


Figure 24. Location and local well number of wells sampled in a subarea of crystalline bedrock in the Piedmont Physiographic Province, Lower Susquehanna River Basin.

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

GROUND-WATER LEVELS IN WELLS

The following table contains ground-water-level records from a network of 24 privately-owned wells used to supply water to rural homes and businesses. The network was established as part of The National Water-Quality Assessment (NAWQA) Project in the Lower Susquehanna River Basin.

The well network represents a subarea of the Lower Susquehanna River Basin in the Piedmont Physiographic Province. The subarea is limited to areas underlain by gneiss, metavolcanics, quartz, phyllite, and schist and includes formations of Upper Paleozoic and Lower Cambrian age. The network is in areas of Chester County and in areas adjacent to the Susquehanna River Valley in Lancaster and York Counties. The network also extends into Cecil and Harford Counties of Maryland. The well network represents both forested and agricultural settings, and wells were sampled to assess the status of ground water quality. The sampling is termed a Study-Unit Survey for the NAWQA program. Water-quality data follows the water-level table.

Explanation of Column Headings--SITE IDENTIFIER: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix. AQUIFER CODE: 000GRGS, Granitic Gneiss; 300MRBG, Marburg Schist of Wissahickon Formation; 300PRCK, Peters Creek Schist; 300WSCK, Wissahickon Formation (Oligoclase Mica Schist); 300WSCKA, Wissahickon Formation (Albite-Chlorite Schist); 300WSCKV, Metavolcanics; 377ANTM, Antietam Formation; 377CCKS, Chickies Formation; 377HRPR, Harpers Formation. ELEVATION OF LAND SURFACE: land-surface at well site, in feet above sea level. SOURCE OF DEPTH DATA: D, Driller; O, Owner; Z, Other. WATER LEVEL METHOD: T, electric tape; S, steel tape.

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	AQUIFER CODE	ELEVATION OF LAND SURFACE (FEET) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SOURCE OF DEPTH DATA	DATE	WATER-LEVEL BELOW LAND SURFACE (FEET) (72019)	WATER-LEVEL METHOD
CHESTER COUNTY									
394426075533501	CH4931	Oxford	300WSCK	410	132	D	12-15-93 06-13-94 07-21-94	26.0 25.6 25.29	T T S
394606076002001	CH4932	Oxford	300WSCK	500	143	O	12-14-93 06-03-94 07-18-94	43.2 42.1 41.7	T T T
394759075560301	CH4933	Oxford	300WSCK	480	157	D	11-24-93 06-02-94 07-14-94	34.4 33.15 33.58	T S S
395335075563501	CH4934	Cochranville	300PRCK	510	135	D	12-23-93 06-02-94 07-19-94	9.6 11.4 11.36	T T S
LANCASTER COUNTY									
395349076204401	LN2049	Pequea	300WSCKA	300	186	D	11-16-93 05-26-94 07-14-94	72.2 67.9 65.9	T T T
395752076045001	LN2050	Paradise	000GRGS	760	130	Z	12-07-93 05-31-94 07-20-94	25.0 28.3 32.58	T T S
395440076150301	LN2051	New Providence	300WSCKA	620	200	D	12-15-93 06-03-94 07-14-94	51.08 31.31 38.86	S S S
395003076110001	LN2052	Quarryville	300WSCKA	580	180	D	11-17-93 05-25-94 07-12-94	69.8 68.2 67.97	T T S
394550076100001	LN2053	Peach Bottom	300PRCK	320	63	D	12-15-93 05-27-94 07-12-94	9.1 9.4 10.98	T T S
395230076014801	LN2054	Christiana	300PRCK	430	105	D	12-07-93 05-25-94 07-18-94	2.4 4.4 6.7	T T T
400432076011901	LN2055	New Holland	377CCKS	1000	180	D	11-30-93 06-02-94 07-19-94	59.4 31.7 42.89	T T S

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT
 SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE
GROUND-WATER LEVELS IN WELLS--Continued

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	AQUIFER CODE	ELEV. OF LAND SURFACE DATUM (FEET ABOVE NGVD (72000))	DEPTH OF WELL (TOTAL FEET) (72008)	SOURCE OF DEPTH DATA	DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL FEET) (72019)	WATER- LEVEL METHOD
YORK COUNTY									
394515076470101	YO1197	Glen Rock	300WSCKV	810	140	D	09-22-93 06-10-94 07-18-94	38.2 38.8 37.38	T T S
394745076524801	YO1198	Spring Grove	300MRBG	730	125	D	10-01-93 06-13-94 06-28-94	39.77 29.1 28.39	S T S
394816076463001	YO1199	Glen Rock	300MRBG	790	175	D	12-29-93 06-03-94 07-21-94	55.4 59.7 58.0	T T T
395210076560401	YO1200	Hanover	377CCKS	920	150	D	09-24-93 05-27-94 07-18-94	66.7 51.0 62.89	T T S
395404076404401	YO1201	York	377HRPR	770	170	D	10-25-93 05-26-94 07-13-94	47.5 44.3 47.39	T T S
400230076410201	YO1202	Mount Wolf	377ANTM	600	140	D	10-21-93 06-08-94 07-12-94	85.9 83.5 88.41	T T S
395812076340001	YO1203	York	377ANTM	500	100	D	02-10-94 06-08-94 07-12-94	47.1 48.6 48.17	T T S
395320076334001	YO1204	Red Lion	300WSCK	900	200	D	10-26-93 05-26-94 06-29-94	85.1 72.4 76.94	T T S
395017076313501	YO1205	Felton	300WSCKA	600	200	D	10-26-93 06-01-94 07-20-94	32.0 33.1 35.0	T T T
394721076390101	YO1206	New Freedom	300WSCKA	970	140	D	10-18-93 06-01-94 06-29-94	55.8 49.1 49.8	T T T
394343076361301	YO1207	Stewarts- town	300WSCKA	730	200	D	12-16-93 05-24-94 07-11-94	40.7 38.6 40.15	T T S
394637076260501	YO1208	Fawn Grove	300WSCKA	640	200	D	11-10-93 06-01-94 07-11-94	72.1 71.3 69.49	T T S
395204076262101	YO1209	Brogue	300WSCKA	740	175	D	06-08-94 06-10-94 07-20-94	65.2 66.6 66.42	T T S

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

GROUND-WATER QUALITY IN WELLS

TABLE 5.--PESTICIDE SCHEDULE FOR GROUND-WATER WELLS

REMARKS.--Water from each of the 30 wells in this study was tested for pesticides. The table below lists the 47 pesticides on this schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. Users of these data should use the parameter code as a cross-reference to the water-quality tables. This schedule includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid-phase extraction and are sufficiently volatile and thermally stable for analysis by gas chromatography. Samples are filtered through a glass-fibre filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. This pesticide reporting level table is applicable only to ground-water samples collected during the 1994 water year. **Only pesticide compounds measured at or above the reporting level in one or more wells are listed in the water-quality table.**

NOTE: Reporting levels have changed from those published in the 1993 report.

ALACHLOR ($\mu\text{G/L}$) (46342)	ALPHA BHC ($\mu\text{G/L}$) (34253)	ATRAZINE ($\mu\text{G/L}$) (39632)	BENFLURALIN ($\mu\text{G/L}$) (82673)	BUTYLATE ($\mu\text{G/L}$) (04028)	CARBARYL ($\mu\text{G/L}$) (82680)
0.009	0.007	0.017	0.013	0.008	0.046
CARBOFURAN ($\mu\text{G/L}$) (82674)	CHLOR- PYRIFOS ($\mu\text{G/L}$) (38933)	CYANAZINE ($\mu\text{G/L}$) (04041)	DCEA ($\mu\text{G/L}$) (82682)	DEETHYL ATRAZINE ($\mu\text{G/L}$) (04040)	DIAZINON ($\mu\text{G/L}$) (39572)
0.013	0.005	0.013	0.004	0.005	0.008
DIELDRIN ($\mu\text{G/L}$) (39381)	DIETHYL- ANALINE-2,6 ($\mu\text{G/L}$) (82660)	DIMETHOATE ($\mu\text{G/L}$) (82662)	DISULFOTON ($\mu\text{G/L}$) (82677)	EPTC ($\mu\text{G/L}$) (82668)	ETHAL- FLURALIN ($\mu\text{G/L}$) (82663)
0.008	0.006	0.024	0.06	0.005	0.013
ETHOPROP ($\mu\text{G/L}$) (82672)	FONOFOS ($\mu\text{G/L}$) (04095)	LINDANE ($\mu\text{G/L}$) (39341)	LINURON ($\mu\text{G/L}$) (82666)	MALATHION ($\mu\text{G/L}$) (39532)	METHYL AZINPHOS ($\mu\text{G/L}$) (82686)
0.012	0.008	0.011	0.039	0.014	0.014
METHYL PARATHION ($\mu\text{G/L}$) (82667)	METOLACHLOR ($\mu\text{G/L}$) (39415)	METRIBUZIN ($\mu\text{G/L}$) (82630)	MOLINATE ($\mu\text{G/L}$) (82671)	NAPROP- AMIDE ($\mu\text{G/L}$) (82684)	P,P-DDE ($\mu\text{G/L}$) (34653)
0.035	0.009	0.012	0.007	0.01	0.02
PARATHION ($\mu\text{G/L}$) (39542)	PEBULATE ($\mu\text{G/L}$) (82669)	PENDI- METHALIN ($\mu\text{G/L}$) (82683)	PERMETHRIN- CIS ($\mu\text{G/L}$) (82687)	PHORATE ($\mu\text{G/L}$) (82664)	PROMETON ($\mu\text{G/L}$) (04037)
0.022	0.009	0.018	0.016	0.011	0.008
PRONAMIDE ($\mu\text{G/L}$) (82676)	PROPACHLOR ($\mu\text{G/L}$) (04024)	PROPANIL ($\mu\text{G/L}$) (82679)	PROPARGITE ($\mu\text{G/L}$) (82685)	SIMAZINE ($\mu\text{G/L}$) (04035)	TEBUTHIURON ($\mu\text{G/L}$) (82670)
0.009	0.015	0.016	0.008	0.008	0.015
TERBACIL ($\mu\text{G/L}$) (82665)	TERBUFOS ($\mu\text{G/L}$) (82675)	THIOBENCARB ($\mu\text{G/L}$) (82681)	TRIALATE ($\mu\text{G/L}$) (82678)	TRIFLURALIN ($\mu\text{G/L}$) (82661)	
0.03	0.012	0.008	0.008	0.012	

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

GROUND-WATER QUALITY IN WELLS

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE

REMARKS.--Water from 10 of the 30 wells in this study was tested for a schedule of 60 Volatile Organic Compounds (VOC's). The table below lists the compounds on the schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$), the U.S. Geological Survey National Water Information System parameter code, and the reporting level. The county and local number of the wells sampled for VOC's were: Lancaster County;--LN2049, and LN2052, and York County;--YO1197, YO1198, YO1201, YO1202, YO1206, and YO1208; Cecil County, Md.--CEAd 67; Harford County, Md.--HABe 39. Only volatile organic compounds measured at or above the reporting level in one or more wells are listed in the water-quality table.

BENZENE ($\mu\text{G/L}$) (34030)	BENZENE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77613))	BENZENE, 1,2,4- TRICHLORO- ($\mu\text{G/L}$) (34551)	BENZENE, 1,2,4- TRIMETHYL- (PSEUDOCUMENE) ($\mu\text{G/L}$) (77222)	BENZENE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34536)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1,3,5- TRIMETHYL (MESITYLENE) ($\mu\text{G/L}$) (77226)	BENZENE, 1,3- DICHLORO- ($\mu\text{G/L}$) (34586)	BENZENE, 1,4- DICHLORO- ($\mu\text{G/L}$) (34571)	BENZENE, 1-CHLORO- 2-METHYL- (O-CHLORO -TOLUENE) ($\mu\text{G/L}$) (77275)	BENZENE, 1-CHLORO- 4-METHYL- (TOLUENE, P-CHLOR) ($\mu\text{G/L}$) (77277)
0.2	0.2	0.2	0.2	0.2
BENZENE, ISOPROPYL ($\mu\text{G/L}$) (77223)	BENZENE, BROMO- ($\mu\text{G/L}$) (81555)	BENZENE, CHLORO- ($\mu\text{G/L}$) (34301)	BENZENE, DIMETHYL- (XYLENE) ($\mu\text{G/L}$) (81551)	BENZENE, ETHYL- ($\mu\text{G/L}$) (34371)
0.2	0.2	0.2	0.2	0.2
BENZENE, 1-METHYL- 4-ISOPROPYL (ISOPROPYL TOLUENE) ($\mu\text{G/L}$) (77356)	BENZENE, METHYL- (TOLUENE) ($\mu\text{G/L}$) (34010)	BENZENE, n-BUTYL- ($\mu\text{G/L}$) (77342)	BENZENE, n-PROPYL- ($\mu\text{G/L}$) (77224)	BENZENE, sec-BUTYL- ($\mu\text{G/L}$) (77350)
0.2	0.2	0.2	0.2	0.2
BENZENE, tert-BUTYL- ($\mu\text{G/L}$) (77353)	ETHANE, 1,1,1,2- TETRACHLORO- ($\mu\text{G/L}$) (77562)	ETHANE, 1,1,1- TRICHLORO- ($\mu\text{G/L}$) (34506)	ETHANE, 1,1,2,2- TETRACHLORO- ($\mu\text{G/L}$) (34516)	ETHANE, 1,1,2- TRICHLORO- ($\mu\text{G/L}$) (34511)
0.2	0.2	0.2	0.2	0.2
ETHANE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34496)	ETHANE, 1,2- DIBROMO- (EDB) ($\mu\text{G/L}$) (77651)	ETHANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (32103)	ETHANE, CHLORO- ($\mu\text{G/L}$) (34311)	ETHANE, TRICHLOROTRIFLUORO- (FREON-113) ($\mu\text{G/L}$) (77652)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (34501)	ETHYLENE, CHLORO- (VINYL CHLORIDE) ($\mu\text{G/L}$) (39175)	ETHYLENE, cis-1,2- DICHLORO- ($\mu\text{G/L}$) (77093)	ETHYLENE, TETRACHLORO- ($\mu\text{G/L}$) (34475)	ETHYLENE, trans1,2 DICHLORO- ($\mu\text{G/L}$) (34546)
0.2	0.2	0.2	0.2	0.2
ETHYLENE, TRICHLORO- ($\mu\text{G/L}$) (39180)	HEXACHLORO- BUTADIENE ($\mu\text{G/L}$) (39702)	METHANE, BROMO- ($\mu\text{G/L}$) (34413)	METHANE, BROMOCHLORO- ($\mu\text{G/L}$) (77297)	METHANE, CHLORO- (METHYL CHLORIDE) ($\mu\text{G/L}$) (34418)
0.2	0.2	0.2	0.2	0.2

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
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GROUND-WATER QUALITY IN WELLS

TABLE 3.--VOLATILE ORGANIC COMPOUNDS SCHEDULE--Continued

METHANE, DIBROMO- ($\mu\text{G/L}$) (30217)	METHANE, DIBROMOCHLORO- ($\mu\text{G/L}$) (32105)	METHANE, DICHLORO- (METHYLENE CHLORIDE) ($\mu\text{G/L}$) (34423)	METHANE, DICHLOROBROMO- ($\mu\text{G/L}$) (32101)	METHANE, DICHLORODIFLUORO- ($\mu\text{G/L}$) (34668)
0.2	0.2	0.2	0.2	0.2
METHANE, TETRACHLORO- (CARBON TETRACHLORIDE) ($\mu\text{G/L}$) (32102)	METHANE, TRIBROMO- (BROMOFORM) ($\mu\text{G/L}$) (32104)	METHANE, TRICHLORO- (CHLOROFORM) ($\mu\text{G/L}$) (32106)	METHANE, TRICHLOROFLUORO- ($\mu\text{G/L}$) (34888)	PROPENE 2-METHOXY-2-METHYL (METHYL ETHER TERT-BUTYL) ($\mu\text{G/L}$) (78032)
0.2	0.2	0.2	0.2	0.2
NAPTHELENE ($\mu\text{G/L}$) (34696)	PROPANE, 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77443)	PROPANE, 1,2- DIBROMO-3- CHLORO-(DBCP) ($\mu\text{G/L}$) (82625)	PROPANE, 1,2- DICHLORO- ($\mu\text{G/L}$) (34541)	PROPANE, 1,3- DICHLORO- ($\mu\text{G/L}$) (77173)
0.2	0.2	1.0	0.2	0.2
PROPANE, 2,2- DICHLORO- ($\mu\text{G/L}$) (77170)	PROPENE, 1,1- DICHLORO- ($\mu\text{G/L}$) (77168)	PROPENE, cis-1,3- DICHLORO- ($\mu\text{G/L}$) (34704)	PROPENE, trans-1,3- DICHLORO- ($\mu\text{G/L}$) (34699)	STYRENE ($\mu\text{G/L}$) (77128)
0.2	0.2	0.2	0.2	0.2

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

GROUND-WATER QUALITY IN WELLS

REMARKS.--Explanation of column headings--**SITE IDENTIFIER:** 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; **ELEVATION OF LAND SURFACE:** land-surface at well site in feet above sea level; **G/M:** gallons per minute; **μ S/CM:** microsiemens per centimeter at 25 degrees Celsius; **DEG.C:** degrees Celsius; **MG/L:** milligrams per liter; **μ G/L:** micrograms per liter; **COLS. PER 100 ML:** colonies per 100 milliliters; **WH IT:** alkalinity, bicarbonate and carbonate as determined by incremental titration of unfiltered water at field site; **PCI/L:** picocuries per liter; **2 SIGMA:** counting statistic that represents error in the reported radon, uranium, or tritium value caused by variations in sample counting, background radiation, volume of sample, and decay since sample was collected. The remark code "E" for deethyl atrazine indicates an estimated value based on low recovery for this analyte.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	DATE	TIME	WATER LEVEL BELOW LAND SURFACE (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEVATION OF LAND SURFACE (FEET) (72000)	FLOW RATE, INSTANTANEOUS (G/M) (00059)	SPECIFIC CONDUCTANCE (μ S/CM) (00095)
CHESTER COUNTY									
394426075533501	CH4931	Oxford	07-21-94	1010	25.29	132	410	3.5	74
394606076002001	CH4932	Oxford	07-18-94	1330	41.7	143	500	3.9	154
394759075560301	CH4933	Oxford	07-14-94	1000	33.58	157	480	3.5	106
395335075563501	CH4934	Cochranville	07-19-94	1400	11.36	135	510	3.5	213
LANCASTER COUNTY									
395349076204401	LN2049	Pequea	07-14-94	1420	65.9	186	300	7.6	89
395752076045001	LN2050	Paradise	07-20-94	0940	32.00	130	760	6.0	217
395440076150301	LN2051	New Providence	07-14-94	1350	38.86	200	620	2.8	22
395003076110001	LN2052	Quarryville	07-12-94	1040	67.97	180	580	6.2	204
394550076100001	LN2053	Peach Bottom	07-12-94	1445	10.98	63	320	3.5	177
395230076014801	LN2054	Christiana	07-18-94	0940	6.7	105	430	3.3	265
400432076011901	LN2055	New Holland	07-19-94	0930	42.89	180	1000	4.0	65
YORK COUNTY									
394515076470101	YO1197	Glen Rock	07-18-94	0910	37.38	140	810	4.7	90
394745076524801	YO1198	Spring Grove	06-28-94	1050	28.39	125	730	4.3	76
394816076463001	YO1199	Glen Rock	07-21-94	0910	58.0	175	790	5.0	90
395210076560401	YO1200	Hanover	07-18-94	1310	62.89	150	920	7.0	17
395404076404401	YO1201	York	07-13-94	1050	47.39	170	770	5.5	307
400230076410201	YO1202	Mount Wolf	07-12-94	0920	88.41	140	600	2.5	209
395812076340001	YO1203	York	07-12-94	1430	48.17	100	500	1.7	177
395320076334001	YO1204	Red Lion	06-29-94	0930	76.94	200	900	5.0	25
395017076313501	YO1205	Felton	07-20-94	1400	35.0	200	600	3.0	103
394721076390101	YO1206	New Freedom	06-29-94	1020	49.8	140	970	3.8	123
394343076361301	YO1207	Stewartstown	07-11-94	1350	40.15	200	730	7.1	286
394637076260501	YO1208	Fawn Grove	07-11-94	0955	69.49	200	640	4.6	80
395204076262101	YO1209	Brogue	07-20-94	1320	66.42	175	740	3.5	154

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SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, TOTAL (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL (COLS. PER 100 ML) (31625)	E.COLI (COLS. PER 100 ML) (31633)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
CHESTER COUNTY										
CH4931	5.3	13.0	10	<1	<1	--	<1	20	2.8	3.1
CH4932	5.7	13.0	9.3	<1	<1	--	<1	46	9.9	5.2
CH4933	7.4	14.5	8.9	20	K 1	K 2	>100	28	5.6	3.4
CH4934	6.1	12.5	9.2	K 1	<1	<1	<1	72	17	7.1
LANCASTER COUNTY										
LN2049	6.3	13.0	.7	<1	<1	--	<1	21	4.8	2.1
LN2050	5.4	12.5	9.1	K 4	K 1	<1	>100	77	11	12
LN2051	5.6	13.0	11	K 1	<1	<1	40	5.3	1.2	.57
LN2052	5.6	11.0	10	K 9	<1	<1	<1	73	11	11
LN2053	5.8	13.0	8.9	<1	<1	--	K 8	57	12	6.5
LN2054	6.4	12.5	8.2	K 1	<1	<1	<1	100	27	7.9
LN2055	5.0	11.5	6.8	<1	<1	--	<1	11	2.2	1.3
YORK COUNTY										
YO1197	6.4	13.0	9.6	<1	<1	--	<1	33	8.4	2.9
YO1198	5.2	12.0	6.9	>80	<1	<1	K 2	20	3.7	2.7
YO1199	5.4	13.0	9.0	23	<1	<1	>100	29	3.3	5.0
YO1200	5.6	12.0	9.0	K 1	<1	<1	<1	5.6	1.0	.76
YO1201	5.8	14.0	7.4	<1	<1	--	<1	84	14	12
YO1202	6.7	13.5	1.4	>80	<1	<1	<1	115	32	8.4
YO1203	5.6	14.5	8.0	K 1	<1	<1	<1	56	17	3.4
YO1204	5.8	12.5	7.8	<1	<1	--	K 2	8	1.8	.85
YO1205	6.6	13.5	2.2	<1	<1	--	<1	41	12	2.7
YO1206	5.4	12.5	8.2	37	<1	<1	50	31	5.2	4.4
YO1207	5.8	12.5	9.9	K 2	<1	<1	K 2	90	18	11
YO1208	5.7	13.0	6.1	<1	<1	--	K 4	24	5.2	2.6
YO1209	5.3	13.0	11	>80	<1	<1	>100	52	7.3	8.3

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WH IT (MG/L AS HCO3) (00450)	CAR- BONATE WH IT (MG/L AS CO3) (00447)	ALKA- LINITY WH IT (MG/L AS CACO3) (00419)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
CHESTER COUNTY										
CH4931	3.3	1.7	6	0	6	1.5	6.5	<.1	.020	9.5
CH4932	6.5	1.8	12	0	10	2.6	13	<.1	.020	14
CH4933	6.6	1.4	18	0	14	1.0	6.7	<.1	.020	22
CH4934	6.2	.8	20	0	16	5.2	16	<.1	.050	13
LANCASTER COUNTY										
LN2049	4.7	1.5	24	0	20	15	2.3	.2	.010	24
LN2050	3.2	1.6	7	0	6	27	9.9	<.1	.010	13
LN2051	1.4	.2	7	0	6	.8	1.5	<.1	.010	6.6
LN2052	4.7	1.5	6	0	6	1.2	20	<.1	.020	7.6
LN2053	10	.9	16	0	14	11	13	<.1	.020	22
LN2054	6.5	.5	60	0	49	16	21	<.1	.030	17
LN2055	4.3	1.2	5	0	4	9.4	5.9	<.1	.020	6.3
YORK COUNTY										
YO1197	3.0	.4	24	0	20	1.2	4.1	<.1	.020	16
YO1198	5.2	.7	15	0	12	2.5	7.2	<.1	.030	15
YO1199	2.5	1.5	4	0	4	.3	6.7	<.1	.020	6.6
YO1200	.80	.4	8	0	7	.8	.5	<.1	<.010	6.7
YO1201	19	.2	9	0	8	1.2	33	<.1	.050	7.0
YO1202	4.0	1.4	110	0	90	9.2	2.9	.2	.010	15
YO1203	11	1.3	15	0	12	6.1	15	<.1	.020	20
YO1204	1.4	3.1	10	0	8	.3	1.7	<.1	.020	6.8
YO1205	3.3	4.0	37	0	30	10.0	3.8	.2	.020	11
YO1206	10	.9	4	0	3	1.9	13	.1	.020	5.7
YO1207	14	1.2	8	0	6	1.0	28	.1	.030	9.2
YO1208	3.4	1.1	3	0	3	.1	2.8	<.1	.020	6.9
YO1209	3.0	1.1	6	0	5	.9	13.0	<.1	.020	6.0

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

TRO- LOCAL WELL NUMBER	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	PHOS- SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	IRON, DIS- SOLVED (MG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L) AS MN) (01056)
CHESTER COUNTY										
CH4931	57	52	<.010	4.60	.030	<.20	<.010	<.010	4	38
CH4932	116	88	<.010	6.60	.010	<.20	<.010	.010	3	17
CH4933	81	118	<.010	A 7.0	<.010	<.20	.080	.060	13	5
CH4934	160	128	<.010	12.0	.010	<.20	.020	<.010	7	2
LANCASTER COUNTY										
LN2049	72	71	<.010	<.050	<.010	<.20	<.010	<.010	3400	540
LN2050	136	131	<.010	11.0	.020	<.20	<.010	<.010	7	120
LN2051	8	16	<.010	<.050	<.010	<.20	.010	<.010	5	5
LN2052	148	114	<.010	12.0	.020	<.20	<.010	<.010	3	39
LN2053	141	121	<.010	8.40	.020	<.20	.030	.030	10	2
LN2054	192	155	<.010	6.70	.010	<.20	<.010	<.010	9	<1
LN2055	28	37	<.010	.740	.020	<.20	<.010	<.010	390	78
YORK COUNTY										
YO1197	72	63	<.010	3.50	.020	<.20	<.010	<.010	32	16
YO1198	56	55	<.010	2.40	<.010	<.20	<.010	.020	4	2
YO1199	74	55	<.010	6.10	.020	<.20	<.010	<.010	4	22
YO1200	15	15	<.010	<.050	.020	<.20	<.010	<.010	<3	4
YO1201	199	180	<.010	20.0	<.010	<.20	<.010	<.010	66	96
YO1202	139	133	<.010	1.30	.020	<.20	.010	.020	<3	1
YO1203	161	130	<.010	11.0	.020	<.20	.020	.020	18	6
YO1204	13	21	<.010	.055	.010	<.20	<.010	.010	<3	2
YO1205	64	68	<.010	.590	.020	<.20	<.010	<.010	6	38
YO1206	87	80	<.010	8.20	.020	<.20	<.010	<.010	3	130
YO1207	200	171	<.010	19.0	.010	<.20	.040	<.010	5	150
YO1208	59	54	<.010	6.90	.010	<.20	<.010	<.010	51	16
YO1209	99	92	<.010	11.0	.010	<.20	.090	.030	<3	20

Field determination by colorimetric technique.

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SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	STRON- TIUM, DIS- SOLVED ($\mu\text{G/L}$ AS SR) (01080)	RADON TOTAL (PCI/L) (82303)	RADON- 222 2 SIGMA TOTAL (PCI/L) (76002)	URANIUM NATURAL DIS- SOLVED ($\mu\text{G/L}$ AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, ($\mu\text{G/L}$) (75990)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA (PCI/L) (75985)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
CHESTER COUNTY										
CH4931	30	2000	42	<.4	.01	--	--	--	--	.2
CH4932	110	6000	69	<.4	.01	--	--	--	--	.2
CH4933	90	3500	53	<.4	.01	-43.0	-7.50	--	--	.2
CH4934	170	3900	57	<.4	.01	-43.4	-7.45	--	--	.2
LANCASTER COUNTY										
LN2049	30	6100	68	<.4	.01	-48.3	-8.10	34	2.0	.1
LN2050	100	38000	169	1.9	.29	-45.7	-7.65	--	--	.4
LN2051	<10	4000	55	<.4	.01	-47.8	-7.95	--	--	<.1
LN2052	50	5700	66	<.4	.01	--	--	--	--	.2
LN2053	130	3300	50	<.4	.01	--	--	--	--	1.2
LN2054	80	2200	45	<.4	.01	--	--	--	--	.2
LN2055	20	1600	38	<.4	.01	-48.0	-7.90	48	3.0	1.1
YORK COUNTY										
YO1197	20	110	18	<.4	.01	-48.5	-8.10	47	3.0	<.1
YO1198	20	2600	56	<.4	.01	-52.4	-8.50	55	4.0	.2
YO1199	30	850	29	<.4	.01	--	--	--	--	.1
YO1200	<10	1100	32	<.4	.01	-52.4	-8.65	57	3.0	<.1
YO1201	50	1100	32	<.4	.01	--	--	--	--	.2
YO1202	110	3200	51	.5	.01	-51.3	-8.35	21	2.0	.1
YO1203	<10	5000	61	<.4	.07	--	--	--	--	.3
YO1204	--	5800	70	<.4	.01	-49.8	-8.35	46	3.0	.1
YO1205	30	1500	35	<.4	.01	-49.0	-7.90	38	3.0	.3
YO1206	20	4700	63	<.4	.01	-49.8	-8.15	--	--	.1
YO1207	160	2200	43	<.4	.01	-44.5	-7.45	--	--	.2
YO1208	30	3200	53	<.4	.01	-45.5	-7.70	--	--	.1
YO1209	20	9100	82	<.4	.01	--	--	--	--	.2

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 SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	ALA- CHLOR, (µG/L) (46342)	ATRA- ZINE, (µG/L) (39632)	CARBO- FURAN (µG/L) (82674)	DEETHYL ATRA- ZINE, (µG/L) (04040)	METO- LACHLOR (µG/L) (39415)	NAPROP- AMIDE (µG/L) (82684)	SI- MAZINE, (µG/L) (04035)	TER- BACIL (µG/L) (82665)	TETRA- CHLORO- ETHYL- ENE (µG/L) (34475)
CHESTER COUNTY										
CH4931	<.02	<.009	<.017	<.013	E .014	<.009	<.010	<.008	<.030	--
CH4932	<.02	<.009	<.017	<.013	E .050	.019	<.010	<.008	<.030	--
CH4933	<.02	<.009	<.017	<.013	E .076	<.009	<.010	<.008	<.030	--
CH4934	<.02	<.009	.110	<.013	E .530	.020	<.010	<.008	<.030	--
LANCASTER COUNTY										
LN2049	.02	<.009	<.017	<.013	<.007	<.009	<.010	<.008	<.030	<.2
LN2050	<.02	<.009	<.017	<.013	E .091	<.009	<.010	<.008	<.030	--
LN2051	<.02	<.009	<.017	<.013	<.007	<.009	<.010	<.008	<.030	--
LN2052	<.02	<.009	<.017	<.013	E .160	<.009	<.010	<.008	<.030	<.2
LN2053	<.02	<.009	.022	<.013	E .200	<.009	<.010	<.008	<.030	--
LN2054	<.02	<.009	.120	<.013	E .190	<.009	<.010	<.008	<.030	--
LN2055	<.02	<.009	<.017	<.013	<.007	<.009	<.010	<.008	<.030	--
YORK COUNTY										
YO1197	<.02	<.009	<.017	<.013	E .075	<.009	<.010	<.008	<.030	<.2
YO1198	<.02	<.009	<.017	<.013	E .045	<.009	<.010	<.008	<.030	<.2
YO1199	<.02	<.009	.055	<.013	E .084	<.009	<.010	<.008	<.030	--
YO1200	<.02	<.009	<.017	<.013	<.007	<.009	<.010	<.008	<.030	--
YO1201	<.02	<.009	.039	<.013	E .086	<.009	<.010	<.008	<.030	1.7
YO1202	<.02	<.009	<.017	<.013	E .015	<.009	<.010	<.008	<.030	<.2
YO1203	<.02	<.009	<.017	<.013	E .078	<.009	<.010	<.008	<.030	--
YO1204	<.02	<.009	<.017	<.013	<.007	.012	<.010	<.008	<.030	--
YO1205	<.02	<.009	<.017	<.013	<.007	<.009	<.010	<.008	<.030	--
YO1206	<.02	<.009	.031	.020	E .078	.071	<.010	<.008	<.030	<.2
YO1207	<.02	<.009	<.017	<.013	E .300	<.009	.070	<.008	.280	--
YO1208	<.02	.083	.051	.170	E .630	.160	<.010	<.008	<.030	<.2
YO1209	.02	<.009	.030	.015	E .220	.036	<.010	.014	<.030	--

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

GROUND-WATER QUALITY IN WELLS

REMARKS.--Explanation of column headings--**SITE IDENTIFIER:** 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; **ELEVATION OF LAND SURFACE:** land-surface at well site, in feet above sea level; **G/M:** gallons per minute; **μS/CM:** microsiemens per centimeter at 25 degrees Celsius; **DEG.C:** degrees Celsius; **MG/L:** milligrams per liter; **μG/L:** micrograms per liter; **COLS. PER 100 ML:** colonies per 100 milliliters; **WH IT:** alkalinity, bicarbonate, and carbonate as determined by incremental titration of unfiltered water at field site; **PCI/L:** picocuries per liter; **2 SIGMA:** counting statistic that represents error in the reported radon, uranium, or tritium value caused by variations in sample counting, background radiation, volume of sample, and decay since sample was collected.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

SITE IDENTIFIER	LOCAL WELL NUMBER	LOCATION	DATE	TIME	WATER-LEVEL BELOW LAND SURFACE (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEVATION OF LAND SURFACE (FEET) (72000)	FLOW RATE, INSTANTANEOUS (G/M) (00059)	SPECIFIC CONDUCTANCE (μS/CM) (00095)
CECIL COUNTY, MD									
394038076061701	CEAb85	Colora	07-13-94	1350	41.84	115	400	3.0	225
394127075583101	CEAd67	Calvert	07-14-94	0930	20.16	107	420	3.0	141

HARFORD COUNTY, MD

394240076263501	HAAb12	Harkins	07-19-94	0930	42.30	150	610	5.0	160
394209076164301	HAAd15	Cooper	07-20-94	0950	22.20	100	280	3.0	75
393828076294501	HABb104	Jarrettsville	07-21-94	1450	22.31	175	500	3.0	191
393504076133601	HABe39	Churchville	07-13-94	1000	49.97	125	300	3.0	275

LOCAL WELL NUMBER	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, TOTAL (COLS. PER 100 ML) (31501)	COLI-FORM, FECAL (COLS. PER 100 ML) (31625)	E. COLI (COLS. PER 100 ML) (31633)	STREP-TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)
CEAb85	5.7	13.9	9.7	>80	52	38	>100	75	22	4.8
CEAd67	6.3	13.2	6.6	<1	<1	--	<1	43	7.3	5.9

CECIL COUNTY, MD

HAAb12	5.6	13.1	9.0	K 1	<1	<1	<1	44	5.3	7.5
HAAd15	6.0	13.2	9.7	K 1	<1	<1	<1	23	6.4	1.7
HABb104	6.1	13.7	6.9	K14	K 1	<1	>100	66	17	5.8
HABe39	5.6	13.7	9.5	>80	K 6	K 1	>100	90	13	14

LOCAL WELL NUMBER	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICARBONATE, WH IT (MG/L AS HCO3) (00450)	CARBONATE, WH IT (MG/L AS CO3) (00447)	ALKALINITY, WH IT (MG/L AS CACO3) (00419)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE, DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
CEAb85	9.1	1.8	16	0	13	35	11	<.1	.020	23
CEAd67	10.0	2.5	51	0	42	1.5	6.3	<.1	.040	31

CECIL COUNTY, MD

HAAb12	7.4	1.9	4	0	2	0.2	14	<.1	.020	7.9
HAAd15	3.9	0.6	17	0	14	1.0	7.0	<.1	.020	9.1
HABb104	7.3	1.9	32	0	26	14	14	.1	.040	17
HABe39	14.0	1.1	16	0	13	38	17	<.1	.010	22

HARFORD COUNTY, MD

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

LOWER SUSQUEHANNA RIVER BASIN NAWQA PROJECT

SUBAREA OF CRYSTALLINE BEDROCK IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

LOCAL WELL NUMBER	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	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)	PHOS- PHORUS ORTHOPHOS- PHATE DIS- SOLVED (MG/L) AS P (00666)	PHOS- PHORUS ORTHOPHOS- PHATE DIS- SOLVED (MG/L) AS P (00671)	IRON, DIS- SOLVED (MG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (MG/L) AS MN (01056)
CECIL COUNTY, MD										
CEAb85	175	153	<.010	8.70	<.010	.40	.160	.020	18	10
CEAd67	96	103	<.010	2.90	.010	<.20	.020	.030	50	9
HARFORD COUNTY, MD										
HAAb12	101	99	<.010	12.0	.010	<.20	<.010	<.010	41	52
HAAd15	55	48	<.010	2.20	.020	<.20	<.010	.010	<3	<1
HABb104	125	119	<.010	5.90	.080	.40	<.010	<.010	<3	33
HABe39	176	180	<.010	12.0	<.010	<.20	.050	.040	9	<1
LOCAL WELL NUMBER	STRON- TIUM, DIS- SOLVED (MG/L) AS SR (01080)	RADON TOTAL (PCI/L) (82303)	RADON- 222 2 SIGMA TOTAL (PCI/L) (76002)	URANIUM NATURAL DIS- SOLVED (MG/L) AS U (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS. (MG/L) (75990)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA (PCI/L) (75985)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)
CECIL COUNTY, MD										
CEAb85	100	2600	46	<.4	.01	--	--	--	--	.6
CEAd67	50	6200	68	<.4	.02	-43.3	-7.40	53	3.0	.2
HARFORD COUNTY, MD										
HAAb12	30	--	--	<.4	.01	--	--	--	--	.2
HAAd15	20	--	--	<.4	.01	-45.0	-7.37	49	3.0	.2
HABb104	100	3300	51	<.4	.01	--	--	--	--	.3
HABe39	130	4100	57	<.4	.01	-40.7	-6.90	--	--	.6
LOCAL WELL NUMBER	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	ALA- CHLOR (MG/L) (46342)	ATRA- ZINE (MG/L) (39632)	CARBO- FURAN (MG/L) (82674)	DEETHYL ATRA- ZINE (MG/L) (04040)	METO- LACHLOR (MG/L) (39415)	NAPROP- AMIDE (MG/L) (82684)	SI- MAZINE (MG/L) (04035)	TER- BACIL (MG/L) (82665)	TETRA- CHLORO- ETHYL- ENE (MG/L) (34475)
CECIL COUNTY, MD										
CEAb85	<.02	<.009	.080	<.013	E .600	.084	<.010	<.008	<.030	--
CEAd67	<.02	<.009	<.017	<.013	E .005	<.009	<.010	<.008	<.030	<.20
HARFORD COUNTY, MD										
HAAb12	.02	<.009	.350	<.013	E1.00	.760	<.010	<.008	<.030	--
HAAd15	<.02	<.009	<.017	<.013	<.005	<.009	<.010	.021	<.030	--
HABb104	<.02	<.009	.720	.037	E .600	.700	<.010	.013	<.030	--
HABe39	<.02	.061	.006	<.013	E .340	.560	<.010	<.008	<.030	<.20

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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